BROWNFIELD CLEANUP PROGRAM (BCP) FINAL REMEDIAL INVESTIGATION REPORT

ECL Article 27/Title 14

1440 Empire Boulevard
Town of Penfield, New York

NYSDEC Site #C828135

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1 INTRODUCTION

This Remedial Investigation Report (RIR) describes activities carried out during the Remedial Investigation (RI) of the property located at 1440 Empire Boulevard, Town of Penfield, New York (herein, the "Site") in accordance with the Remedial Investigation Work Plan (RIWP) dated December 1, 2009 and approved by the NYSDEC on December 3, 2009 and pursuant to the Brownfield Cleanup Program (BCP) Agreement between the New York State Department of Environmental Conservation (NYSDEC) and 1440 Empire Boulevard Development Corporation. The Brownfield Cleanup Agreement was signed by the applicant, 1440 Empire Boulevard Development Corporation, on September 1, 2006. The BCP was amended transferring the Site to Upstate Brownfield Partners, LLC and the amendment was executed on February 17, 2011.

1.1 Site Location and Description

The Site and subject of the BCP is located at 1440 Empire Boulevard and is an approximately 4.4-acre portion of a larger 16.67-acre parcel. The Site is zoned for commercial and residential use and is located on the northern side of Empire Boulevard (NYS Route 404) at the southern end of Irondequoit Bay in the Town of Penfield, Monroe County, New York. Orientation to the Site, the surrounding area, topography and nearby waterbodies, and the site location relative to the larger parcel of land are provided on Figures 1 through 4, included with this report.

According to Mr. James Costello of the Town of Penfield Department of Planning and Development, a portion of the Site was used as a sand quarry and an unpermitted disposal area for construction and demolition (C&D) debris from the late 1940s to the early 1980s. Mr. Costello stated that the site owners were taken to court by the Town of Penfield in the early 1980s to address the unpermitted waste disposal. At that time, the restoration of the "Olde Rochesterville Apartments" was occurring in the City of Rochester, and the owners allowed the Site to be used as a C&D disposal site as part of that reconstruction project.

1.2 Site Geology and Hydrogeology

The Monroe County Generalized Soil Map indicates that the site soils are, "soils formed in Lake-Laid-Deposits of silt and very fine sand". The Passero Associates 2002 Phase II investigation revealed site soils to be silt, fine sand, and fill material consisting of C&D debris. The area soil classification is Sands, and Sands with Fine and Silty Sand. The Department of Agriculture, Natural Resources Conservation Services (NRCS) indicates that the hydraulic conductivity for these soil types typically ranges from 14-42 µm/sec. Bedrock underlying the Site is classified as shale and siltstone of the Upper Ordovician

Queenston Formation (Geologic Map of New York, 1970, Finger Lakes Sheet). Groundwater flow direction is presumed to be in a westerly direction toward Irondequoit Bay, based on a review of surface topography evaluated on the United States Geological Survey (USGS) East Rochester Quadrangle Map and observations made at the Site. Groundwater elevation measurements collected in September 2010 confirm a westerly groundwater flow direction (Appendix 3 and Figure 17).

Base on filed investigations, it appears that the historical sand quarry was excavated to approximately 35 feet below the present ground level. Fill material on the Site appear to have been covered with the native soils at various intervals, and later filled with construction debris and household garbage.

The east shore of Irondequoit Bay is approximately 700 feet west of the Site. The National Wetlands Inventory indicates that the shore of Irondequoit Bay is a mapped state and federal wetland. The wetland boundary is depicted on Figure 3. According to Mr. Costello, the NYSDEC has staked out the wetland boundaries.

There are no public water supply wells located within one-half mile of the Site (EPA/Office of Drinking Water). There are also no private wells, as the area is serviced by Monroe County Water Authority (MCWA).

Utilizing water level measurements and the elevations measured during the Passero Associates well survey, the average water table gradient was calculated to be 0.06 ft/ft. The measured depth to groundwater beneath the Site ranges from 30.37 to 72.25 feet below grade.

2 DATA QUALIFIERS

The following table contains the definitions of the qualifiers associated with the data presented throughout this RIR.

Organic Qualifiers	
B:	Analyte detected in the associated Method Blank
H:	Holding times for preparation or analysis exceeded
JN:	Non-routine analyte. Quantitation estimated.
S:	Spike Recovery outside accepted recovery limits
E:	Value above quantitation range
J:	Analyte detected at or below quantitation limits
ND:	Not Detected at the Reporting Limit
NS:	No Standard
BOLD:	Quantity exceeds guidance value
R:	Rejected
D:	Compounds identified in an analysis at the secondary dilution factor.
P:	For CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25% the lower of the two values is reported on the data page and flagged with a "P"
Inorganic Qualifiers	
J or B:	Value greater than or equal to the instrument detection limit, but less than the quantition limit.
H:	Holding times for preparation or analysis exceeded

N:	Spike sample recovery is not within the quality control limits.
S:	Value determined by the Method of Standard Addition.
E:	Value estimated or not reported due to the presence of interferences.
ND:	Not Detected at the Reporting Limit
NS	No Standard
BOLD:	Quantity exceeds guidance value
G:	Value greater than of equal to the project reporting limit but less than the laboratory quantitation limit.
M	Matrix spike recovery outside QC limits. Matrix bias indicated.
*	Spike of duplicate analysis is not within the quality control limits
+	Correlation coefficient for the Method of Standard Addition is less than 0.995

3 PREVIOUS INVESTIGATIONS

3.1 Sear-Brown 2000-2001

A Phase I Environmental Site Assessment (ESA) and a Phase II Environmental Test Pit Program (ETP) were completed on the Site by Sear-Brown in December 2000 and February 2001, respectively. At the time that Sear-Brown conducted its work, the acreage of the property totaled approximately 27 acres. The Site and subject of this BCP is an approximately 4.4 acre division parcel as depicted on the attached Figure 4. Therefore, some of Sear-Brown's findings do not apply to the Site as it is defined in this RIR.

The December 2000 Sear-Brown Phase I ESA revealed evidence of numerous recognized environmental conditions (RECs). The Executive Summary of Sear-Brown's report provided a reasonable basis to believe that environmental contamination is present at the Site.

The Sear-Brown Phase I ESA identified the following on-Site RECs:

- the presence of empty 55-gallon drums in various areas of the Site which could have leaked or spilled;
- C&D debris on the Site including asphalt, cement blocks, PVC pipes, metal, and concrete; and
- the presence of other fill materials including municipal solid waste and ash fill;
- the former operation of the Site as a C&D debris disposal site - the Site is identified on the Monroe County Environmental Management Council (EMC) Waste Site listing as Penfield Site No. 2 due to the property's former use as a disposal area for C&D debris; and
- the use of portions of the Site as a sand borrow pit or quarry, and the potential backfilling of these areas.

The Sear-Brown Phase I ESA noted the following environmental issue as an additional concern:

- the location of wetlands identified by the United States Fish & Wildlife Service and NYSDEC adjacent to the west of the Site.

In February 2001, Sear-Brown conducted a Phase II ETP investigation and identified the following conditions:

- semivolatile organic compounds (SVOCs) including benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, pyrene and indeno(1,2,3-cd)pyrene, above the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 Recommended Soil Cleanup Objectives (RSCO);

- metals including mercury, zinc, arsenic, cadmium, chromium, copper, lead, and nickel at levels greater than the respective TAGM #4046 RSCO;

- the polychlorinated biphenyl (PCB) Aroclor 1254 above the NYSDEC TAGM #4046 value for surface soil samples;

- volatile organic compounds (VOCs), including toluene, ethylbenzene, xylenes, and 1,3,5-trimethylbenzene above the respective TAGM #4046 RSCO; and

- ash fill inconsistent in texture and intermittent in its presence.

3.2 Passero Associates 2002

Passero Associates first investigated the Site on November 20 and 21, 2002. Ten soil samples, one shallow groundwater sample, and one deeper groundwater sample were collected for laboratory analysis. Contaminants of concern (COC) identified in fill soils on the Site included SVOCs and PCBs.

Passero Associates conducted a second round of sampling on December 20, 2002 to generate additional data to investigate areas of concern indicated by the November 2002 sampling event. All of the 2002 sample locations are depicted on Figure 5; samples with an “A” designation were collected in November 2002, and samples with a “B” designation were collected in December 2002. The results of the November and December 2002 investigation are presented in the following sections and are tabulated on pages 6 and 7 of this report; a copy of the investigation report is included in Appendix 1.

3.2.1 Results

Soil

SVOCs, and the PCB Aroclor 1254, were identified in fill soil on the western portion of the Site at concentrations that exceed the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs. The SVOCs and PCBs detected are tabulated in the following tables with comparison to Part 375-6.8(a) Unrestricted Use SCOs (SCOs), Part 375-6.8(b)

Restricted Use, Restricted Residential SCOs, and Part 375-6.8(b) Protection of Groundwater SCOs.

Perched Water

Saturated soil and perched groundwater were encountered in sample location TP-3 at an approximate depth of 10 feet below grade. The only VOC detected in the perched water was 1.21 micrograms per liter (µg/L) of benzene. Soil boring BH-13B (located approximately 50 feet south of TP-3) was subsequently advanced and sampled on December 19, 2002; the perched saturated zone extended from approximate depths of 10 feet to 40 feet below grade. A sample collected from the native silt beneath the perched water was determined to be uncontaminated.

December 20, 2002

To further investigate the extent of SVOCs and PCBs in the fill soils, Passero conducted a second round of sampling on December 20, 2002. Because of the consistently elevated SVOCs in the fill area east of a site driveway, the entire fill area was assumed to be SVOC contaminated. The focus of the December sampling in this area was the PCB content of the fill soils. The SVOCs and PCBs detected in the December 20, 2002 investigation are provided in the following tables.

SVOCs - November 21 and 22, 2002 Investigation								
Sample ID Sample Depth Sampling Date Units	**TP-2A N/A 11/02 ppm**	**TP-3A N/A 11/02 ppm**	**TP-4A N/A 11/02 ppm**	**TP-5A N/A 11/02 ppm**	**BH-15A (2'-12') 11/02 ppm**	**Part 375-6.8(a): Unrestricted Use SCOs ppm**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs ppm**	**Part 375-6.8(b): Protection of Groundwater SCOs ppm**
Benzo (a) anthracene	0.367	**19.6**	**33.7**	**18.8**	ND	1	1	1
Benzo (a) pyrene	0.352	**19.3**	**44.6**	**27.4**	ND	1	1	22
Benzo (b) fluoranthene	ND	**26.3**	**63.4**	**39.8**	ND	1	1	1.7
Benzo (g,h,i) perylene	ND	21.5	48.3	28.5	ND	100	100	1,000
Benzo (k) fluoranthene	ND	**19.3**	**37.9**	**20.8**	ND	0.8	3.9	1.7
Chrysene	0.409	**18.6**	**37.5**	**28.4**	ND	1	3.9	1
Dibenz (a,h) anthracene	ND	**6.74**	ND	**8.94**	ND	0.33	0.33	1,000
Fluoranthene	0.876	22.4	41.1	19.9	ND	100	100	1,000
Indeno (1,2,3-cd) pyrene	ND	ND	ND	**28.8**	ND	0.5	0.5	8.2
Naphthalene	0.923	ND	ND	ND	ND	12	100	12
Phenanthrene	0.852	11.1	23.5	6.62	ND	100	100	1,000
Pyrene	0.765	21.0	46.8	21.9	ND	100	100	1,000

ND: Not Detected at the Reporting Limit
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

SVOCs - December 20, 2002 Investigation													
Sample ID Sample Depth Sampling Date Units	**TP-1B N/A 12/20/02 ppm**	**TP-2B N/A 12/20/02 ppm**	**TP-3B N/A 12/20/02 ppm**	**TP-4B N/A 12/20/02 Ppm**	**TP-6B N/A 12/20/02 ppm**	**TP-8B N/A 12/20/02 ppm**	**TP-9B N/A 12/20/02 ppm**	**TP-10B N/A 12/20/02 ppm**	**BH-13B (41'-42') 12/20/02 ppm**	**BH-14B (11'-12') 12/20/02 ppm**	**Part 375-6.8(a): Unrestricted Use SCOs ppm**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs ppm**	**Part 375-6.8(b): Protection of Groundwater SCOs ppm**
Anthracene	ND	ND	ND	ND	ND	ND	ND	2.21	ND	ND	100	100	1,000
Benzo (a) anthracene	ND	ND	**1.90**	**111**	ND	**1.48**	**1.13**	**6.73**	ND	ND	1	1	1
Benzo (a) pyrene	ND	ND	**2.92**	**85.3**	**32.3**	**2.66**	**1.84**	**6.67**	ND	ND	1	1	22
Benzo (b) fluoranthene	ND	ND	**3.48**	**103**	**48.6**	**3.84**	**2.57**	**8.0**	ND	ND	1	1	1.7
Benzo (g,h,i) perylene	ND	ND	2.16	ND	29.5	2.41	1.97	3.96	ND	ND	100	100	1,000
Benzo (k) fluoranthene	ND	ND	**1.46**	**46.3**	ND	**1.37**	**0.896**	**3.1**	ND	ND	0.8	3.9	1.7
Chrysene	ND	ND	**2.3**	**111**	**29.5**	**2.17**	**1.48**	**6.94**	ND	ND	1	3.9	1
Dibenz (a,h) anthracene	ND	ND	**5.15**	ND	ND	**0.584**	**0.477**	ND	ND	ND	0.33	0.33	1,000
Fluoranthene	ND	ND	3.13	**265**	ND	1.17	1.45	14.1	ND	ND	100	100	1,000
Indeno (1,2,3-cd) pyrene	ND	ND	**2.25**	**41.8**	**29.4**	**2.37**	**1.86**	**4.15**	ND	ND	0.5	0.5	8.2
Phenanthrene	ND	ND	1.42	**125**	ND	ND	0.723	7.1	ND	ND	100	100	1,000
Pyrene	ND	ND	3.49	**239**	21.9	1.46	1.52	14.1	ND	ND	100	100	1,000

ND: Not Detected at the Reporting Limit
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

PCBs - November 21 and 22, 2002 Investigation								
Sample ID Sample Depth Sample Date Units	TP-2A N/A 11/21/02 ppm	TP-3A N/A 11/21/02 ppm	TP-4A N/A 11/21/02 ppm	TP-5A N/A 11/21/02 ppm	BH-15 2'-12' 11/21/02 ppm	Part 375-6.8(a): Unrestricted Use SCOs ppm	Part 375-6.8(b): Restricted Use, Restricted Residential SCOs ppm	Part 375-6.8(b): Protection of Groundwater SCOs ppm
Aroclor 1254	**28.0**	**3.45**	**2.15**	**83.9**	ND	0.1	1	3.2
ND: Not Detected at the Reporting Limit								
NS: No Standard								
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs								
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs								
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO								

PCBs - December 20, 2002 Investigation													
Sample ID Sample Depth Sample Date Units	TP-1B N/A 12/20/02 ppm	TP-2B N/A 12/20/02 ppm	TP-3B N/A 12/20/02 ppm	TP-4B N/A 12/20/02 Ppm	TP-6B N/A 12/20/02 ppm	TP-8B N/A 12/20/02 ppm	TP-9B N/A 12/20/02 ppm	TP-10B N/A 12/20/02 ppm	BH-13B (41'-42') 12/20/02 ppm	BH-14B (1'-3') 12/20/02 ppm	Part 375-6.8(a): Unrestricted Use SCOs ppm	Part 375-6.8(b): Restricted Use, Restricted Residential SCOs ppm	Part 375-6.8(b): Protection of Groundwater SCOs ppm
Aroclor 1254	ND	ND	ND	**7.87**	**5.89**	ND	**1.07**	**0.581**	ND	ND	0.1	1	3.2
ND: Not Detected at the Reporting Limit													
NS: No Standard													
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs													
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs													
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO													

VOCs - December 20, 2002 Investigation				
Sample ID Sample Date Units	TP-1B 12/20/02 ppm	Part 375-6.8(a): Unrestricted Use SCOs ppm	Part 375-6.8(b): Restricted Use, Restricted Residential SCOs ppm	Part 375-6.8(b): Protection of Groundwater SCOs ppm
m,p-xylene	0.01	0.26	100	3.2
ND: Not Detected at the Reporting Limit				
NS: No Standard				
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs				
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs				
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO				

4 RI OBJECTIVES

In December 2009 and January 2010, Passero Associates conducted a RI to further define the nature and extent of on-site contamination. To evaluate the potential for off-site impacts associated with contamination emanating from the Site, samples were collected at the site boundaries. The results of this investigation will ultimately be used to evaluate remedial actions that will be required to render the site suitable for use as a mixed residential/commercial development. Specifically, the investigation was intended to:

- evaluate cleanup options pursuant to 6 NYCRR Part 375 by comparing results to the Restricted Use SCOs;
- further define the nature and extent of SVOC and PCB contamination in site soil, surface water, groundwater, and other impacted media, including a boundary investigation;
- evaluate on-site soil and groundwater quality; and
- conduct a qualitative exposure assessment, including a human health exposure assessment and a fish and wildlife exposure assessment.

5 DEVIATIONS FROM THE WORK PLAN

During the RI, minor changes were made to the numbering of the Geoprobe® soil borings and boreholes advanced with the truck-mounted drill rig, and five of the Geoprobe® locations were combined with the boreholes. All tables, figures, and laboratory data contain the new numbering system. The table on Page 10 of this report lists the approximate latitude and longitude of the Geoprobe® boring locations, boreholes, monitoring wells, and test pits, and indicates which have been changed from the RIWP. The locations of these features are depicted on Figure 6. Test Pits 8 and 15-21 are plotted on the figures based on estimated location; their latitudes and longitudes were not surveyed.

5.1 Site Boundary Deviations

The site boundaries depicted in the RIWP and those used for the locations of the RI sample and well locations were based on the Town of Penfield tax maps, Monroe County Maps, Google Earth and a hand held global positioning system (GPS) unit. After the RI field work was completed, a Passero Associates survey crew surveyed the Site and determined the boundaries to be approximately 90 feet to the east of the boundaries used for the RI. Consequently, wells MW-1 and MW-2 and Geoprobe® sample locations GP-1, GP-2 and GP-3 are outside and slightly west of the apparent western site boundary.

Groundwater is presumed to flow to the west; based on this assumption, the locations of MW-1 and MW-2 are used to determine if groundwater contamination has the potential to migrate off the Site.

6 AREAS OF CONCERN (AOCs)

Based on the results of the Geoprobe® borehole and test pitting program, we have redefined the areas of concern (AOCs) at the Site into two areas. The AOCs are depicted on Figure 6.

6.1 AOC-1

AOC-1 covers approximately 84,600square-feet (approximately 2 acres) in the center of the Site, and encompasses the area where the 2002 and the 2009/2010 subsurface and surface soil sample results for SVOCs, PCBs, pesticides and metals exceeded the NYSDEC Part 375-6.8(b) Restricted Use, Restricted Residential Soil Cleanup Objectives (SCOs). VOCs were not detected at concentrations above the NYSDEC Part 375-6.8(b) Restricted Use, Restricted Residential SCOs in this area of the Site.

6.2 AOC-2

AOC-2 surrounds AOC-1 and covers approximately 105,400 square feet (approximately 2.4 acres). AOC-2 encompasses the historical fill area. In AOC-2, the 2009/2010 subsurface and surface soil sample data and the 2002 soil data for SVOCs, PCBs, pesticides, and metals exceed the NYSDEC Part 375-6.8(b) Unrestricted Use SCOs, but not the Restricted Use, Restricted Residential SCOs.

Borehole ID	Latitude N	Longitude W	Date	AOC	Approximate Depth to Native Soil	Description/Changed from
BH-1/MW-1/Surface-4	43-10-34.4	-77-30-50.9	01/06/10	Native		**MW-1**
BH-2/MW-2/Surface-1	43-10-32.1	-77-30-48.4	12/22/10	AOC-2		**MW-2**
BH-5/MW-5/Surface-9	43-10-32.9	-77-30-45.6	12/14/09	AOC-2	~5'	**MW-3**
BH-4/MW-4/Surface-10	43-10-36.7	-77-30-47.0	01/04/10	AOC-2		**MW-4**
BH-3/MW-3/Surface-5	43-10-34.0	-77-30-48.2	12/16/09	AOC-1	~35'	**MW-5**
						~~BH-1~~
GP-3/Surface-3	43-10-34.2	-77-30-50.6	12-16-09	AOC-2	~1'	**BH-2**
GP-2/Surface-2	43-10-33.3	-77-30-49.1	12-18-09	AOC-2	~4'	**BH-3**
						~~BH-4~~
GP-1	43-10-31.2	-77-30-47.8	12-16-09	Native	~4'-8'	**BH-5**
GP-7	43-10-32.5	-77-30-46.9		AOC-1	~3'	**BH-6**
GP-6/Surface-6	43-10-33.1	-77-30-47.5	12-16-09	AOC-1	~12'	**BH-7**
						~~BH-8~~
GP-5	43-10-35.0	-77-30-48.9	12-18-09	AOC-1	<8'	**BH-9**
GP-4	43-10-35.7	-77-30-49.3	12-18-09	AOC-1	~8'	**BH-10**
GP-11	43-10-36.3	-77-30-48.0	12-21-09	AOC-2	~8'	**BH-11**
GP-10/Surface-7	43-10-35.7	-77-30-47.6	12-18-09	AOC-1	<8'	**BH-12**
GP-9	43-10-35.1	-77-30-47.1	12-18-09	AOC-1	<8'	**BH-13**
GP-8/Surface-8	43-10-34.5	-77-30-46.4	12-21-09	AOC-1	~2'	**BH-14**
						~~BH-15~~
GP-13	43-10-35.2	-77-30-45.0		AOC-2	~8'	**BH-16**
GP-12	43-10-35.9	-77-30-45.7	12-21-09	AOC-2	Native	**BH-17**
GP-14	43-10-36.7	-77-30-46.5	12-21-09	Native	Native	**~~BH-18~~**
GP-15	43-10-37.1	-77-33-45.2	12-21-09	Native	Native	**BH-19**
						~~BH-20~~
TP-1	43-10-31.9	-77-30-48.2	01/06/10	Native		
TP-2	43-10-31.4	-77-30-46.9	01/06/10	AOC-2		
TP-3	43-10-31.5	-77-30-47.2	01/06/10	AOC-2		
TP-4	43-10-32.7	-77-30-48.1	01/06/10	AOC-1		
TP-5	43-10-33.3	-77-30-49.1	01/06/10	AOC-2		
TP-6	43-10-34.2	-77-30-49.6	01/06/10	AOC-2		
TP-7	43-10-34.9	-77-30-50.2	01/06/10	AOC-2		
TP-8	43-10-35.2	-77-30-50.8	01/06/10	AOC-2		
TP-9	43-10-35.5	-77-30-50.9	01/06/10	Native		**NW Corner**
TP-10	43-10-35.9	-77-30-50.3	01/06/10	AOC-1		
TP-11	43-10-36.1	-77-30-50.7	01/06/10	AOC-1		
TP-12	43-10-36.2	77-30-49.7	01/06/10	AOC-1		
TP-13	43-10-36.5	-77-30-48.4	01/06/10	AOC-2		
TP-14	43-10-36.7	-77-30-48.5	01/06/10	AOC-2		
TP-15	43-10-36.8	-77-30-46.9	01/06/10	Native		
TP-16	43-10-36.3	-77-30-47.4	01/06/10	AOC-1		
TP-17	43-10-36.5	-77-30-46.0	01/06/10	Native		
TP-18	43-10-36.0	-77-30-45.7	01/06/10	AOC-2		
TP-19	43-10-36.2	-77-30-44.4	01/06/10	AOC-2		
TP-20	43-10-36.1	-77-30-44.1	01/06/10	AOC-2		
TP-21	43-10-35.1	-77-30-44.4	01/06/10	AOC-2		
TP-22	43-10-32.7	-77-30-45.4	01/06/10	AOC-2		**By MW-5**
TP-23	43-10-31.9	-77-30-46.0	01/06/10	AOC-2		
Boundary #1	43-10-35.2	-77-30-51.7	01/06/10	N/A		
Boundary #2	43-10-33.5	-77-30-50.6	01/06/10	N/A		
Boundary #3	43-10-33.7	-77-30-49.9	01/06/10	N/A		
Boundary #4	43-10-30.9	-77-30-47.9	01/06/10	N/A		
Boundary #5	43-10-37.5	-77-30-43.5	01/06/10	N/A		

6.3 Conceptual Model

Historical, unpermitted waste disposal of primarily C&D debris resulted in elevated levels of SVOCs, and the PCBs Aroclor 1254 and Aroclor 1248, in site soils. Although there are no known users of groundwater in the site area, the Site is located above the eastern shore of Irondequoit Bay, adjacent to which is a mapped state and federal wetland. The measured depth to groundwater beneath the Site ranges from 30.37 to 72.25 feet below grade. Based on a review of topographical information and observations made at the Site, the groundwater is assumed to flow towards Irondequoit Bay to the west of the Site. Based on known contamination on the Site, the nearby (downgradient) wetland and contaminated fill soils are being considered AOC, with respect to this RI.

6.4 Standards, Criteria, and Guidelines (SCGs)

The Standards, Criteria, and Guidelines (SCGs) utilized during this RI were NYSDEC-approved protocols. In particular, the SCGs for soil include the Restricted Use and Restricted Residential Soil Cleanup Objectives listed in 6 NYCRR Part 375-6 and for groundwater and surface water include the Ambient Water Quality Standards listed in 6 NYCRR Part 700-706. Due to the lack of soil vapor intrusion, NYSDOH protocols were not taken into consideration during this RI.

7 SCOPE OF WORK

This section details the activities that were performed during the RI. The work was conducted in accordance with Draft DER-10, *Technical Guidance for Site Investigation and Remediation*, the Draft Brownfield Cleanup Program Guide and BCP codified in Title 14 of Article 27 of the Environment Conservation Law.

The 2002 test pit and borehole locations within and bordering the BCP area are presented on Figure 5 and the 2009/2010 test pit, Geoprobe®, borehole and surface sample locations are presented on Figure 6.

Other than the deviations outlined in Section 5 of this RIR, the RI was performed in conformance with the work plan approved by the NYSDEC on December 3, 2009.

7.1 Preliminary Mapping and Utility Mark Out

Prior to conducting the sampling, the locations of subsurface utilities (e.g. electric, telephone, gas, and sewer) were marked by Underground Facilities Protective Organization (UFPO); no utilities were identified within the boundaries of the BCP site. A Site Map can be viewed in Figures 1, 2, 3, and 4 attached to this report.

7.2 Signage

A BCP sign was posted at the Site before beginning the RI work.

7.3 Geoprobe® Soils

On December 16, 18 and 21, 2009, Passero Associates collected 15 subsurface soil samples using a direct-push Geoprobe® drill rig to delineate the areal and vertical extent of contaminated fill materials. Soils were collected and screened until native soils were identified. Four foot plastic sample sleeves were advanced to collect and log soil in the field by Passero Associates' geologists. Soils were placed in a re-sealable plastic bag for screening using an organic vapor meter (OVM) equipped with a photoionization detector (PID).

An OVM is a portable, battery operated, gas chromatograph using digital light-emitting diode (LED) displays and high level audio alarms. The OVM that was utilized during the field investigation activities was a Mini Rae 2000 PID. The specifications for the Mini Rae 2000 are included in Appendix 2. Headspaces of the bagged soils were screened using the PID. The PID readings were recorded in a field log book and a summary table of the PID readings is provided in Appendix 2.

If elevated levels of organic vapors were recorded, the soils exhibiting the highest PID readings were submitted for laboratory analysis. Additionally, other indicators of contamination such as staining or olfactory evidence were used in the selection of samples for laboratory analysis. In the absence of visible staining, olfactory evidence, or elevated PID readings, one representative sample of the fill soils from each boring were submitted for laboratory analysis for Analytical Services Protocol (ASP) methodology with Category B deliverable packages. In soil boring locations where no fill soils were identified, one soil sample was collected from the interval of 4 to 8 feet beneath ground surface (BGS) for laboratory analysis.

Sample locations and data tables can be viewed in figure 6 attached to this report.

7.4 Boreholes

In December 2009 and January 2010, six boreholes were advanced at the Site and used for the installation of six groundwater monitoring wells referred to as MW-1, MW-2, MW-3, MW-4, MW-5 Deep and MW-5 Shallow (Figure 16). The monitoring wells were installed with a truck-mounted hollow stem auger (HSA) drill rig. Hollow stem augers were used to bore through soils until saturated conditions were encountered and the desired depth was achieved.

Split spoon samples were collected at five-foot intervals; soil obtained using the split spoon system was sampled for visual inspection and VOC screening using the PID. No evidence of contamination (i.e. odors, elevated organic vapor readings, staining, or free product) was noted in any of the soil sampled in the boreholes. One soil sample was collected and analyzed for full Target Compound List/Target Analyte List (TCL/TAL) laboratory analyses from each borehole from directly above the depth that saturation was encountered.

One soil sample was collected and analyzed for full TCL/TAL laboratory analyses from the 8’-10’ interval from BH-1, BH-3, BH-4 and BH-5; these samples were collected, along with one test pit sample, to complete the number of soil samples indicated in the RIWP for the Geoprobe® investigation.

Surface soil samples were collected no deeper than six inches BGS and from within a few feet of the borehole locations.

Sample locations and data tables can be viewed in figure 6 attached to this report.

7.5 Monitoring Wells

In December 2009 and January 2010, six monitoring wells were constructed of 2-inch diameter, machine slot polyvinyl chloride (PVC) well screen and PVC riser, installed using the HSA drill system. The well screens are 20 feet long and set 10 feet into the water table. A sand pack was placed from approximately one foot below the screen to one foot above the screen. A bentonite seal was placed on top of the sand pack, and the wells were completed with cement/bentonite grout. Locking metal stand pipes were set in concrete over each well. The location of soil boring is depicted in Figure 6 and the typical well construction details are depicted on Figure 18. Copies of Passero soil boring logs can be viewed in Appendix 2, and copies of the monitoring well development logs can be viewed in Appendix 4, both attached to this report.

7.6 Test Pits

During January 6 and 7, 2010, a test pit investigation was completed to identify the limits of the historical fill soils located on the Site. As indicated on Figure 6, twenty three test pits were excavated to delineate the extent of the fill. As the approximate fill soil boundaries were known, test pits were excavated around the periphery of the fill soils to determine the boundary between the historical fill and the native soils. The fill soil boundaries are indicated on Figure 19. Sample locations and data tables can be viewed in figure 6 attached to this report.

7.7 Survey

The monitoring well, Geoprobe® soil boring, and test pit locations were located and elevations above mean sea level determined from the inner casing of each well by Passero Associates’ survey crew. Figure 6 provides the location of the surveyed wells.

The survey provides x, y, and z coordinate data for each well, soil boring, and test pit relative to the site datum. Elevations are expressed using the National Geodetic Vertical Datum (NGVD) 1988 coordinate system and the horizontal measurements using the North American Datum (NAD) 1983 Universal Transverse Mercator (UTM) Zone 18 coordinate system. Survey notes can be viewed in Appendix 6 attached to this report.

8 SOIL SAMPLING

The intent of the investigation was to determine the nature and extent of contamination as well as to delineate the horizontal and vertical extent of historically-placed fill materials at the Site. A test pitting program was conducted to accurately define the horizontal and, to a lesser extent, the vertical extent of historical fill.

8.1 Subsurface Soil Sampling

Based on our 2002 Phase II investigation data, the contaminants of concern at the Site include SVOCs and PCBs. Passero delineated the SVOC and PCB contamination during this RI through the advancement and sampling of the following:

- fifteen (15) bore holes were advanced with a direct-push Geoprobe® drill rig with fifteen (15) soil samples submitted for laboratory analysis;

- six (6) boreholes were advanced with a truck-mounted drill rig and split spoon soil samples were collected through hollow-stem augers; ten (10) soil samples were submitted for laboratory analysis; and

- twenty-three (23) test pits were excavated with one (1) test pit soil sample submitted for laboratory analysis.

During the Geoprobe® sampling effort, four-foot acetate sample sleeves were used to collect soil; each four foot section of soil was logged in the field by Passero Associates personnel. The Geoprobe® was used to advance borings through fill soil until native soil or refusal was encountered. Representative soil samples were placed in re-sealable plastic bags screened for total VOCs using an OVM equipped with a PID. As stated previously, the OVM utilized for the RI was a Mini Rae 2000 PID. The PID readings were recorded in a field log book, and a summary table of the PID readings, boring logs, and test pit logs are included in Appendix 2.

If elevated levels of organic vapors were recorded, soil exhibiting the highest PID readings was submitted for laboratory analysis. In the absence of visible staining or PID readings, one representative sample of the fill soils from each boring was submitted for laboratory analysis for TCL VOCs and tentatively identified compounds (TICs); TCL SVOCs and TICs; and for PCBs; pesticides; and TAL metals by ASP methodology with Category B deliverable packages. In boring locations where no fill soils were encountered, one soil sample was collected from the interval of 4 to 8 feet below grade for laboratory analysis.

The results of the subsurface soil analysis are discussed in the following subsections and tabulated on Pages 17 through 26 with comparisons to 6NYCRR Part 375-6.8 Unrestricted, Restricted Use, and protection of groundwater soil cleanup objectives. The results of the subsurface soil analysis are also tabulated in their entirety, including quantitation limits, in Tables 1-15 at the end of this report. The Data Usability Summary Reports (DUSRs) and laboratory data are on CDs in Appendix 7 and 8 of this report.

8.1.1 *Results of Subsurface Soil Sampling - VOCs*

The VOC acetone was reported above the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs in soil collected from GP-1 (4'-8'), GP-2 (0'-4'), GP-5 (4'-8'), GP-6 (8'-12'), GP-13 (4;-8'). The VOC acetone was reported above of the NYSDEC Part 375-6.8(a) Protection of Groundwater SCOs in GP-1 (4'-8'), GP-2 (0'-4'), GP-5 (4'-8'), GP-6 (8'-12'), GP-13 (4;-8') and the field duplicate (blank). Acetone was also reported in the September 22-23, 2010 Groundwater Sampling Results. However, acetone has not been identified as a site-specific contaminant of concern and is often introduced as a result of laboratory contamination.

Soil collected from Test Pit TP-7 exhibited concentrations of methylene chloride, ethylbenzene, total Xylenes above the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs and Protection of Groundwater. These compounds were not found in the groundwater samples.

The laboratory results for subsurface VOCs are tabulated on Pages 18 through 20 of this report and summarized on Figure 7. The subsurface VOC data are tabulated in their entirety, including the quantitation limits, in Tables 1-3 at the end of this report.

8.1.2 *Results of Subsurface Soil Sampling - SVOCs*

SVOCs exceeding the NYSDEC Part 375-6.8(a) Restricted Use, Restricted Residential SCOs and the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs were reported in soil collected from GP-4 (4'-8'), GP-5 (4'-8'), GP-8 (0'-4'),GP-9 (4'-8'), and the field duplicate.

SVOCs exceeding the NYSDEC Part 375-6.8(a) Protection of Groundwater were reported in soil collected from GP-4, GP-5, GP-7 and GP-8. These compounds were not detected in the groundwater samples.

The SVOC benzo(b)fluoranthene was reported in soil collected from TP-7 above the NYSDEC Part 375-6.8(a) Restricted Use Restricted Residential SCOs.

The laboratory results for subsurface SVOCs are tabulated on Pages 21through 23 of this report and are summarized on Figure 8. The subsurface SVOC data are tabulated in their entirety, including quantitation limits, in Tables 4-6 at the end of this report.

8.1.3 *Results of Subsurface Soil Sampling - Pesticides*

Pesticides detected above the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs were reported in soil collected from BH-3 (4'-6'), BH-5 (8'-10'), GP-2 (0'-4'), GP-4 (4'-8'), GP-5 (4'-8'), GP-7 (0'-4'), GP-9 (4'-8'), GP-10 (4'-8'), GP-11 (4'-8') GP-13 (4'-8') and TP-7.

Pesticides detected above the NYSDEC Part 375-6.8(a) Restricted Use, Restricted Residential were reported in soil collected from GP-5 and GP-7.

Pesticides detected above the NYSDEC Part 375-6.8(a) Protection of Groundwater were reported in soil collected from GP-2, GP-4, GP-5 GP-7 and the field duplicate.

The pesticide 4,4'-DDT, which exceeded NYSDEC Part 375-6.8(a) Protection of Groundwater in GP-4, was also detected in groundwater collected from MW-1 and MW-5D.

The laboratory results for subsurface pesticides are tabulated on Pages 24 and 26 of this report and are plotted on Figure 9. The subsurface pesticide data are tabulated in their entirety, including quantitation limits, in Tables 7-9 at the end of this report.

8.1.4 Results of Subsurface Soil Sampling - PCBs

PCBs detected above the NYSDEC Part 375-6.8(a) Restricted Use, Restricted Residential SCOs and the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs were reported in soil collected from GP-4 (4'-8'), GP-5 (4'-8'), GP-6 (4'-8'), GP-7 (0'-4') and TP-7.

PCBs detected above the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs were reported in soil collected from GP-2 (0'-4'), and GP-9 (4'-8').

PCBs detected above the NYSDEC Part 375-6.8(a) Protection of Groundwater were reported in soil samples collected from GP-7 and Test Pit 7. These compounds were not reported above laboratory detection limits in the groundwater samples.

The laboratory results for subsurface PCBs are tabulated on Page 27 of this report and are plotted on Figure 10. The subsurface PCB data are tabulated in their entirety, including quantitation limits, in Tables 10-12 at the end of this report.

8.1.5 Results-Sub-surface Soils-Metals

Metals detected above the 6NYCRR Part 375-6.8 Unrestricted, Restricted Use, and protection of groundwater soil cleanup objectives were reported in soil samples collected from BH-3 (4'-6'), GP-2 (0'-4'), GP-7 (0'-4') GP-10 (4'-8'), and also in the field duplicate.

Metals detected above the NYSDEC Part 375-6.8(a) Protection of Groundwater were reported in soil samples collected from BH-3, GP-2, GP-7, GP-10 and the field duplicate. Metals detected are discussed below.
Cadmium, which exceeded NYCRR Part 375-6.8 Unrestricted, Restricted Use, and protection of groundwater soil cleanup objectives in GP-2, GP-7 and the field duplicate, was not detected in monitoring wells.

Chromium, which exceeded NYSDEC Part 375-6.8(a) Protection of Groundwater in GP-2, GP-4, GP-7 and the field duplicate, was also detected in MW-2, MW-4 and MW-5D.

Copper, which exceeded NYCRR Part 375-6.8 Unrestricted, Restricted Use, and protection of groundwater soil cleanup objectives in GP-2 and the field duplicate, was not detected in monitoring wells.

Lead, which exceeded NYSDEC Part 375-6.8(a) Protection of Groundwater in GP-2, GP-10 and the field duplicate, was also detected in all of the monitoring wells sampled.

Nickel, which exceeded NYSDEC Part 375-6.8(a) Protection of Groundwater in GP-2 and GP-7, was also detected in MW-2, MW-4 and MW-5.

Nickel, which exceeded NYSDEC Part 375-6.8(a) Protection of Groundwater in GP-2, was not detected in monitoring wells.

Zinc, which exceeded NYSDEC Part 375-6.8(a) Protection of Groundwater in GP-2, was also detected in groundwater from all of the monitoring wells sampled.

The laboratory results for subsurface metals are tabulated on Pages 28 through 30 of this report and are summarized on Figure 11. The subsurface metals data are tabulated in their entirety, including quantitation limits, in Tables 13-15 at the end of this report.

VOCs - Geoprobe® Soils

Sample ID (Depth) Sampling Date Units	GP 1 (4' - 8') 12/16/09 (ppm)	GP 2 (0' - 4') 12/18/09 (ppm)	GP 3 (4' - 8') 12/16/09 (ppm)	GP 4 (4' - 8') 12/18/09 (ppm)	GP 5 (4' - 8') 12/18/09 (ppm)	GP 6 (8' - 12') 12/18/09 (ppm)	GP 7 (0' - 4') 12/18/09 (ppm)	GP 8 (0' - 4') 12/21/09 (ppm)	GP 9 (4' - 8') 12/18/09 (ppm)	GP 10 (4' - 8') 12/21/09 (ppm)	GP 11 (4' - 8') 12/21/09 (ppm)	GP 12 (0' - 4') 12/21/09 (ppm)	GP 13 (4' - 8') 12/21/09 (ppm)	GP 14 (0' - 4') 12/21/09 (ppm)	GP 15 (0' - 4') 12/21/09 (ppm)	Field Duplicate (Blank) N/A 12/18/2009 (ppm)	Part 375-6.8(a): Unrestricted Use SCOs (ppm)	Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)	Part 375-6.8(b): Protection of Groundwater SCOs (ppm)
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	0.00262 J	ND	ND	ND	ND	ND	ND	ND	0.25	100	0.25
Tetrachloroethene	ND	ND	ND	0.00304 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.47	19	1.3
Trichloroethene	ND	0.0220	ND	0.00565	ND	ND	ND	ND	ND	0.00519	ND	ND	ND	ND	ND	ND	0.47	21	0.47
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00234 J	0.02	0.9	0.02
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00298 j	0.06	4.8	0.06
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0603	ND	ND	ND	1.1	100	1.1
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00362 J	1	41	1
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7	100	0.7
m,p-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00297 J	0.26	100	1.6
o-Xylene	ND	ND	ND	ND	0.0116 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00368 J	0.26	100	1.6
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0467	ND	ND	ND	1.8	13	1.8
n-Butylbenzene	ND	ND	ND	ND	ND	J 0.300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	NS	NS
sec-Butylbenzene	ND	ND	ND	ND	0.0358	J 0.351	ND	ND	ND	ND	ND	ND	0.00464	ND	ND	0.0132	11	100	11
n-Propylbenzene	ND	ND	ND	ND	0.0118 J	J 0.167	ND	ND	ND	ND	ND	ND	0.00281 J	ND	ND	0.00682	3.9	100	3.9
Naphthalene	ND	ND	ND	ND	0.118	J 0.131	ND	0.0210	ND	ND	ND	ND	ND	ND	ND	ND	12	100	12
1,2,4-Trimethylbenzene	ND	ND	ND	ND	0.143	J 0.687	ND	ND	ND	ND	ND	ND	0.00396 J	ND	ND	0.0408	3.6	52	3.6
1,3,5-Trimethylbenzene	ND	ND	ND	ND	0.0360	J 0.319	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0182	8.4	52	8.4
Acetone	**J 0.279**	**J 0.0813**	J 0.0343	ND	**J 0.376**	**J 0.206**	ND	J 0.0209	ND	ND	ND	J 0.0316	**J 0.420**	J 0.0360	J 0.0303	**0.153**	0.05	100	0.05
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	J 0.0470	ND	ND	ND	NS	NS	0.12
Carbon disulfide	ND	ND	ND	ND	0.0747	ND	ND	ND	ND	ND	ND	ND	0.00855	ND	ND	0.0182	NS	NS	2.7
Total TICs	0	0.0156	0	0.1086	3.7505	17.938	0	0	0.144	0.0227	0.0101	0	0.2184	0	30.3	1.8664	NS	NS	NS

ND: Not Detected at the Reporting Limit
J: Analyte detected at or below quantitation limits
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

VOCs - Borehole Soils													
Sample ID (Depth) Sampling Date Units	**BH 1 (8′ - 10′) 01/06/2010 (ppm)**	**BH 1 (28′ - 30′) 01/06/2010 (ppm)**	**BH 1 (63′ - 65′) 01/07/2010 (ppm)**	**BH 2 (63′ - 65′) 12/22/2009 (ppm)**	**BH 3 (4′ - 6′) 12/16/2009 (ppm)**	**BH 3 (59′ - 61′) 12/17/2009 (ppm)**	**BH 4 (8′ - 10′) 01/04/2010 (ppm)**	**BH 4 (28′ - 30′) 01/04/2010 (ppm)**	**BH 5 (8′ - 10′) 12/14/2009 (ppm)**	**BH 5 (34′ - 36′) 12/14/2009 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(a): Protection of Groundwater SCOs (ppm)**
Methylene chloride	J0.0125	J 0.0114	J 0.00649	ND	ND	ND	ND	ND	ND	ND	0.05	100	0.05
1,1,1-Trichloroethane	J 0.00363	J 0.00441	ND	ND	ND	ND	ND	ND	ND	ND	0.68	100	0.68
Trichloroethene	J 0.00400	0.00584	ND	ND	0.00760	ND	ND	ND	ND	ND	0.47	21	0.47
Trichlorofluoromethane	ND	ND	J 0.00206	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS
p-Isopropyltoluene	ND	ND	ND	ND	0.0219 J	ND	ND	ND	ND	ND	NS	NS	10[1,2]
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	100	12
1,2,4-Trimethylbenzene	ND	ND	ND	ND	0.00684	ND	ND	ND	0.00295 J	0.00233 J	3.6	52	3.6
Acetone	0.0369	J 0.0202	J 0.0227	**J 0.0703**	ND	**J0.0850**	ND	J0.0467	J 0.0394	J 0.0457	0.05	100	0.05
Carbon disulfide	ND	ND	ND	ND	0.00488 J	ND	ND	ND	ND	ND	NS	NS	2.7[1]
Total TICs	0	0	0	0	0.301	0	0	0	0.0391	0.1205	NS	NS	NS

ND: Not Detected at the Reporting Limit
J: Analyte detected at or below quantitation limits
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO
1: CP-51 Soil Cleanup Guidance, Supplemental Soil Cleanup Objectives
2: CP-51 Soil Cleanup Guidance, Soil Cleanup Levels for Gasoline Contaminated Soils

VOCs – Test Pit Soil				
Sample ID (Depth) Sampling Date Units	**TP-7 N/A 01/06/2010 (µg/Kg)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b):Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Methylene chloride	**J 0.177**	0.05	100	0.05
Ethylbenzene	**3.240**	1	41	1
Toluene	J 0.112	0.7	100	0.7
m,p-Xylene	**8.370**	0.26	100	1.6
o-Xylene	**6.620**	0.26	100	1.6
n-Propylbenzene	0.367	3.9	100	3.9
Naphthalene	0.539	12	100	12
1,2,4-Trimethylbenzene	3.090	3.6	52	3.6
1,3,5-Trimethylbenzene	1.270	8.4	52	8.4
Total TICs	38.663	NS	NS	NS
J: Analyte detected at or below quantitation limits				
NS: No Standard				
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs				
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs				
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO				

SVOCs – Geoprobe® Soils

Sample ID (Depth) Sampling Date Units	GP 1 (4' - 8') 12/16/09 (ppm)	GP 2 (0' - 4') 12/18/09 (ppm)	GP 3 (4' - 8') 12/16/09 (ppm)	GP 4 (4' - 8') 12/18/09 (ppm)	GP 5 (4' - 8') 12/18/09 (ppm)	GP 6 (8' - 12') 12/18/09 (ppm)	GP 7 (0' - 4') 12/18/09 (ppm)	GP 8 (0' - 4') 12/21/09 (ppm)	GP 9 (4' - 8') 12/18/09 (ppm)	GP 10 (4' - 8') 12/21/09 (ppm)	GP 11 (4' - 8') 12/21/09 (ppm)	GP 12 (0' - 4') 12/21/09 (ppm)	GP 13 (4' - 8') 12/21/09 (ppm)	GP 14 (0' - 4') 12/21/09 (ppm)	GP 15 (0' - 4') 12/21/09 (ppm)	Field Duplicate (blank) 12/18/2009 (ppm)	Part 375-6.8(a): Unrestricted Use SCOs (ppm)	Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)	Part 375-6.8(b): Protection of Groundwater SCOs (ppm)
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	J 2.220	ND	ND	ND	ND	ND	ND	ND	ND	20	100	98
Anthracene	ND	ND	ND	ND	0.603	ND	ND	5.640	ND	ND	ND	ND	ND	ND	ND	ND	100	100	1,000
Benzo (a) anthracene	ND	ND	ND	**3.060**	**3.210**	ND	ND	**9.670**	**1.430**	ND	ND	ND	ND	ND	ND	**J 2.170**	1	1	1
Benzo (a) pyrene	ND	ND	ND	**4.950**	**4.270**	ND	ND	**7.150**	**2.140**	ND	ND	ND	ND	ND	ND	**J 1.850**	1	1	22
Benzo (b) fluoranthene	ND	ND	ND	**6.890**	**4.500**	ND	ND	**6.050**	**2.200**	ND	ND	ND	ND	ND	ND	ND	1	1	1.7
Benzo (g,h,i) perylene	ND	ND	ND	5.670	3.350	ND	ND	3.550	2.030	ND	ND	ND	ND	ND	ND	ND	100	100	1,000
Benzo (k) fluoranthene	ND	ND	ND	**3.050**	**3.210**	ND	ND	**6.360**	**1.780**	ND	ND	ND	ND	ND	ND	ND	0.8	3.9	1.7
Chrysene	ND	ND	ND	**4.160**	**3.900**	ND	ND	**8.840**	**1.780**	ND	ND	ND	ND	ND	ND	**J 2.170**	1	3.9	1
Bis (2-ethylhexyl) phthalate	ND	0.237 J	ND	ND	ND	ND	ND	ND	J 0.174	ND	ND	ND	ND	ND	ND	21.500	NS	NS	436[1]
Dibenz (a,h) anthracene	ND	ND	ND	**1.780**	**1.470**	ND	ND	ND	**0.626**	ND	ND	ND	ND	ND	ND	ND	0.33	0.33	1,000
Fluoranthene	ND	ND	ND	2.890	3.710	ND	ND	20.800	1.730	ND	ND	ND	ND	ND	ND	3.810	100	100	1,000
Fluorene	ND	ND	ND	ND	ND	ND	ND	J 2.500	<0.320	ND	ND	ND	ND	ND	ND	ND	30	100	386
Indeno (1,2,3-cd) pyrene	ND	ND	ND	**4.150**	**2.640**	ND	ND	**3.590**	**1.350**	ND	ND	ND	ND	ND	ND	ND	0.5	0.5	0.5[3]
Naphthalene	ND	ND	ND	ND	0.710	ND	ND	J 3.110	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	12
Phenanthrene	ND	ND	ND	0.611	1.430	ND	ND	17.800	0.606	ND	ND	ND	ND	ND	ND	J 2.520	100	100	1,000
Pyrene	ND	ND	ND	2.890	3.630	ND	J 0.174	17.300	1.630	ND	ND	ND	ND	ND	ND	3.920	100	100	1,000
Acenaphthylene	ND	ND	ND	ND	0.608	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	98
Total TICs	0	0.564	0	20.042	18.018	3.356	6.727	52.980	16.176	0	0	0	187.132	0	0	16.300	100	NS	NS

ND: Not Detected at the Reporting Limit
J: Analyte detected at or below quantitation limits
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO
1: CP-51 Soil Cleanup Guidance, Supplemental Soil Cleanup Objectives
3: CP-51 Soil Cleanup Guidance, Soil Cleanup Levels for Fuel Oil Contaminated Soil

SVOCs – Borehole Soils													
Sample ID (Depth) Sampling Date Units	**BH 1 (8′ - 10′) 01/06/2010 (ppm)**	**BH 1 (28′ - 30′) 01/06/2010 (ppm)**	**BH 1 (63′ - 65′) 01/07/2010 (ppm)**	**BH 2 (63′ - 65′) (ppm)**	**BH 3 (4′ - 6′) 12/16/2009 (ppm)**	**BH 3 (59′ - 61′) 12/17/2009 (ppm)**	**BH 4 (8′ - 10′) 01/04/2010 (ppm)**	**BH 4 (28′ - 30′) 01/04/2010 (ppm)**	**BH 5 (8′ - 10′) 12/14/2009 (ppm)**	**BH 5 (34′ - 36′) 12/14/2009 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Butylbenzylphthalate	ND	ND	ND	ND	J 0.362	ND	ND	ND	ND	ND	NS	NS	12.2[1]
Di-n-butyl phthalate	ND	ND	ND	ND	0.804	ND	ND	ND	ND	ND	NS	NS	8.1[1]
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	J 0.223	ND	100	100	1,000
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	J 0.192	ND	100	100	1,000
Total TICs	0	4.304	0.448	0	0.2407	3.510	0	0	0	0	NS	NS	NS

ND: Not Detected at the Reporting Limit
J: Analyte detected at or below quantitation limits
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO
1: CP-51 Soil Cleanup Guidance, Supplemental Soil Cleanup Objectives

SVOCs – Test Pit Soil				
Sample ID **Sampling Date** **Units**	**TP-7** **1/06/2010** **(ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs** **(ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs** **(ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs** **(ppm)**
Benzo (a) anthracene	0.425	1	1	1
Benzo (a) pyrene	0.584	1	1	22
Benzo (b) fluoranthene	**1.020**	**1**	**1**	**1.7**
Benzo (g,h,i) perylene	0.786	100	100	1,000
Benzo (k) fluoranthene	0.466	0.8	3.9	1.7
Chrysene	0.677	1	3.9	1
Butylbenzylphthalate	J 0.322	NS	NS	122[1]
Bis (2-ethylhexyl) phthalate	0.579	NS	NS	435[1]
2-Methylnapthalene	1.080	NS	NS	36.4
Dibenz (a,h) anthracene	J 0.275	0.33	0.33	1,000
Fluoranthene	0.416	100	100	1,000
Indeno (1,2,3-cd) pyrene	0.474	0.5	0.5	8.2
Naphthalene	0.802	NS	NS	12
Pyrene	0.417	100	100	1,000
Total TICs	125.01	NS	NS	NS

J: Analyte detected at or below quantitation limits
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

Pesticides – Geoprobe® Soils

Sample ID (Depth) Sampling Date Units	GP 1 (4′ - 8′) 12/16/09 (ppm)	GP 2 (0′ - 4′) 12/18/09 (ppm)	GP 3 (4′ - 8′) 12/16/09 (ppm)	GP 4 (4′ - 8′) 12/18/09 (ppm)	GP 5 (4′ - 8′) 12/18/09 (ppm)	GP 6 (8′ - 12′) 12/18/09 (ppm)	GP 7 (0′ - 4′) 12/18/09 (ppm)	GP 8 (0′ - 4′) 12/21/09 (ppm)	GP 9 (4′ - 8′) 12/18/09 (ppm)	GP 10 (4′ - 8′) 12/21/09 (ppm)	GP 11 (4′ - 8′) 12/21/09 (ppm)	GP 12 (0′ - 4′) 12/21/09 (ppm)	GP 13 (4′ - 8′) 12/21/09 (ppm)	GP 14 (0′ - 4′) 12/21/09 (ppm)	GP 15 (0′ - 4′) 12/21/09 (ppm)	Field Duplicate. 12/18/09 (ppm)	Part 375-6.8(a): Unrestricted Use SCOs (ppm)	Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)	Part 375-6.8(b): Protection of Groundwater SCOs (ppm)
delta-BHC	ND	ND	ND	ND	J 0.0382*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.04	100	0.25
alpha-Chlordane	ND	ND	ND	J 0.0835*	ND	ND	ND	ND	ND	0.0239	J 0.0134*	ND	ND	ND	ND	ND	0.094	4.2	2.9
gamma-Chlordane	ND	ND	ND	J 0.128	ND	ND	ND	ND	ND	0.00435	0.0206	ND	ND	ND	ND	ND	NS	NS	14[1]
4,4′-DDD	ND	ND	ND	ND	ND	ND	**J 0.405***	ND	ND	**JN 0.00365***	**J 0.00571**	ND	**J 0.00881***	ND	ND	ND	0.0033	13	14
4,4′-DDE	ND	**JN 0.0164***	ND	**0.0730**	**JN 0.0199***	ND	**JN 0.151***	ND	ND	**J 0.00779**	**0.00454**	ND	**J 0.00767***	ND	ND	ND	0.0033	8.9	17
4,4′-DDT	ND	**JN 0.0669***	ND	**0.173**	**0.0913**	ND	**1.110**	ND	**J 0.0596**	**J 0.0206**	**J 0.0127**	ND	**J 0.00765***	ND	ND	ND	0.0033	7.9	136
Dieldrin	ND	**J 0.0486***	ND	**J 0.153***	**J 0.0664***	ND	**JN 0.869***	ND	ND	ND	**0.0158**	ND	**0.00506**	ND	ND	ND	0.005	0.2	0.1
Endosulfan II	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00500	ND	ND	ND	ND	ND	2.4	24	102
Endosulfan Sulfate	ND	ND	ND	JN 0.103*	ND	ND	ND	ND	ND	JN 0.0761*	JN 0.0159*	ND	ND	ND	ND	ND	2.4	24	1,000
Endrin	ND	J 0.0349*	ND	ND	ND	ND	**J 0.120**	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.014	11	0.06
Endrin Aldehyde	ND	JN 0.0122*	ND	0.0245	ND	ND	JN 0.168*	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS
Heptachlor Epoxide	ND	JN 0.0251*	ND	0.0611	J0.0631*	ND	J 0.462*	ND	ND	ND	0.00587	ND	ND	ND	ND	ND	NS	NS	0.02[1]
Methoxychlor	ND	JN 0.00349*	ND	ND	ND	ND	J 0.388	J 0.0196*	JN 0.0359	ND	ND	ND	ND	ND	ND	JN 38.6*	NS	NS	900
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	0.359*	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS

ND: Not Detected at the Reporting Limit
J: Analyte detected at or below quantitation limits
JN: Non-routine analyte. Quantitation estimated
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
* concentration differs by more than 40% between primary and secondary columns
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

Pesticides – Borehole Soils													
Sample ID (Depth) Sampling Date Units	**BH 1 (8′ - 10′) 01/06/2010 (ppm)**	**BH 1 (28′ - 30′) 01/06/2010 (ppm)**	**BH 1 (63′ - 65′) 01/07/2010 (ppm)**	**BH 2 (63′ - 65′) 12/22/09 (ppm)**	**BH 3 (4′ - 6′) 12/16/2009 (ppm)**	**BH 3 (59′ - 61′) 12/17/2009 (ppm)**	**BH 4 (8′ - 10′) 01/04/2010 (ppm)**	**BH 4 (28′ - 30′) 01/04/2010 (ppm)**	**BH 5 (8′ - 10′) 12/14/2009 (ppm)**	**BH 5 (34′ - 36′) 12/14/2009 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
delta-BHC	ND	ND	ND	ND	ND	ND	J 0.00207	ND	ND	ND	0.04	100	0.25
gamma-Chlordane	ND	J 0.00270	ND	ND	ND	ND	ND	ND	ND	0.0140*	NS	NS	2.9[1]
4,4′-DDD	ND	ND	ND	ND	**0.107**	ND	ND	ND	**J 0.00508**	ND	0.0033	13	14
4,4′-DDT	ND	ND	ND	ND	**J0.0368***	ND	ND	ND	**0.00550**	ND	0.0033	7.9	136
Endosulfan Sulfate	ND	ND	ND	0.0882*	ND	ND	ND	ND	ND	ND	2.4	24	1,000
Heptachlor Epoxide	ND	ND	ND	ND	ND	ND	ND	ND	J 0.00771	ND	NS	NS	0.02[1]
Toxaphene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.158	NS	NS	NS

ND: Not Detected at the Reporting Limit
J: Analyte detected at or below quantitation limits
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
* concentration differs by more than 40% between primary and secondary columns
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO
1: CP-51 Soil Cleanup Guidance, Supplemental Soil Cleanup Objectives

Pesticides – Test Pit Soil				
Sample ID (Depth) Sampling Date Units	**TP-7 (8′ - 10′) 01/06/2010 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Aldrin	**J 0.0457***	0.005	0.97	0.19
alpha-Chlordane	**0.172**	0.094	4.2	2.9
gamma-Chlordane	R 0.862*	NS	NS	14[1]
4,4′-DDD	**0.367**	0.0033	13	14
4,4′-DDE	**0.282**	0.0033	8.9	17
4,4′-DDT	**JN 0.750***	0.0033	7.9	136
Dieldrin	**R 0.574***	0.005	0.2	0.1
Endosulfan I	R 0.0353*	2.4	24	102
Endrin Aldehyde	JN 0.155*	NS	NS	NS
Heptachlor Epoxide	0.421	NS	NS	0.02[1]
Methoxychlor	R 0.618*	NS	NS	900[1]

ND: Not Detected at the Reporting Limit

J: Analyte detected at or below quantitation limits

NS: No Standard

Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs

Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs

* concentration differs by more than 40% between primary and secondary columns

ND: Not Detected at the Reporting Limit

Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

1: CP-51 Soil Cleanup Guidance, Supplemental Soil Cleanup Objectives

PCBs – Geoprobe® Soils																		
Sample ID (Depth) Sampling Date Units	**GP 1 (4′ - 8′) 12/16/09 (mg/Kg)**	**GP 2 (0′ - 4′) 12/18/09 (mg/Kg)**	**GP 3 (4′ - 8′) 12/16/09 (mg/Kg)**	**GP 4 (4′ - 8′) 12/18/09 (mg/Kg)**	**GP 5 (4′ - 8′) 12/18/09 (mg/Kg)**	**GP 6 (8′ - 12′) 12/18/09 (mg/Kg)**	**GP 7 (0′ - 4′) 12/18/09 (mg/Kg)**	**GP 8 (0′ - 4′) 12/21/09 (mg/Kg)**	**GP 9 (4′ - 8′) 12/18/09 (mg/Kg)**	**GP 10 (4′ - 8′) 12/21/09 (mg/Kg)**	**GP 11 (4′ - 8′) 12/21/09 (mg/Kg)**	**GP 12 (0′ - 4′) 12/21/09 (mg/Kg)**	**GP 13 (4′ - 8′) 12/21/09 (mg/Kg)**	**GP 14 (0′ - 4′) 12/21/09 (mg/Kg)**	**GP 15 (0′ - 4′) 12/21/09 (mg/Kg)**	**Field Duplicate (blank) 12/18/09 (mg/Kg)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Aroclor 1248	ND	ND	ND	ND	**1.56**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	1	3.2
Aroclor 1254	ND	**0.664**	ND	**1.16**	**1.16**	**1.15**	**18.1**	ND	**0.193**	ND	ND	ND	ND	ND	ND	ND	0.1	1	3.2

ND: Not Detected at the Reporting Limit
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

PCBs – Borehole Soils												
Sample ID (Depth) Sampling Date Units	**BH 1 (8′ - 10′) 01/06/2010 (ppm)**	**BH 1 (28′ - 30′) 01/06/2010 (ppm)**	**BH 1 (63′ - 65′) 01/07/2010 (ppm)**	**BH 2 (63′ - 65′) 12/22/09 (ppm)**	**BH 3 (4′ - 6′) 12/16/2009 (ppm)**	**BH 3 (59′ - 61′) 12/17/2009 (ppm)**	**BH 4 (8′ - 10′) 01/04/2010 (ppm)**	**BH 4 (28′ - 30′) 01/04/2010 (ppm)**	**BH 5 (8′ - 10′) 12/14/2009 (ppm)**	**BH 5 (34′ - 36′) 12/14/2009 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Aroclor 1254	ND	ND	ND	ND	ND	ND	ND	ND	0.0699	ND	0.1	1	3.2

ND: Not Detected at the Reporting Limit
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

PCBs – Test Pit Soil				
Sample ID Sampling Date Units	**TP-7 01/06/2010 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b):Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Aroclor 1248	**13.0**	**0.1**	**1**	**3.2**

ND: Not Detected at the Reporting Limit
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

TAL Metals – Geoprobe® Soils																			
Sample ID (Depth) Sampling Date Units	**GP 1 (4' - 8') 12/16/09 (ppm)**	**GP 2 (0' - 4') 12/18/09 (ppm)**	**GP 3 (4' - 8') 12/16/09 (ppm)**	**GP 4 (4' - 8') 12/18/09 (ppm)**	**GP 5 (4' - 8') 12/18/09 (ppm)**	**GP 6 (8' - 12') 12/18/09 (ppm)**	**GP 7 (0' - 4') 12/18/09 (ppm)**	**GP 8 (0' - 4') 12/21/09 (ppm)**	**GP 9 (4' - 8') 12/18/09 (ppm)**	**GP 10 (4' - 8') 12/21/09 (ppm)**	**GP 11 (4' - 8') 12/21/09 (ppm)**	**GP 12 (0' - 4') 12/21/09 (ppm)**	**GP 13 (4' - 8') 12/21/09 (ppm)**	**GP 14 (0' - 4') 12/21/09 (ppm)**	**GP 15 (0' - 4') 12/21/09 (ppm)**	**Field Duplicate (blank) 12/18/09 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Aluminum	4930	14600	3820	7638	6050	7830	6680	5970	8130	6360	6550	3180	3540	8010	4550	13900	NS	NS	NS
Arsenic	4.06	6.72	4.00	7.02	5.85	5.08	8.59	4.42	4.90	6.34	6.39	2.55	2.47	3.21	3.28	12.5	13	16	16
Barium	22.2	**502**	21.0	99.7	57.5	62.0	55.4	51.9	49.4	49.0	48.0	14.0	20.8	21.6	18.5	**699**	350	400	820
Cadmium	ND	**72.4**	ND	ND	1.20	ND	**4.69**	ND	ND	ND	ND	ND	ND	ND	ND	2.35	2.5	4.3	7.5
Calcium	44800	26000	39700	12600	24700	27600	25300	32300	25600	70600	36900	30400	39600	1750	42400	55500	NS	NS	NS
Chromium	**9.61**	**66.2**	**8.91**	**32.2**	**18.7**	**13.9**	**302**	**10.7**	**20.5**	**11.9**	**12.2**	**8.11**	**8.86**	**12.5**	**10.7**	**60.2**	1	110	19
Cobalt	5.71	17.7	4.87	6.87	4.59	5.84	8.11	4.17	5.47	4.52	4.17	3.50	3.45	4.29	4.23	7.73	NS	NS	NS
Copper	10.7	**8870**	7.36	36.3	22.0	17.2	**87.7**	13.3	22.5	22.2	22.0	6.18	7.99	6.46	9.99	**156**	50	270	1,720
Iron	12700	45700	11700	15200	12600	13600	50200	11600	14000	11700	11800	9190	9040	12000	12200	50700	NS	NS	NS
Lead	2.65	**2140**	1.89	**166**	**84.7**	**76.2**	**84.7**	62.4	**63.7**	**1060**	**240**	1.36	6.68	2.96	2.29	**2490**	63	400	450
Magnesium	11900	6830	10800	4810	8000	8970	7550	9840	11400	21100	14300	8510	8720	1570	10700	7540	NS	NS	NS
Manganese	346	713	284	398	271	495	649	364	286	318	275	230	230	184	330	566	1,600	2000	2,000
Mercury	ND	0.0316	ND	**0.186**	**0.196**	**0.427**	0.0702	0.0597	0.0656	0.0629	**0.482**	ND	0.0844	0.0152	ND	0.139	0.18	0.81	0.73
Nickel	8.65	**208**	5.66	17.2	13.0	11.6	**130**	7.73	13.9	11.7	10.3	4.90	5.21	7.80	7.12	**31.4**	30	310	130
Potassium	840	1390	720	888	870	1420	1030	1210	1220	1300	1060	607	615	680	729	1130	NS	NS	NS
Silver	ND	**12.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	180	8.3
Sodium	243	798	243	95.5	150	94.1	149	176	ND	193	135	171	184	ND	209	527	NS	NS	NS
Vanadium	19.8	29.0	20.7	24.0	19.8	19.8	22.1	17.5	21.0	21.3	19.6	17.2	16.6	21.9	19.7	27.1	NS	NS	NS
Zinc	26.5	**5060**	21.2	**213**	**119**	56.8	118	53.3	81.3	96.6	105	11.3	39.1	15.7	17.2	**1530**	109	10,000	2,480

ND: Not Detected at the Reporting Limit
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

TAL Metals – Borehole Soils													
Sample ID (Depth) Sampling Date Units	**BH 1 (8′ - 10′) 01/06/2010 (mg/kg)**	**BH 1 (28′ - 30′) 01/06/2010 (mg/kg)**	**BH 1 (63′ - 65′) 01/07/2010 (mg/kg)**	**BH 2 (63′ - 65′) 12/22/09 (mg/kg)**	**BH 3 (4′ - 6′) 12/16/2009 (mg/kg)**	**BH 3 (59′ - 61′) 12/17/2009 (mg/kg)**	**BH 4 (8′ - 10′) 01/04/2010 (mg/kg)**	**BH 4 (28′ - 30′) 01/04/2010 (mg/kg)**	**BH 5 (8′ - 10′) 12/14/2009 (mg/kg)**	**BH 5 (34′ - 36′) 12/14/2009 (mg/kg)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Aluminum	3310	3330	2550	4280	2940	3170	5830	3660	8630	4120	NS	NS	NS
Antimony	ND	ND	ND	ND	21.8	ND	ND	ND	ND	ND	NS	NS	NS
Arsenic	ND	ND	ND	2.66	**15.0**	1.89	ND	ND	5.15	6.28	13	16	16
Barium	17.4	18.1	16.9	22.6	87.0	14.9	15.4	15.2	51.7	233	350	400	820
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	0.546	ND	7.2	72	47
Cadmium	ND	ND	ND	ND	2.11	ND	ND	ND	0.499	ND	2.5	4.3	7.5
Calcium	32800	30300	25900	33500	10800	3820	1990	40900	41000	105000	NS	NS	NS
Chromium	**7.30**	**6.83**	**5.98**	**10.4**	**25.5**	**5.34**	**10.7**	**8.22**	**13.8**	**6.29**	1	110	19
Cobalt	3.41	3.39	2.75	4.32	6.50	3.00	4.09	4.19	5.57	3.65	NS	NS	NS
Copper	7.49	7.83	5.07	7.11	100	5.88	10.1	6.95	21.6	7.35	50	270	1,720
Iron	9900	9460	7850	11200	77100	8630	12800	9200	15400	9980	NS	NS	NS
Lead	1.86	2.00	1.58	2.12	**3450**	2.49	2.15	4.96	**103**	8.61	63	400	450
Magnesium	9110	8470	6940	8760	2510	2600	1400	15800	13400	57000	NS	NS	NS
Manganese	243	248	187	298	231	402	281	278	417	380	1,600	2000	2,000
Mercury	ND	ND	ND	ND	**0.454**	ND	ND	ND		ND	0.18	0.81	0.73
Nickel	5.94	5.89	4.69	6.95	**35.6**	5.65	7.79	7.22	9.94	7.51	30	310	130
Potassium	689	687	591	946	565	695	567	1010	1300	2350	NS	NS	NS
Sodium	201	177	161	345	264	158		208	264	236	NS	NS	NS
Vanadium	16.7	15.6	14.3	19.2	8.81	11.7	20.9	20.2	21.3	7.35	NS	NS	NS
Zinc	11.7	11.9	8.58	14.7	**592**	23.9	20.0	24.6	112	22.8	109	10,000	2,480

ND: Not Detected at the Reporting Limit
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

TAL Metals – Test Pit Soil				
Sample ID **Sampling Date** **Depth** **Units**	**TP-7** **01/06/2010** **N/A** **(ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Aluminum	15100	NS	NS	NS
Arsenic	1.20	13	16	16
Barium	51.7	350	400	820
Cadmium	2.13	2.5	4.3	7.5
Calcium	25700	NS	NS	NS
Chromium	**62.2**	1	110	19
Cobalt	5.90	NS	NS	NS
Copper	33.9	50	270	1,720
Iron	34500	NS	NS	NS
Lead	46.7	63	400	450
Magnesium	7570	NS	NS	NS
Manganese	553	1,600	2000	2,000
Mercury	0.0364	0.18	0.81	0.73
Nickel	20.8	30	310	130
Potassium	1130	NS	NS	NS
Sodium	207	NS	NS	NS
Vanadium	20.5	NS	NS	NS
Zinc	**293**	109	10,000	2,480

NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

8.2 Surface Soil Sampling

During the investigation, ten surface soil samples were co-located with soil borings and collected from the top two inches of site soil. Surface soils were analyzed for TCL SVOCs plus 20 TICs, TAL Metals, PCBs, and pesticides.

The results of the surface soil sampling are tabulated in Pages 33 through 35 of this report and compared with the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs and the Part 375-6.8(b) Restricted Use, Restricted Residential SCOs. The results of the surface soil analysis are also tabulated in their entirety, including quantitation limits, in Tables 16-19 at the end of this report.

8.2.1 Results of Surface Soil Sampling - SVOCs

SVOCs detected above the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs and Part 375-6.8(b) Restricted Use, Restricted Residential SCOs were reported in surface soil samples collected from Surface Soil Samples 5, 6, and 8.

The laboratory results for SVOCs in surface soil are tabulated on Page 33 of this report and plotted on Figure 12. The SVOC data are tabulated in their entirety, including quantitation limits, in Table 16 at the end of this document. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

8.2.2 Results of Surface Soil Sampling - Pesticides

Pesticides detected above the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs were reported in surface soil samples collected from Surface Soil Samples 1, 2, 4, 5, 6, 7, 8, 9, and 10.

The laboratory results for pesticides in surface soil are tabulated on Page 34 of this report and plotted on Figure 13. The pesticide data are tabulated in their entirety, including quantitation limits, in Table 17 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

8.2.3 Results of Surface Soil Sampling - PCBs

PCBs detected above the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs were reported in surface soil samples collected from Surface Soil Samples 4, 5, and 6.

The laboratory results for PCBs in surface soil are tabulated on Page 34 of this report and plotted on Figure 14. The PCB data are tabulated in their entirety, including quantitation limits, in Table 18 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

8.2.4 Results of Surface Soil Sampling - Metals

One or more of chromium, copper, lead, mercury, nickel, and zinc were detected above the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs in surface soil samples collected from all 10 of the surface soil sample locations.

In two instances (S-5 and S-6), the concentrations of chromium exceed the NYSDEC Part 375-6.8(b) Protection of Groundwater SCOs.

The laboratory results for metals in surface soil are tabulated on Page 35 of this report and plotted on Figure 15. The metals data are tabulated in their entirety, including quantitation limits, in Table 19 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

SVOCs – Surface Soils													
Sample ID Sampling Date Units	**S-1 12/21/09 (ppm)**	**S-2 12/18/09 (ppm)**	**S-3 12/16/09 (ppm)**	**S-4 01/05/2010 (ppm)**	**S-5 01/05/2010 (ppm)**	**S-6 12/16/09 (ppm)**	**S-7 12/21/09 (ppm)**	**S-8 12/21/09 (ppm)**	**S9 12/14/09 (ppm)**	**S-10 01/04/2010 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b):Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	0.500	ND	ND	20	100	98
Anthracene	ND	ND	ND	ND	ND	ND	ND	1.040	ND	ND	100	100	1,000
Benzo (a) anthracene	ND	ND	ND	0.378	**9.060**	0.802	0.478	**2.610**	ND	J 0.281	1	1	1
Benzo (a) pyrene	ND	ND	ND	0.424	**15.400**	**1.260**	0.379 J	**2.340**	ND	J 0.239	1	1	22
Benzo (b) fluoranthene	ND	ND	ND	0.450	**18.200**	**1.330**	0.352 J	**2.290**	ND	J 0.232	1	1	1.7
Benzo (g,h,i) perylene	ND	ND	ND	0.376	14.200	1.140	0.225 J	1.400	ND	ND	100	100	1,000
Benzo (k) fluoranthene	ND	ND	ND	0.356	**12.100**	**1.010**	0.351 J	**1.810**	ND	J 0.183	0.8	3.9	1.7
Chrysene	ND	ND	ND	0.425	**12.600**	**1.050**	0.475	**2.580**	ND	J 0.262	1	3.9	1
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	0.278 J	ND	ND	NS	NS	210
Dibenz (a,h) anthracene	ND	ND	ND	ND	**5.090**	ND	ND	**0.471 J**	ND	ND	0.33	0.33	1,000
Fluoranthene	ND	ND	ND	ND	8.370	0.954	0.981	6.330	ND	0.548	100	100	1,000
Fluorene	ND	ND	ND	ND	ND	ND	ND	0.459 J	ND	ND	30	100	386
Indeno (1,2,3-cd) pyrene	ND	ND	ND	J 0.265	**10.200**	**0.780**	0.223 J	**1.480**	ND	ND	0.5	0.5	8.2
Naphthalene	ND	ND	ND	ND	ND	ND	ND	0.299 J	ND	ND	NS	NS	12
Phenanthrene	ND	ND	ND	J 0.200	ND	J 0.317	0.616	5.250	ND	J 0.248	100	100	1,000
Pyrene	ND	ND	ND	0.552	8.310	0.879	0.840	5.550	ND	0.440	100	100	1,000
Total TICs	0.466	0	0.345	0	37.28	0.673	24.742	37.799	0	2.000	NS	NS	NS

ND: Not Detected at the Reporting Limit
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

Pesticides – Surface Soils													
Sample ID Sampling Date Units	**S-1 12/21/09 (ppm)**	**S-2 12/18/2009 (ppm)**	**S-3 12/16/2009 (ppm)**	**S-4 01/05/2010 (ppm)**	**S-5 01/05/2010 (ppm)**	**S-6 12/16/2009 (ppm)**	**S-7 12/21/09 (ppm)**	**S-8 12/21/09 (ppm)**	**S-9 12/14/2009 (ppm)**	**S-10 01/04/2010 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
delta-BHC	ND	ND	ND	ND	J 0.00344	ND	ND	ND	ND	ND	0.04	100	0.25
alpha-Chlordane	ND	ND	ND	R 0.00619*	J 0.0228	ND	J 0.0351	0.00824	0.00462	R 0.00302*	0.094	4.2	2.9
gamma-Chlordane	0.0105	ND	ND	J 0.0125	ND	ND	ND	0.00614	ND	J 0.00327*	NS	NS	14[1]
4,4′-DDD	**0.00395**	ND	ND	**J 0.0116***	**J 0.0237***	**0.0169**	**J0.00555***	ND	**0.00461**	J 0.00310*	0.0033	13	14
4,4′-DDE	ND	ND	ND	R 0.00228*	**R 0.00774***	**JN 0.0865***	ND	ND	ND	ND	0.0033	8.9	17
4,4′-DDT	**J 0.0100**	**J 0.00440**	ND	**J 0.0238**	**0.0794**	ND	**J0.0116**	**J 0.00490**	**0.00673**	**0.00477**	0.0033	7.9	136
Dieldrin	ND	ND	ND	**JN 0.0152***	**JN 0.0407***	**J 0.0243***	ND	ND	ND	J0.00423	0.005	0.2	0.1
Endosulfan II	ND	ND	ND	J 0.0102	<0.00375	ND	ND	ND	ND	J 0.00206*	2.4	24	102
Endosulfan Sulfate	J 0.00552*	ND	ND	R 0.0299*	R 0.110*	ND	JN 0.0813*	JN 0.0248*	ND	ND	2.4	24	1,000
Endrin	ND	ND	ND	ND	ND	JN 0.00753*	**JN 0.0185***	ND	ND	ND	0.014	11	0.6
Endrin Aldehyde	ND	ND	ND	0.00479	0.0150	ND	J 0.00742*	ND	ND	ND	NS	NS	NS
Heptachlor Epoxide	ND	ND	ND	J 0.00481*	J 0.0215*	J 0.0129*	ND	ND	ND	ND	NS	NS	0.02
Methoxychlor	JN 0.00374*	ND	ND	ND	ND	ND	J 0.00484	ND	ND	0.00554*	NS	NS	900[1]

ND: Not Detected at the Reporting Limit
J: Analyte detected at or below quantitation limits
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs
* concentration differs by more than 40% between primary and secondary columns
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO
1: CP-51 Soil Cleanup Guidance, Supplemental Soil Cleanup Objectives

PCBs – Surface Soils													
Sample ID Sampling Date Units	**S-1 12/21/09 (ppm)**	**S-2 12/18/2009 (ppm)**	**S-3 12/16/2009 (ppm)**	**S-4 01/05/2010 (ppm)**	**S-5 01/05/2010 (ppm)**	**S-6 12/16/2009 (ppm)**	**S-7 12/21/09 (ppm)**	**S-8 12/21/09 (ppm)**	**S-9 12/14/2009 (ppm)**	**S-10 01/04/2010 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Aroclor 1254	0.0476	0.0368	ND	**0.222**	**0.846**	**0.255**	ND	ND	0.0640	ND	0.1	1	3.2

ND: Not Detected at the Reporting Limit
NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

TAL Metals – Surface Soils													
Sample ID Sampling Date Units	**S-1 12/21/09 (ppm)**	**S-2 12/18/2009 (ppm)**	**S-3 12/16/2009 (ppm)**	**S-4 01/05/2010 (ppm)**	**S-5 01/05/2010 (ppm)**	**S-6 12/16/2009 (ppm)**	**S-7 12/21/09 (ppm)**	**S-8 12/21/09 ppm)**	**S-9 12/14/2009 (ppm)**	**S-10 01/04/2010 (ppm)**	**Part 375-6.8(a): Unrestricted Use SCOs (ppm)**	**Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)**	**Part 375-6.8(b): Protection of Groundwater SCOs (ppm)**
Aluminum	7860	9510	4220	4610	7860	7650	6820	6650	8920	7560	NS	NS	NS
Arsenic	5.36	5.53	3.27	1.49	5.18	6.92	5.50	7.37	5.86	2.34	13	16	16
Barium	42.1	50.8	25.6	29.1	54.5	54.5	43.9	46.7	46.0	43.7	350	400	820
Cadmium	0.810	ND	ND	0.632	1.50	0.874	ND	ND	0.824	0.504	2.5	4.3	7.5
Calcium	35700	22400	44800	60400	10700	28300	19700	17800	17600	17500	NS	NS	NS
Chromium	**15.0**	**16.4**	**8.85**	**11.0**	**63.3**	**22.1**	**13.3**	**15.5**	**12.9**	**11.4**	1	110	19
Cobalt	5.30	6.9	5.51	3.71	6.92	6.19	5.15	5.05	6.10	5.92	NS	NS	NS
Copper	**90.9**	16.5	8.88	14.0	48.2	26.7	23.9	37.5	24.2	17.1	50	270	1,720
Iron	13600	16000	11000	10800	18700	14000	12600	15400	14500	13700	NS	NS	NS
Lead	22.2	22.0	2.25	42.1	**137**	**118**	**67.5**	**288**	40.8	34.9	63	400	450
Magnesium	17500	7790	11000	9770	4890	12100	7340	7180	7650	8070	NS	NS	NS
Manganese	376	451	409	290	322	425	324	307	361	387	1,600	2000	2,000
Mercury	0.0560	0.0413	ND	0.0237	**0.576**	0.0609	0.0871	0.112	0.0445	**0.240**	0.18	0.81	0.73
Nickel	11.3	12.8	7.56	8.65	**38.2**	15.5	11.2	11.3	10.7	12.0	30	310	130
Potassium	1850	1440	803	1050	1070	1600	1290	978	1270	1390	NS	NS	NS
Sodium	167	ND	232	138	92.9	141	133	ND	115	105	NS	NS	NS
Vanadium	20.5	23.8	18.4	16.9	28.4	20.9	18.1	20.3	21.3	18.5	NS	NS	NS
Zinc	66.1	51.3	21.7	46.6	94.0	**124**	78.6	**111**	103	62.3	109	10,000	2,480

NS: No Standard
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use SCOs
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use SCOs
Red: Quantity exceeds Part 375-6.8(b): Protection of Groundwater SCO

9 GROUNDWATER WELL INSTALLATION

As indicated on Figure 16, Passero Associates installed six groundwater monitoring wells at the Site and sampled them for full TCL/TAL laboratory analyses. The monitoring wells were installed with a truck-mounted HSA drill rig. Hollow stem augers were used to bore through soils until saturated conditions were encountered. Split spoon samples were collected at five-foot intervals; one soil sample from each boring was collected for visual inspection and VOC screening. In the absence of visual evidence of contamination (e.g. odors, elevated organic vapor readings, staining, or free product), one soil sample was collected from directly above the depth that saturation was encountered for full TCL/TAL laboratory analyses. The well depths ranged from 28.0 feet below grade to 80 feet below grade. The soil boring logs and PID readings are included in Appendix 2. The depth of each well and respective depths to water are shown on the table provided on page 43 of this report.

9.1 Containment and Disposal

Drill cuttings that were generated from the well installation activities were containerized in Department of Transportation (DOT)-approved 55-gallon drums. Drill cuttings of the native soils were staged on polyethylene sheeting in conformance with NYSDEC STARS Memo #1. The cuttings were separated by soil boring. Following receipt of analytical results, the soils were later spread on the Site in the area of the well installations.

9.2 Well Construction

Monitoring wells were constructed of 2-inch diameter, machine slot PVC well screen and PVC riser, installed through the HSA drill stem. The well screens were 20 feet long and set 10 feet into the water table. A sand pack was placed from approximately 1-foot below the screen to 1-foot above the screen. A bentonite seal was placed on top of the sand pack, and the wells were completed with cement/bentonite grout. Locking metal stand pipes were set in concrete over each well. Figure 18 provides a typical well construction detail. A diagram showing the specific construction of each well is included in the well logs in Appendix 2 of this report.

The monitoring wells were located and elevations above mean sea level were determined for the inner casing of each well by a Passero Associates survey crew. The survey log book notes are included in Appendix 3.

9.3 Development

The monitoring wells were given a minimum of 48 hours after installation to equilibrate prior to development. Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5D (deep) were developed. MW-5S (shallow) was not developed in January 2010 because it did not produce an adequate volume of groundwater.

The purpose of well development is to remove fine-grained material near the well screen and improve the hydraulic connection between the well and the adjacent water-bearing strata. The objective of well development is enhancing the filtration ability of the filter pack that surrounds the well screen, reducing the turbidity of the groundwater entering the well. This was accomplished by repeatedly drawing water with suspended sediment through the filter pack and well screen by hand-bailing with disposable polyethylene bailers. Bailing was continued until turbidity appeared to stabilize visually, or until a maximum of five well volumes was purged. The development, purge, and decontamination water was containerized and characterized for disposal purposes. A Lamont 2040 Turbidity Analyzer was used to monitor the turbidity of the well water during development. Based on the groundwater analytical results, the purge water will be discharged to the ground surface near each well. The well development logs are included in Appendix 4 of this report.

9.4 Groundwater Sampling

On January 28 and 29, 2010 groundwater samples were collected from the five new monitoring wells MW-1, MW-2, MW-3, MW-4 and MW-5D. Monitoring well MW-5S could not be sampled in January 2010 because it did not produce an adequate volume of groundwater.

The first round of groundwater analyses included TCL VOCs plus TICs, TCL SVOCs plus TICs, TAL Metals, PCBs and pesticides by ASP methodology with Category B deliverables.

The groundwater samples were collected using a low-flow minimal drawdown methodology; a low-flow QED bladder pump was utilized to minimize agitation of the water column while drawing the samples. The wells were sampled using dedicated polyethylene tubing. The bladder pump was used for purging and for sample collection. The following parameters and guidelines were followed during purging of the monitoring wells:

- Drawdown not to exceed 3.9 inches;
- Turbidity: three (3) successive readings ± 10% and a final value between 5 and 10 Nephelometric Turbidity Units (NTU);
- Specific conductance: three (3) successive readings ± 3%;
- pH: three (3) successive readings ± 0.1 pH units;
- Temperature: three (3) successive readings ± 3%;
- Dissolved oxygen: three (3) successive readings ± 10%; and
- Oxidation reduction potential: three (3) successive readings ± 10 mV.

The Low Flow Sampling Field Forms are included in Appendix 3.

The unfiltered groundwater samples were analyzed by ASP methodology with Category B deliverables. The analytical laboratory contracted to perform the samples analyses was Paradigm Environmental Services (Paradigm), a NYSDOH ELAP-certified laboratory. Paradigm performed the analyses in conformance with ASP including a Category B deliverable package. Groundwater data was compared to the Groundwater Quality Standards listed in 6 NYCRR Part 703.

9.4.1 Results of Groundwater Sampling - VOCs

Concentrations of VOCs exceeding the 6NYCRR Part 703 Groundwater Quality Standards for Protection of Groundwater (GA) were identified in groundwater samples collected from monitoring well MW-1 and MW- 3.

The laboratory results for groundwater VOCs are tabulated in the following tables and plotted on Figure 16. The groundwater VOC data are tabulated in their entirety, including quantitation limits, in Tables 20-21 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

VOCs – Groundwater Samples - January 28-29, 2010							
Sample ID Sampling Date Units	**MW-1 01/28/2010 (µg/L)**	**MW-2 01/29/2010 (µg/L)**	**MW-3 01/28/2010 (µg/L)**	**MW-4 01/28/2010 (µg/L)**	**MW-5 Deep 01/29/2010 (µg/L)**	**Field Duplicate 01/28/2010 (µg/L)**	**6NYCRR Part 703 Groundwater Quality Standards (µg/L)**
Benzene	J 0.507	ND	J 0.693	ND	ND	ND	1
Chlorobenzene	3.17	ND	**5.06**	J 1.05	ND	J1.02	5
1,4-Dichlorobenzene	J 1.67	ND	J 1.26	ND	ND	ND	3
Propene	ND	ND	ND	ND	8.41	ND	NS
ND: Non Detect							
NS: No Standard							
Bold: Quantity exceeds 6NYCRR 703 Groundwater Quality Standards, Protection for Groundwater							

VOCs – Groundwater Samples - September 22-23, 2010							
Sample ID Sampling Date Units	**MW-1 09/23/2010 (µg/L)**	**MW-2 09/22/2010 (µg/L)**	**MW-3 09/22/2010 (µg/L)**	**MW-4 09/23/2010 (µg/L)**	**MW-5 D 09/22/2010 (µg/L)**	**Field Duplicate 09/22/2010 (µg/L)**	**6NYCRR Part 703 Groundwater Quality Standards (µg/L)**
Benzene	J 0.642	ND	ND	ND	ND	ND	1
Chlorobenzene	**5.35**	ND	ND	ND	ND	ND	5
Acetone	J 8.33	J 8.33	11.4	J 7.09	J 6.35	ND	50
ND: Non Detect							
NS: No Standard							
Bold: Quantity exceeds 6NYCRR 703 Groundwater Quality Standards, Protection for Groundwater							

9.4.2 *Results of Groundwater Sampling - SVOCs*

SVOCs were not detected in the groundwater samples collected from the Site that exceed the 6NYCRR Part 703 Groundwater Quality Standards.

The laboratory results for groundwater SVOCs are tabulated in the following tables. The groundwater SVOC data are tabulated in their entirety, including quantitation limits, in Tables 22-23 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

SVOCs – Groundwater Samples - January 28-29, 2010							
Sample ID Sampling Date Units	**MW-1 01/28/2010 (µg/L)**	**MW-2 01/29/2010 (µg/L)**	**MW-3 01/28/2010 (µg/L)**	**MW-4 01/28/2010 (µg/L)**	**MW-5 Deep 01/28/2010 (µg/L)**	**Field Duplicate 01/28/2010 (µg/L)**	**6NYCRR Part 703 Groundwater Quality Standards (µg/L)**
TOTAL TICS	0	5.27	6.37	0	0	0	NS
ND: Non Detect							
NS: No Standard							
Bold: Quantity exceeds 6NYCRR 703 Groundwater Quality Standards, Protection for Groundwater							

SVOCs – Groundwater Samples - September 22-23, 2010							
Sample ID Sampling Date Units	**MW-1 09/23/2010 (µg/L)**	**MW-2 09/22/2010 (µg/L)**	**MW-3 09/22/2010 (µg/L)**	**MW-4 09/23/2010 (µg/L)**	**MW-5 09/22/2010 (µg/L)**	**Field Duplicate 09/22/2010 (µg/L)**	**6NYCRR Part 703 Groundwater Quality Standards (µg/L)**
Benzoic acid	ND	ND	J 15.9	J 16.1	ND	15.8	NS
Total TICS	35	0	0	9.9	4.30	4.00	NS
ND: Non Detect							
NS: No Standard							
Bold: Quantity exceeds 6NYCRR 703 Groundwater Quality Standards, Protection for Groundwater							

9.4.3 *Results of Groundwater Sampling - Pesticides*

Groundwater samples collected from monitoring wells MW-1, MW-2, MW- 3, MW-4 and the Field Duplicate for pesticides analysis exceed the 6 NYCRR Part 703 Groundwater Quality Standards.

The laboratory results for Pesticides in groundwater are tabulated in the following table and are plotted on Figure 16. The groundwater pesticides data are tabulated in their entirety, including quantitation limits, in Tables 24-25 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

Pesticides – Groundwater Samples - January 28-29, 2010							
Sample ID **Sampling Date** **Units**	**MW-1** **01/28/2010** **(µg/L)**	**MW-2** **01/29/2010** **(µg /L)**	**MW-3** **01/28/2010** **(µg /L)**	**MW-4** **01/28/2010** **(µg /L)**	**MW-5 Deep** **01/29/2010** **(µg /L)**	**Field Duplicate** **01/28/2010** **(µg /L)**	**6NYCRR Part 703 Groundwater Quality Standards** **(µg /L)**
delta-BHC	ND	ND	**J 0.0779***	ND	ND	ND	0.04
4,4′-DDT	J 0.0714	ND	ND	ND	J 0.0896	ND	0.2
ND: Non Detect							
NS: No Standard							
Bold: Quantity exceeds 6NYCRR 703 Groundwater Quality Standards, Protection for Groundwater							

Pesticides – Groundwater Samples - September 22-23, 2010							
Sample ID **Sampling Date** **Units**	**MW-1** **09/23/2010** **(µg /L)**	**MW-2** **09/22/2010** **(µg /L)**	**MW-3** **09/22/2010** **(µg /L)**	**MW-4** **09/23/2010** **(µg /L)**	**MW-5** **09/22/2010** **(µg /L)**	**Field Duplicate** **09/22/2010** **(µg /L)**	**6NYCRR Part 703 Groundwater Quality Standards** **(µg /L)**
alpha-BHC	**J 0.0550**	ND	**J 0.0560**	**J 0.0548**	ND	ND	0.01
delta-BHC	**J 0.0546**	**J 0.0560**	**J 0.0550**	**J 0.0541**	ND	**J 0.0550**	0.04
ND: Non Detect							
NS: No Standard							
Bold: Quantity exceeds 6NYCRR 703 Groundwater Quality Standards, Protection for Groundwater							

9.4.4 Results of Groundwater Sampling - PCBs

PCBs were not detected in any of the January or September 2010 groundwater samples. The groundwater PCB data are tabulated in their entirety, including quantitation limits, in Tables 26-27 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

9.4.5 Results-Groundwater-Metals

Metals exceeding 6NYCRR Part 703 Groundwater Quality Standards were detected in all of the monitoring wells sampled and in the field duplicate. The laboratory results for metals in groundwater are tabulated in the following table and plotted on Figure 16. The metals data for groundwater are tabulated in their entirety, including quantitation limits, in Tables 28-29 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

All September 2010 sodium results have been flagged with and “E” as estimated due to various run quality control exceedances. According to Paradigm, the exceedances were relatively minor so analysis was allowed to proceed without further action.

TAL Metals – Groundwater Samples - January 28-29, 2010							
Sample ID **Sampling Date** **Units**	**MW-1** **01/28/2010** **(µg /L)**	**MW-2** **01/29/2010** **(µg /L)**	**MW-3** **01/28/2010** **(µg /L)**	**MW-4** **01/28/2010** **(µg /L)**	**MW-5** **01/29/2010** **(µg /L)**	**Field Duplicate** **01/28/2010** **(µg /L)**	**6NYCRR Part 703 Groundwater Quality Standards** **(µg /L)**
Aluminum	4730	67300	2390	1910 D,M	54500	1930	NS
Arsenic	10	**60**	11	7 D	**33 D**	9	25
Barium	248	460	436	274 M	496	268	1,000
Calcium	139,000	645000	129000	149,000	384000	148,000	NS
Chromium	ND	**160**	ND	ND	**159 M**	ND	50
Cobalt	ND	48	ND	ND	35	ND	NS
Copper	27	183	ND	11	119	ND	200
Iron	**26,300**	**137,000**	**30,600**	**18,600 M**	**91,800**	**18,600**	300
Lead	11	**110**	7	8	**61 M**	8.0	25
Magnesium	**47,300**	**210,000**	**52,600**	**54,000**	**195,000**	**52,900**	35,000
Manganese	**415**	**4,840**	213	**402**	**2,650**	**393**	300
Nickel	ND	**119**	ND	ND	93 M	ND	100
Potassium	13100	37300	14600	11200 M	56800 M	12400	NS
Selenium	ND	ND	ND	**14**	ND	ND	10
Sodium	**181,000**	**582,000**	**205,000**	**325,000**	**287,000**	**345,000**	20,000
Vanadium	13	151	ND	ND	101	ND	NS
Zinc	40	489	ND	30 D	269	30	2,000

ND: Non Detect
NS: No Standard
Bold: Quantity exceeds 6NYCRR 703 Groundwater Quality Standards, Protection for Groundwater

TAL Metals – Groundwater Samples - September 22-23, 2010							
Sample ID **Sampling Date** **Units**	**MW-1** **09/23/2010** **(µg /L)**	**MW-2** **09/22/2010** **(µg /L)**	**MW-3** **09/22/2010** **(µg /L)**	**MW-4** **09/23/2010** **(µg /L)**	**MW-5** **09/22/2010** **(µg /L)**	**Field Duplicate** **01/28/2010** **(µg /L)**	**6NYCRR Part 703 Groundwater Quality Standards** **(µg /L)**
Aluminum	J 120	1,510	254	J 115	ND	R	NS
Arsenic	D 20	10	10	10	5	7	25
Barium	238	177	289	307	267	146	1,000
Calcium	147,000	224,000	104,000	179,000	52,600	192,000	NS
Chromium	ND	7.5	ND	**61**	ND	ND	50
Cobalt	ND	6.5	ND	ND	ND	ND	NS
Copper	ND	12	ND	ND	ND	J 5.7	200
Iron	**J18,000**	**J 5,050**	**7,710**	**J 19,500**	**4,370**	**J 2,070**	300
Lead	ND	10	7	ND	5	7	25
Magnesium	**54,400**	**58,700**	**60,800**	**58,000**	**43,300**	**51,700**	35,000
Manganese	137	**J 1,790**	102	**447**	57	**J 960**	300
Nickel	ND	ND	ND	47	ND	ND	100
Potassium	12,300	8,150	19,900	13,100	18,600	7,030	NS
Selenium	ND	ND	ND	JB 3.1	ND	ND	10
Sodium	**J E,M 182,000**	**J E 437,000**	**J E 249,000**	**J E 412,000**	**E 221,000**	**J E 442,000**	20,000
Zinc	ND	J 52	J 12	J 7	36	J 26	2,000

ND: Non Detect
NS: No Standard
Bold: Quantity exceeds 6NYCRR 703 Groundwater Quality Standards, Protection for Groundwater

9.5 Data Usability Summary Report (DUSR)

All soil and groundwater data generated was provided in accordance with NYSDEC's Analytical Service Protocol (ASP) and include Category B deliverables. Additionally, the include a Data Usability Summary Report (DUSR) validation by an independent third party (Dr. Kenneth Applin), in accordance with NYSDEC Guidance for the Development of Data Usability Summary Reports. The DUSRS are included in Appendix 7 in electronic format on CD. The laboratory analytical data is provided in Appendix 8 in electronic format on CD.

According to Dr. Applin's Narratives for all of the analytical data: *"All analytical results by the laboratory are considered valid and acceptable except results that have been qualified as rejected, "R". Results qualified as estimated, "J", or as non-detects, "U", are considered usable for the purpose of evaluating water and/or soil quality. However, these qualifiers indicate that the accuracy and/or precision of the analytical result is questionable. A summary of all data that have been qualified and the reasons for qualification are provided in the following data usability summary report (DUSR).*"

All data in the tables reflect the corrections made by Dr. Applin in the DUSRs.
No data marked with the "R" qualifier has been used.

9.6 Groundwater Gradient

Utilizing water level measurements and the elevations measured during the Passero Associates well survey, the average water table gradient was calculated to be 0.06 ft/ft.

A slug test was performed on MW-1 and MW-5D to calculate well yields, hydraulic conductivity (K), permeability (k), and the rate of groundwater flow (V). The slug test logs and calculations are in Appendix 4.

Well depth, depth to water, surveyed elevations, groundwater elevations, and slug test information are provided in the following table.

Well	Depth (feet)	Water Level 1/28-29/10	Water Level 9/22-23/10	Surveyed Top of Well Casing	Groundwater Elevation 1/28-29/10	Groundwater Elevations 9/22-23/10	K (ft/day)	k (millidarcies)	V (ft/day)
MW-1	76.85	72.25	71.72	329.37	257.12	329.37	0.278		
MW-2	74.4	66.31	65.73	334.49	268.18	268.76			
MW-3	75.02	66.11	64.10	329.43	263.32	265.33			
MW-4	41.7	33.97	35.2	316.20	282.23	281			
MW-5 D	41.15	30.37	31.06	334.85	304.48	303.79	0.022		
MW-5 S	28.0'	Dry	Dry		Dry				
Average		53.802					0.150	54.9	0.001

9.7 Perched Groundwater

During the Phase II sampling conducted by Passero Associates in December 2002, a zone of perched groundwater was encountered at an approximate depth of 10 feet below grade. The shallow well installed during this RI, MW-5S, did not generate a sufficient volume of groundwater to obtain a sample.

9.8 Instrument Survey

After monitoring well installation, the Passero Associates survey crew located and established elevations for the new monitoring wells and Geoprobe® locations. The survey provides x, y, and z coordinate data for each well relative to the site datum. Elevations were expressed using the NGVD 1988 coordinate system and the horizontal measurements using the NAD 1983 UTM Zone 18 coordinate system.

10 SURFACE WATER

An intermittent creek traverses the central portion of the Site before discharging into the ground surface in the north central portion of the Site. One surface water sample was collected on January 5, 2010 and analyzed for TCL VOCs plus TICs, TCL SVOCs plus TICs, TAL Metals, PCBs and Pesticides. The results of the surface water analysis are provided in the following tables and are compared to 6NYCRR Part 703 Surface Water Quality Standards (A, A-S, AA, AA-S: Source of Drinking Water [Surface Water]). The results of the surface water analysis are also tabulated in their entirety, including quantitation limits, and are compared to the compared to 6 NYCRR Part 703 Surface Water Quality Standards (A, A-S, AA, AA-S: Source of Drinking Water (Surface Water) in Tables 30-32 at the end of this report.

10.1 Results of Surface Water Sampling - VOCs

No VOCs that exceed the 6 NYCRR Part 703 Surface water Quality Standards were detected in the surface water sample collected from the Site. The laboratory results for surface water VOCs are tabulated below. The VOC data for surface water are tabulated in their entirety, including quantitation limits, in Table 30 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

VOCs – Surface Water		
Sample ID Sampling Date Units	Surface Water 01/05/2010 (μg /L)	6NYCRR Part 703 Surface water Quality Standards Class C (μg /L)
Total TICs	22.69	NS
NS: No Standard		
Bold: Quantity exceeds 6NYCRR Part 703 Surface Water Quality Standards		

10.2 Results of Surface Water Sampling - SVOCs

No SVOCs that exceed the 6NYCRR Part 703 Surface water Quality Standards were detected in the surface water sample. The laboratory results for surface water SVOCs are tabulated below. The SVOC data for surface water are also tabulated in their entirety, including quantitation limits, in Table 31 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

SVOCs – Surface Water		
Sample ID **Sampling Date** **Units**	**Surface Water** **01/05/2010** **(µg /L)**	**6NYCRR Part 703 Water Quality Standards Class C** **(µg /L)**
TOTAL TICs	12.2	NS
NS: No Standard		
Bold: Quantity exceeds 6NYCRR Part 703 Surface Water Quality Standards		

10.3 Results of Surface Water Sampling - Pesticides

No pesticides that exceed the 6NYCRR Part 703 Surface water Quality Standards were detected in the surface water sample. The laboratory results for pesticides in surface water are tabulated below. The pesticide data for surface water are also tabulated in their entirety, including quantitation limits, in Table 32 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

Pesticides – Surface Water		
Sample ID **Sampling Date** **Units**	**Surface Water** **01/05/2010** **(µg /L)**	**6NYCRR Part 703 Water Quality Standards Class C** **(µg /L)**
gamma-Chlordane	J 0.106*	NS
NS: No Standard		
Bold: Quantity exceeds 6NYCRR Part 703 Surface Water Quality Standards		
* concentration differs by more than 40% between primary and secondary columns		

10.4 Results of Surface Water Sampling - PCBs

No PCBs that exceed the 6NYCRR Part 703 Surface water Quality Standards were detected in the surface water sample. The laboratory results for PCBs in surface water are tabulated below. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

PCBs – Surface Water		
Sample ID **Sampling Date** **Units**	**Surface Water** **01/05/2010** **(µg /L)**	**6NYCRR Part 703 Water Quality Standards Class C** **(µg /L)**
Total PCBs	0	NS
NS: No Standard		
Bold: Quantity exceeds 6NYCRR Part 703 Surface Water Quality Standards		

10.5 Results of Surface Water Sampling - Metals

Metals that exceed the 6NYCRR Part 703 Surface Water Quality Standards were detected in the surface water sample. The laboratory results for groundwater metals are tabulated below and are tabulated in their entirety, including quantitation limits, in Table 33 at the end of this report. The DUSRs and laboratory data are on CDs in Appendix 7 and 8.

TAL Metals – Surface Water		
Sample ID **Sampling Date** **Units**	**Surface Water** **01/05/2010** **(µg /L)**	**6NYCRR Part 703 Water Quality Standards Class A** **(µg /L)**
Aluminum	**4480**	100
Barium	75	1,000
Calcium	132,000	NS
Copper	14	200
Iron	**6110**	300
Lead	**102**	50
Magnesium	**51,600**	35,000
Manganese	228	300
Potassium	5,210	NS
Sodium	205,000	NS
Zinc	42	2,000
NS: No Standard		
Bold: Quantity exceeds 6NYCRR Part 703 Surface Water Quality Standards		

11 SOIL VAPOR

Passero Associates did not conduct a soil vapor test because no VOCs were detected in the Geoprobe® and borehole data that exceed the NYSDEC Part 375-6.8(a) Restricted Use, Restricted Residential SCOs or the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs.

Soil collected from Test Pit TP-7 contained the VOCs methylene chloride, ethylbenzene, m,p-xylene, and o-xylene above the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs. However, the VOCs detected in soil collected from TP-7 are limited in extent, and do not indicate potential concern relative to off-site vapor migration.

12 RI SUMMARY

This RI resulted in the identification of SVOCs, PCBs, metals and pesticides that exceed the NYSDEC Part 375-6.8(a) Restricted Use, Restricted Residential SCOs and the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs.

The results of the RI are summarized in the tables below.

2002 RI Summary								
Sample ID	**AOC**	**Tables**	**Samples Taken**	**Constituents Detected**	**Exceeds Part 375-6.8(a): Unrestricted Use SCOs**	**Exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs**	**Exceeds Part 3756.8(b) Protection of Groundwater SCOs**	**Detected in Groundwater**
TP 1B		3,5	VOCs, SVOCs, Pesticides, PCBs	VOCs				
TP-2A		4	VOCs, SVOCs, Pesticides, PCBs	SVOCs			PCBs	
TP-3A	1	4	VOCs, SVOCs, Pesticides, PCBs	SVOCs, PCBs	SVOCs, PCBs	SVOCs	SVOCs, PCBs	
TP-4A	1	4	VOCs, SVOCs, Pesticides, PCBs	SVOCs, PCBs	SVOCs, PCBs	SVOCs	SVOCs	
TP-5A	1	4	VOCs, SVOCs, Pesticides, PCBs	SVOCs, PCBs	SVOCs, PCBs	SVOCs	SVOCs, PCBs	
TP-3B	1	3,5	VOCs, SVOCs, Pesticides, PCBs	SVOCs	SVOCs	SVOCs	SVOCs	
TP-4B	1	3,5	VOCs, SVOCs, Pesticides, PCBs	SVOCs, PCBs	SVOCs, PCBs	SVOCs	SVOCs, PCBs	
TP-6B	1	3,5	VOCs, SVOCs, Pesticides, PCBs	SVOCs, PCBs	SVOCs, PCBs	SVOCs	SVOCs, PCBs	
TP-8B	1	3,5	VOCs, SVOCs, Pesticides, PCBs	SVOCs	SVOCs	SVOCs	SVOCs	
TP-9B	1	3,5	VOCs, SVOCs, Pesticides, PCBs	SVOCs, PCBs	SVOCs, PCBs	SVOCs	SVOCs	
TP-10B	1	3,5	VOCs, SVOCs, Pesticides, PCBs	SVOCs, PCBs	SVOCs, PCBs	SVOCs	SVOCs	

2009 - 2010 RI Summary								
Sample ID	AOC	Tables	Samples Taken	Constituents Detected	Exceeds Part 375-6.8(a): Unrestricted Use SCOs	Exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs	Exceeds Part 375 6.8(b) Protection of Groundwater SCOs	Same Compounds Detected in Groundwater
BOREHOLES								
BH-1 (8'-10')	Native	7, 10, 13, 16, 19	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Metals	Metals			
BH-1 (28'-30')	Native	7, 10, 13, 16, 19	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, Metals	Metals			
BH-1 (63'-30')	Native	7, 10, 13, 16, 19	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Metals	Metals			
BH-2 (63'-65')	2	7, 10, 13, 16, 19	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Pesticides, Metals	VOCs (acetone only), Metals		VOCs (acetone only)	VOCs (acetone only)
BH-3 (4'-6')	1	7, 10, 13, 16, 19	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides,	Pesticides, Metals	Metals	Metals	Metals
BH-3 (59'-61')	1	7, 10, 13, 16, 19	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Metals	VOCs (acetone only),Metals		VOCs (acetone only)	VOCs (acetone only)
BH-4 (8'-10')	2	7, 10, 13, 16, 19	VOCs, SVOCs, Pesticides, PCBs, Metals	Pesticides, Metals	Metals			
BH-4 (28'-30')	2	7, 10, 13, 16, 19	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Metals	Metals			
BH-5 (8'-10')	2	7, 10, 13, 16, 19	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, PCBs, Metals	Pesticides, Metals			
BH-5 (34'-36')	2	7, 10, 13, 16, 19	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Pesticides, Metals	Metals			
GEOPROBE®								
GP-1 (4'-8')	Native	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Metals	VOCs (acetone only), Metals		VOCs (acetone only)	VOCs (acetone only)
GP-2 (0'-4')	2	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, PCBs,	VOCs, (acetone only), Pesticides, PCBs, Metals	Metals	VOCs (acetone only), Pesticides, Metals	VOCs (acetone only), Metals
GP-3 (4'-8')	2	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	Metals	Metals			
GP-4 (4'-8')	1	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, PCBs, Metals	SVOCs, PCBs,	SVOCs, Pesticides, metals	Pesticides, metals
GP-5 (4'-8')	1	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs (acetone only), SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, PCBS	VOCs (acetone only), SVOCs, Pesticides	VOCs (acetone only)
GP-6 (8'-12')	1	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, PCBs, Metals	VOCs (acetone only), PCBs, Metals	PCBS	VOCs (acetone only)	VOCs (acetone only)
GP-7 (0'-4')	1	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, PCBs, Metals	Pesticides, PCBs, Metals	Pesticides, PCBS, Metals	SVOCs, PCBs, Pesticides, Metals	Metals
GP-8 (0'-4')	1	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, Metals	SVOCs, Metals	SVOCs	SVOCs	
GP-9 (4'-8')	1	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, PCBs, Metals	SVOCs		
GP-10 (4'-8')	1	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Pesticides, Metals	Pesticides, Metals	Metals	Metals	Metals
GP-11 (4'-8')	2	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Pesticides, Metals	Pesticides, Metals			
GP-12 (0'-4')	2	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Metals	Metals			
GP-13 (4'-8')	2	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, Metals	VOCs(acetone only), Pesticides, Metals		VOCs (acetone only)	VOCs (acetone only)
GP-14 (0'-4')	Native	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Metals	Metals			
GP-15 (0'-4')	Native	8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Metals	Metals			
Field Duplicate		8,11,14,17,20	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, Metals	VOCs (acetone only), SVOCs, Metals	SVOCs, Metals	VOCs (acetone only), SVOCs, Metals	VOCs (acetone only), Metals
TEST PITS								
TP-1	Native		None					
TP-2	2		None					
TP-3	2		None					
TP-4	1		None					
TP-5	2		None					
TP-6	2		None					
TP-7	2	9,12,15,18,21	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, PCBs, Metals	SVOCs, PCBS	VOCs, Pesticides, PCBs	
TP-8			None					
TP-9	Native		None					
TP-10	1		None					
TP-11	1		None					
TP-12	1		None					
TP-13	2		None					
TP-14	2		None					
TP-15	Native		None					
TP-16	2		None					
TP-17	Native		None					
TP-18	2		None					

2009 - 2010 RI Summary								
Sample ID	**AOC**	**Tables**	**Samples Taken**	**Constituents Detected**	**Exceeds Part 375-6.8(a): Unrestricted Use SCOs**	**Exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCOs**	**Exceeds Part 375 6.8(b) Protection of Groundwater SCOs**	**Same Compounds Detected in Groundwater**
TP-19	2		None					
TP-20	2		None					
TP-21	2		None					
TP-22	2		None					
TP-23	2		None					
SURFACE SOILS								
Surface-1	2	22, 23, 24, 25	SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, PCBs, Metals	Pesticides, Metals			
Surface-2	2	22, 23, 24, 25	SVOCs, Pesticides, PCBs, Metals	Pesticides, PCBs, Metals	Pesticides, Metals			
Surface-3	2	22, 23, 24, 25	SVOCs, Pesticides, PCBs, Metals	SVOCs, Metals	Metals			
Surface-4	Native	22, 23, 24, 25	SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, PCBs, Metals	Pesticides, PCBs, Metals			
Surface-5	1	22, 23, 24, 25	SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, PCBs, Metals	SVOCs	SVOCs, Metals	Metals
Surface-6	1	22, 23, 24, 25	SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, PCBs, Metals	SVOCs	Metals	Metals
Surface-7	1	22, 23, 24, 25	SVOCs, Pesticides, PCBs, Metals	SVOCs, Metals	Pesticides, Metals			
Surface-8	1	22, 23, 24, 25	SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, Metals	SVOCs, Pesticides, Metals	SVOCs	SVOCs	
Surface-9	2	22, 23, 24, 25	SVOCs, Pesticides, PCBs, Metals	Pesticides, PCBs, Metals	Pesticides, Metals			
Surface-10	2	22, 23, 24, 25	SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, Metals	Pesticides, Metals			
MONITORING WELLS							**Exceeds 6NYCRR Part 703 Groundwater and/or Surface water Quality Standards (µg/L)**	
MW-1 (1/28/10)	Native	26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Pesticides, Metals			Metals	
MW-1 (9/23/10)	Native	26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, Metals			VOCs, Pesticides, Metals	
MW-2 (1/29/10)	2	26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, Metals			Metals	
MW-2 (9/22/10)	2	26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Pesticides, Metals			Pesticides, Metals	
MW-3 (1/28/10)	1	26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, Metals			VOCs, Metals	
MW-3 (9/22/10)	1	26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, Metals			Pesticides, Metals	
MW-4 (1/28/10)	2	26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Metals			Metals	
MW-4 (9/23/10)	2	26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, Metals			Pesticides, Metals	
MW-5 (1/29/10)	2	26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Pesticides, Metals			Metals	
MW-5 (9/22/10)	2	26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Metals			Metals	
Field Duplicate (1/28/10)		26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, Metals			Metals	
Field Duplicate (9/22/10)		26, 27, 28, 29, 30	VOCs, SVOCs, Pesticides, PCBs, Metals	SVOCs, Pesticides, Metals			Pesticides, Metals	
SURFACE WATER								
Surface Water	2	31, 32, 33, 34, 35	VOCs, SVOCs, Pesticides, PCBs, Metals	VOCs, SVOCs, Pesticides, Metals			Metals	

13 CONCLUSION

13.1 Soils

Base on the results of this RI, it appears that the historical sand quarry was excavated to approximately 35 feet below the present ground level in the general area of BH-3, later filled with construction debris and household garbage. This was surmised from well logs from location MW-3 in which brick, wood and rubber in the interval between 20 and 35 feet was observed. The fill material appears to have been covered with the native soils at various intervals.

The fill materials consisted of a heterogeneous collection of miscellaneous construction and demolition debris (c/d) including pieces of wood, bricks, concrete, glass, plastic, and metal, with varying amounts of co-mingled ash, cinders, and gravel fill.

Site soils in AOC-1 and AOC-2 are determined to have SVOCs, PCBs, pesticides and metals present at concentrations greater than Part 375 Unrestricted and Restricted Use, Restricted Residential SCOs. It should be noted that the test pit investigation to determine the extent of the fill materials indicated that the AOCs and contaminants extend beyond the western boundary of the BCP site. The soils with elevated levels of concentrations greater than Part 375 Unrestricted and Restricted Use, Restricted Residential SCOs ranged from surficial samples to samples collected at depths up to 12 feet BGS.

The compounds that exhibited concentrations above the Protection of Groundwater SCOs in Part 375 6.8(b) which were also found in the groundwater samples include acetone, 4,4'-DDT and chromium, copper, lead, nickel and zinc. The groundwater sample results are discussed in section 13.2 below.

Based on an areal extent of approximately 84,600 square feet and an average depth of 25 feet, the volume of fill material in AOC-1 is estimated to be 78,000 cubic yards. Based on an areal extent of approximately 105,400 square feet and an average depth of eight feet, the volume of fill material in AOC-2 is estimated to be 31,230 cubic yards. In sum, a total estimated volume of 109,230 cubic yards of fill and impacted fill is present at the Site. This volume was determined through an evaluation of contaminant distribution in soil borings and test pits combined with observations made during the investigation of the Site.

13.2 Groundwater

The direction of groundwater flow has been measured to be toward Irondequoit Bay to the west. Groundwater flow direction, as calculated during the September 2010 sampling event, is depicted on Figure 17. Groundwater samples collected from the Site contain chlorobenzene, alpha- and delta-BHC, and various metals at concentrations greater than the default, numeric Part 703 Groundwater Quality Standards.

Chlorobenzene was reported at a concentration of 5.06 µg/L in groundwater collected from location MW-3 during the January 2010 sampling event though it was not detected during the September 2010 sampling event. Chlorobenzene was reported at a concentration of 5.35 µg/L in groundwater collected from MW-1 in the September 2010 sampling event but was not detected in the January 2010 sampling event. The Groundwater Quality Standard for chlorobenzene is 5 µg/L. The inconsistent detection of chlorobenzene slightly above the Groundwater Quality Standard does not appear to indicate a significant release to groundwater.

The pesticide, alpha-BHC, was detected in groundwater at concentrations ranging from 0.0548 µg/L to 0.056 µg/L, slightly greater than the Groundwater Quality Standard of 0.01 µg/L. The pesticide, delta-BHC, was detected in groundwater at concentrations ranging from 0.0541 µg/L to 0.056 µg/L, slightly greater than the Groundwater Quality Standard of 0.04 µg/L. These trace concentrations of pesticides were detected in groundwater collected from four of the five monitoring wells. Historical aerial photographs indicate that the land upgradient to the east of the Site were historically utilized as orchards. These pesticides are interpreted as being due to historical pesticide application to the nearby orchards, and not as a release on the Site.

Metal concentrations were elevated in groundwater collected from all five monitoring wells when compared to Part 703 Groundwater Quality Standards, but these concentrations appear to be a natural occurrence, since elevated metals were found in both upgradient and downgradient monitoring wells.

The concentrations of any of these parameters at the assumed discharge point in Irondequoit Bay are presumably much lower than what was found on Site due to natural attenuation and dilution processes. The low contaminant concentrations found in the groundwater do not indicate a significant groundwater plume emanating from the Site.

14 QUALITY ASSURANCE/QUALITY CONTROL PROTOCOLS

A summary of the project team personnel and entities is presented below and qualifications of on-site personnel are included in Appendix 6.

14.1 Project Manager

Peter S. Morton, C.P.G. served as Project Manager for this BCP. He is Passero Associates' Certified Professional Geologist, licensed Asbestos Inspector, and licensed Lead Paint Inspector. His 40-hour OSHA safety training is up to date.

14.2 Quality Assurance Officer

Passero's Geologist, Elizabeth Primus, served as the Quality Assurance Officer. In conformance with DER-10, App 2A, Ms. Primus has a Bachelor of Science degree in Earth Science and a Master of Arts degree with a focus in geology. She joined Passero Associates in 2006. Elizabeth has developed the Quality Assurance Plan and Sampling Plan relative to this BCP, and interacted with Paradigm Environmental Services, Inc. to ensure that all data is of usable quality.

14.3 Decontamination

The drilling augers and split-spoon samplers were decontaminated by pressure washing in between each borehole. The augers were power-washed and the samplers were washed with Alconox and water. All decontamination water was containerized and characterized for disposal purposes.

14.4 Sampling Equipment

Nitrile gloves were donned by project personnel for each sample. Soil samples were collected directly by personnel wearing nitrile gloves from the split-spoon samplers. Sampling procedures such as the use of dedicated bailers (well development only) and disposable gloves for each sample collection were used to minimize the potential for cross-contamination.

14.5 Analytical Laboratory

The analytical laboratory that performed all of the soil and groundwater analyses was Paradigm Environmental Services, Inc. Paradigm is a NYSDOH Environmental Laboratory Approval Program (ELAP) certified laboratory. Their quality assurance quality control (QA/QC) protocols are in conformance with DER-10 Section 2 "Quality Assurance for Sampling and Laboratory Analysis".

14.6 Sample Storage and Handling

Samples were transported directly to Paradigm Environmental Services, Inc. on the day they were collected. The NYSDOH National Environmental Laboratory Accreditation Program (NELAP) and the National Environmental Laboratory Accreditation Conference (NELAC) handling times and conditions were met for all samples.

15 HEALTH AND SAFETY PROTOCOLS

The Health and Safety Plan (HASP) was followed in conformance with OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations found in 29 CFR 1910.120. All personnel and subcontractors who enter the Site during field operations and were involved with the investigation activities were required to comply with the HASP.

16 COMMUNITY AIR MONITORING PLAN (CAMP)

The Community Air Monitoring Plan (CAMP) was followed for the duration of the RI. The CAMP provided real-time monitoring for VOCs at the downwind perimeter of the work area. Monitoring for VOCs was conducted using a Mini Rae 2000 PID. The CAMP logs and the specifications for the Mini Rae 2000 are included in Appendix 2.

17 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

This Section presents the Qualitative Human Health Exposure Assessment, followed by a discussion of remedial options under consideration to address the contamination identified by the RI. The Qualitative Human Health Exposure Assessment (QHHEA) is performed in conformance with NYSDEC and NYSDOH guidance (DER-10). The QHHEA is performed to characterize the exposure setting to identify the exposure pathway, and evaluate the contaminant fate and transport.

As stated in the NYSDOH protocol, an exposure pathway must include all of the following five elements in order to be complete: (1) a contaminant source; (2) contaminant release and transport mechanisms; (3) a point of exposure; (4) a route of exposure; and (5) a receptor population.

The contaminant source is where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The point of exposure is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure. A potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway is not documented. An exposure pathway may be eliminated from further evaluation when any one of the five elements comprising an exposure pathway has not existed in the past, does not exist in the present, and will never exist in the future.

17.1 Contaminant Source

The contaminant source is the historical landfill that reportedly operated on the Site from the late 1940s to the early 1980s.

17.2 Contaminant Release and Transport Mechanism

If the SVOCs and PCBs present in site soils that exceed the 6 NYCRR Part 375 SCOs are untreated and left in place, they will continue to be a potential exposure point through direct contact.

17.3 Points of Exposure

Human populations at or near the Site are considered potential receptors. These include construction/utility workers and remediation workers, local residents/workers at or near the Site, and trespassers who could encounter contaminants, if remediation was not conducted.

The following exposure pathways are considered most applicable to the Site:

- dermal absorption through direct contact with contaminated soil;
- incidental soil ingestion, and;
- inhalation of airborne particulates.

17.3.1 Potential Exposure Pathways for Soil

Current and Potential Future Exposure Pathways if Remediation Was Not Conducted

Human populations at or near the Site are potential receptors. These include construction/utility workers and remediation workers, local residents/workers, occupation workers at the Site, and trespassers who could encounter surface soil contaminants, if remediation was not conducted.

There will be potential for the remediation contractors to come into contact with the contaminated soils. The contractors will follow the HASP including dermal protection, air monitoring, and respiratory protection to mitigate concerns relative to exposure during excavation.

Potential Exposure Pathways that Could Remain After Remediation

Passero proposes to perform a Track 4 Cleanup by capping all soils with contamination levels greater than Part 375 Restricted Use, Restricted Residential SCOs. When remediation is complete, exposure to any soils remaining with concentrations greater than SCOs would be prevented by a cover. Penetration of the cover will only be allowed in compliance with an approved Soil Management Plan (SMP) and HASP established to protect workers from exposure. Through the Track 4 Cleanup and implementation of the SMP and HASP, there will be no potential for future exposure to contaminated soils.

17.3.2 Potential Exposure Pathways for Groundwater

Groundwater contamination has been identified in groundwater samples collected on the Site; however, exposure due to contact or ingestion is not expected based on the area having a public water supply.

17.3.3 Current and Potential Future Exposure Pathways for Soil Gas and Air

Based on the VOC data for site soil and/or groundwater indicating no VOCs are present or are present at concentrations that are very low, soil vapor intrusion was not evaluated and is not considered a potential exposure route.

There is a potential exposure of nearby residents/workers via fugitive dust. To control this potential exposure, the CAMP will be implemented during the duration of the remediation activities.

Potential Exposure Pathways that Could Remain After Remediation

There will be potential future exposure to the contaminated soils if any future excavations penetrate the cap proposed to achieve a Track 4 cleanup. However, an approved SMP and HASP, properly implemented, will prevent exposure.

18 FISH AND WILDLIFE RESOURCES IMPACT ANALYSIS

NYSDEC DER-10 requires an on-site and off-site Fish and Wildlife Resources Impact Analysis (FWRIA).

A comprehensive survey and inventory of the study area's resources was conducted on September 16, 2010, by wetlands ecologist Gene Pellett and wildlife biologist John Hauber.

Appendix 5 contains the full FWRIA report with tables and figures.

19 RISK ASSESSMENT SUMMARY

Based on this assessment, potential exposures were found to be related to the excavation of surface and subsurface soils and will only occur during site remediation. The future proposed control and use of the Site would restrict access and control exposure to contaminated sub-surface soils through the use of institutional controls thus not impacting future occupants of the proposed site buildings.

The following potential exposure pathways were determined to be complete during the construction activities:

- There is a potential for exposures of construction and remediation workers to soil during construction activities.

20 CONCLUSIONS AND RECOMMENDATION

20.1 Conclusions

Passero Associates 2002 soil investigation resulted in the identification of SVOCs and PCBs at concentrations that exceed the NYSDEC Part 375-6.8(a) Restricted Use, Restricted Residential SCOs and the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs.

In December 2009 and January 2010, Passero Associates conducted an RI to further define the nature and extent of potential on-site impacts resulting from historical waste disposal at the Site. The extent of off-site impact was evaluated at the property boundaries. Soil investigation resulted in the identification of metals and pesticides at concentrations that exceed the NYSDEC Part 375-6.8(a) RestriScted Use, Restricted Residential SCOs and the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs.

AOC-1 (Figure 6) covers approximately 84,600-square-feet (approximately 2 acres) in the center of the Site, and encompasses the area where the 2002 and the 2009/2010 subsurface and surface soil sample results for SVOCs, PCBs, pesticides and metals indicate exceedances of the NYSDEC Part 375-6.8(a) Restricted Use, Restricted Residential Soil Cleanup Objectives (SCOs). VOCs were not detected at concentrations above the NYSDEC Part 375-6.8(a) Restricted Use, Restricted Residential SCOs.

AOC-2 surrounds AOC-1 (Figure 6) and covers approximately 105,400-square-feet (approximately 2.4 acres). AOC-2 encompasses the historical fill area. In AOC-2, the 2009/2010 subsurface and surface soil sample data and the 2002 soil data for SVOCs, PCBs, pesticides, and metals exceed the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs, but not the Restricted Use, Restricted Residential SCOs.

This RI has resulted in the identification of SVOCs, PCBs, pesticides, and metals at concentrations in soil that exceed the NYSDEC Part 375-6.8(a) Restricted Use, Restricted Residential SCOs and the NYSDEC Part 375-6.8(a) Unrestricted Use SCOs.

If the SVOCs and PCBs, present in site soils, which exceed the 6 NYCRR Part 375 SCOs, are left in place and untreated, they will continue to be a potential exposure point through direct exposure. Human and wildlife populations at or near the Site are potential receptors.

The groundwater data do not indicate contaminants of concern in site groundwater at concentrations that would pose a risk to human health or the environment.

The FWRIA concluded that, although surface contamination exists at the Site, there is no potential for migration based on the ground surface topography and the ground surface being covered with vegetation. There is also a lack of fish and wildlife resources that can be impacted, because the site offers no valued habitat. The site's storm water drainage does have wetland vegetation growing; however, its value is low because of its size, the absence of runoff from the site and through the wetland, and the availability of off-site wetlands. There are also substantial habitat and natural resources north, south, and west of the Site where there are woodlands, wetlands and Irondequoit Bay. Separating the Site from these resources to the west and south are developed properties and road surfaces.

During the implementation of the investigation, all QA/QC protocols for this RI were performed in conformance with DER-10 Section 2 "Quality Assurance for Sampling and Laboratory Analysis".

20.2 Recommendation

Based on the findings of the RI and the presence of contaminants in site soil, an evaluation of remedial alternatives will need to be conducted. The remedial alternatives will be prepared and summarized in a separate Remedial Action Work Plan and Alternatives Analysis.

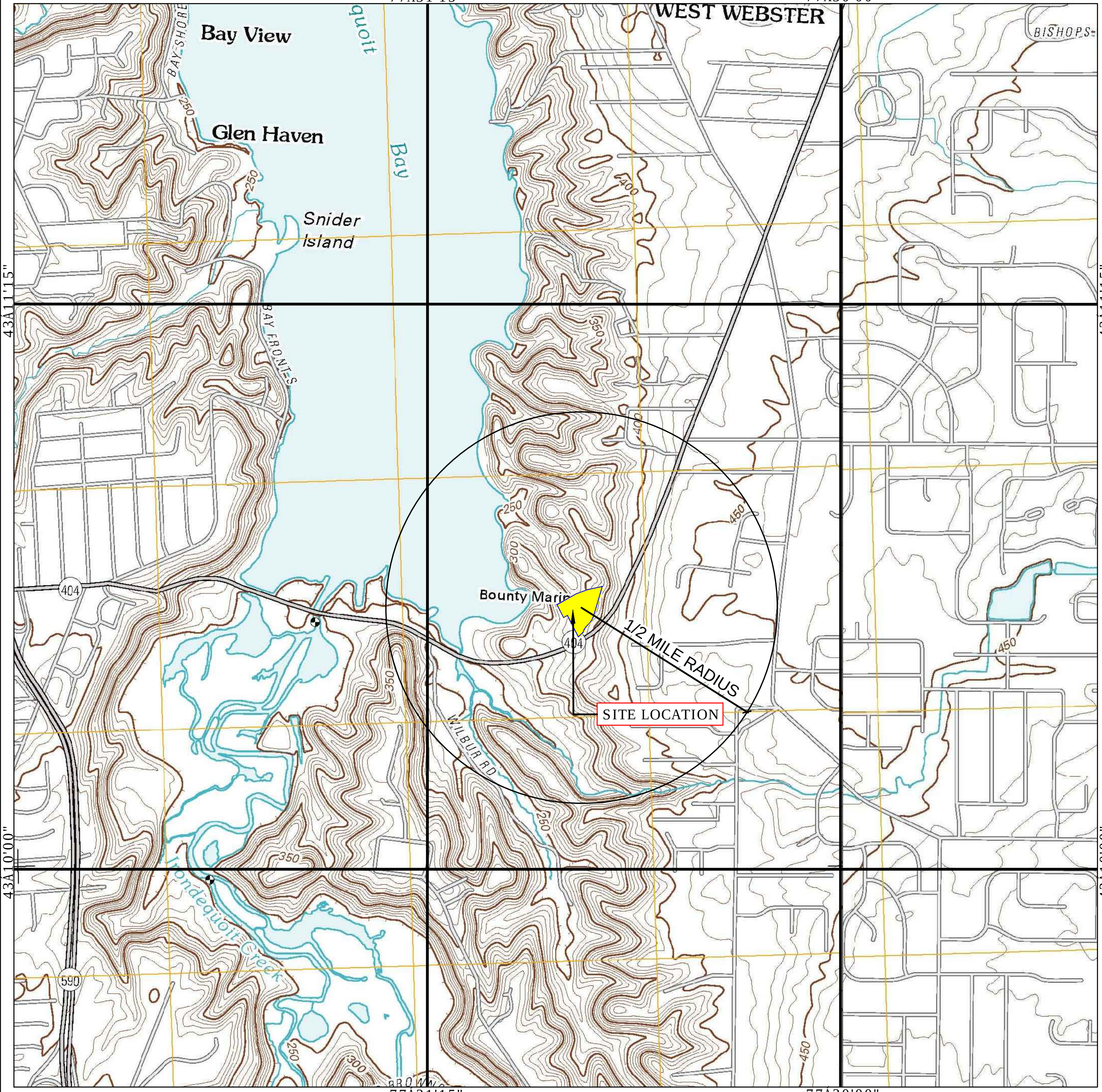
The Site is proposed for re-development for residential and commercial purposes. Passero proposes to perform a Track 4 Cleanup by capping all soils with contamination levels greater than Part 375 Restricted Use, Restricted Residential SCOs. When remediation is complete, exposure to any soils remaining with concentrations greater than SCOs would be prevented by a cover. Penetration of the cover will only be allowed through compliance with an approved Soil Management Plan (SMP) and Health and Safety Plan (HASP) that protects workers from exposure.

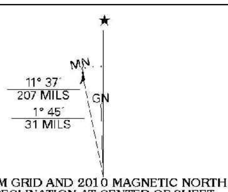
We, Peter S. Morton and Gary W. Passero, certify we were the people with primary responsibility for the day to day performance of the activities under Brownfield Site Cleanup Agreement Index # B8-0693-05-06 for NYSDEC Site #C828135 (1440 Empire Boulevard) and that all activities were performed in full accordance with the Remedial Investigation Work Plan.

Peter S. Morton, C.P.G.
Certified Professional Geologist

Gary W. Passero, P.E.
Chairman and CEO

FIGURES





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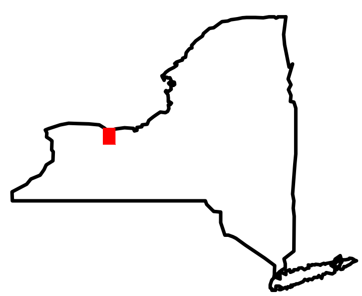
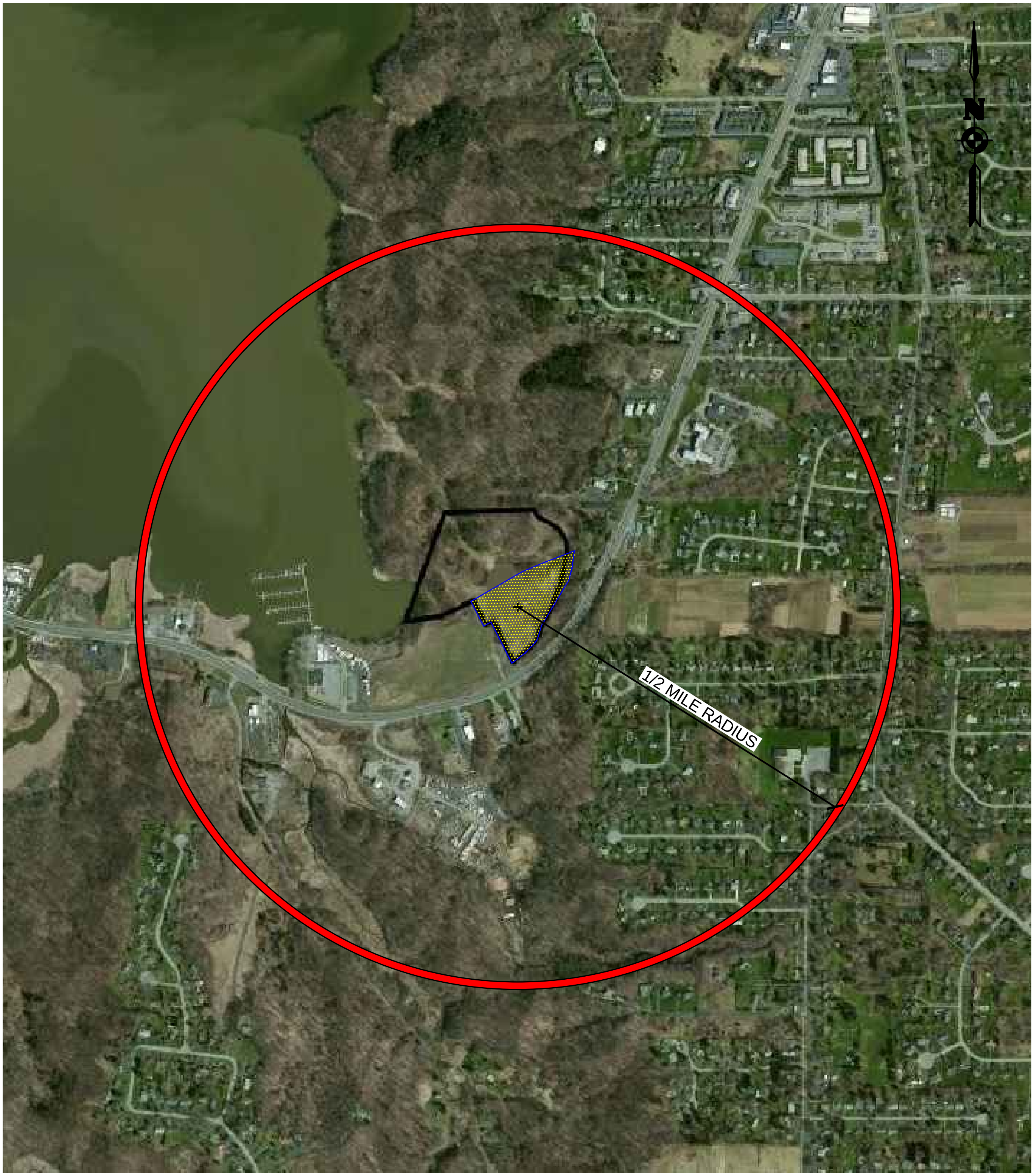


Source:

United States Geological Survey 7.5 Minute Topographic Map, Rochester East Quadrangle (2010)

Passero Associates 100 Liberty Pole Way, Rochester, NY 14604 585-325-1000 FAX: 585-760-8539 Engineering Surveying Architecture Planning	Phase I Environmental Site Assessment 1440 Empire Blvd. Penfield, New York 14580	SITE LOCATION MAP
	Project No. 20091064.0000	FIGURE 1
	1440 Empire Boulevard Development Corporation PIC:GWP PM: KMC Designer: JMR	

Z:\2009\20091064\20091064.0000\DRAWINGS\ENVIRONMENTAL\20091064.0000 FIGURES 1-3.DWG 12/28/2011 3:51 PM Jared Miller



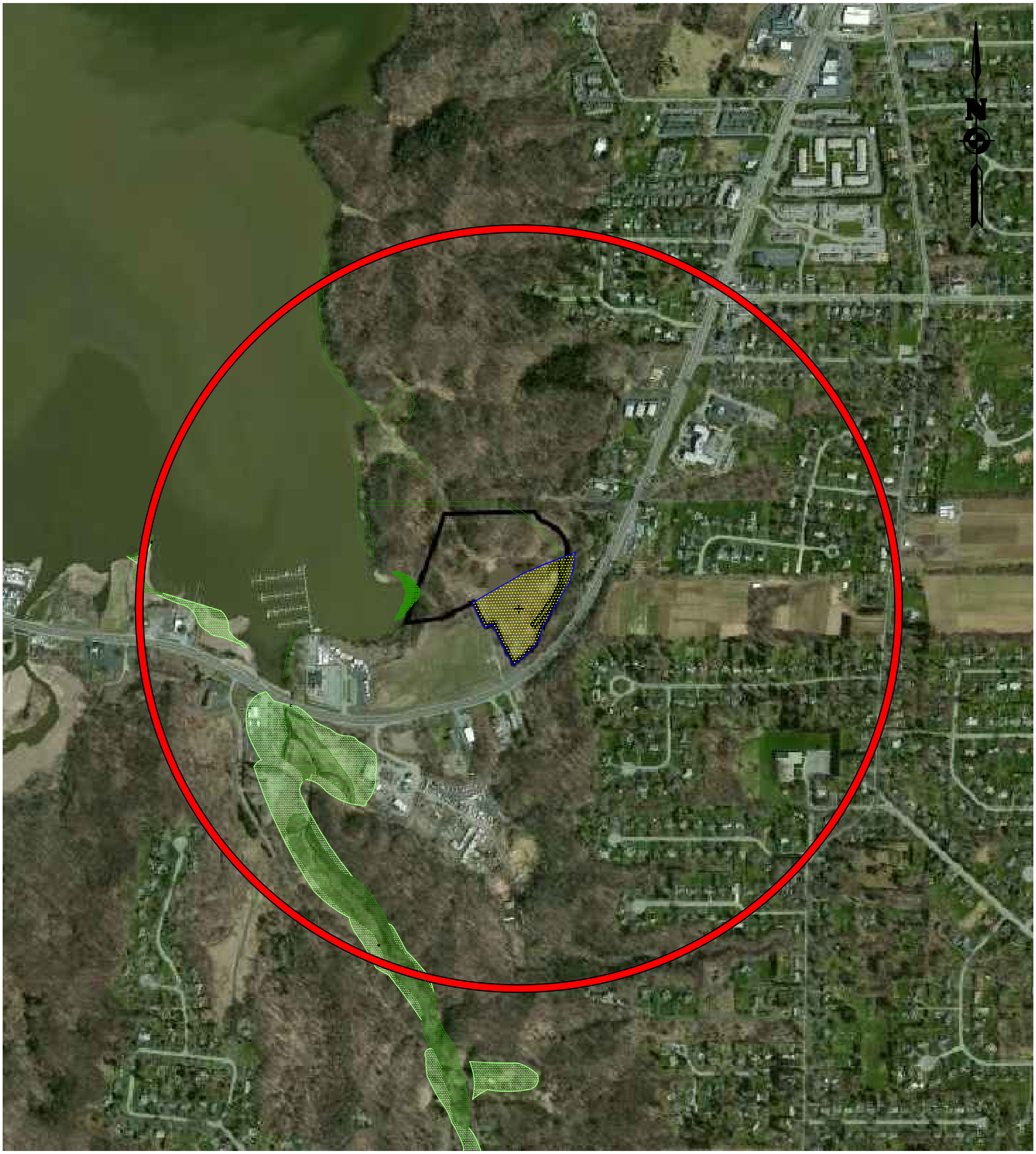
SITE LOCATION

1000 0 500 1000 2000

SCALE

Passero Associates 100 Liberty Pole Way, Rochester, NY 14604 585-325-1000 FAX: 585-□60-8539 Engineering Surveying Architecture Planning	Phase □Environmental Site Assessment 1440 Empire Blvd. Penfield, New York 14580	**AERIAL** SITE **LOCATION MAP**
	Pro□ect No. 20091064.0000	FIGURE 2
	1440 Empire Boulevard Development Corporation P□□:GWP PM: □MC Designer: □MR	

Z:\2009\20091064\20091064.0000\DRAWINGS\ENVIRONMENTAL\20091064.0000 FIGURES 1-3.DWG 12/28/2011 3:52 PM Jared Miller



SITE LOCATION

NATIONAL WETLAND INVENTORY

STATE WETLANDS

1000 0 500 1000 2000

SCALE

Passero Associates 100 Liberty Pole Way, Rochester, NY 14604 585-325-1000 FAX: 585-□60-8539 Engineering Surveying Architecture Planning	Phase □Environmental Site Assessment 1440 Empire Blvd. Penfield, New York 14580	WETLAND MAP
	Pro□ect No. 20091064.0000	
	1440 Empire Boulevard Development Corporation P□□:GWP PM: □MC Designer: □MR	FIGURE 3

Z:\2009\20091064\20091064.0000\DRAWINGS\ENVIRONMENTAL\20091064.0000 FIGURES 1–3.DWG 12/28/2011 3:53 PM Jared Miller

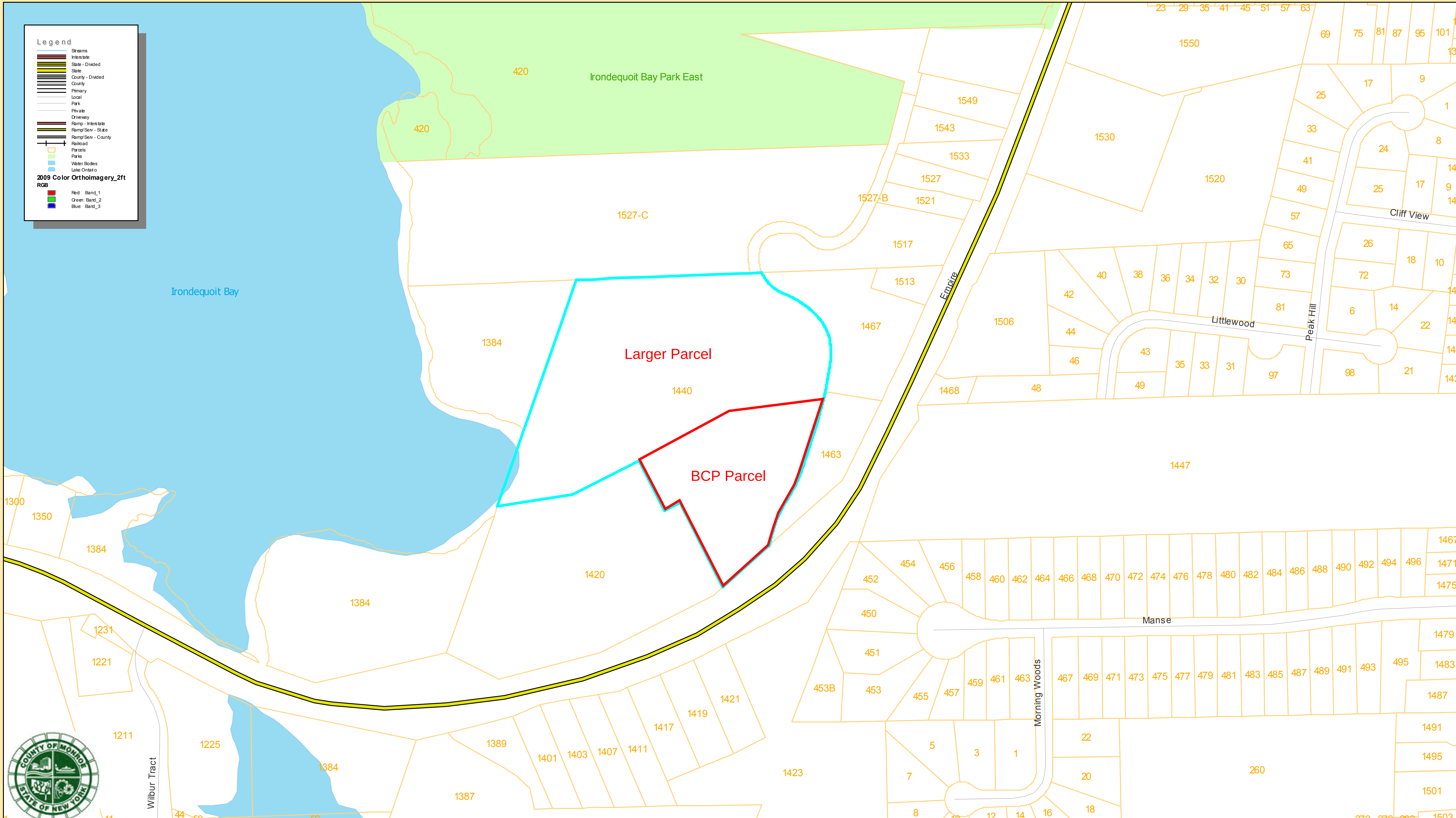


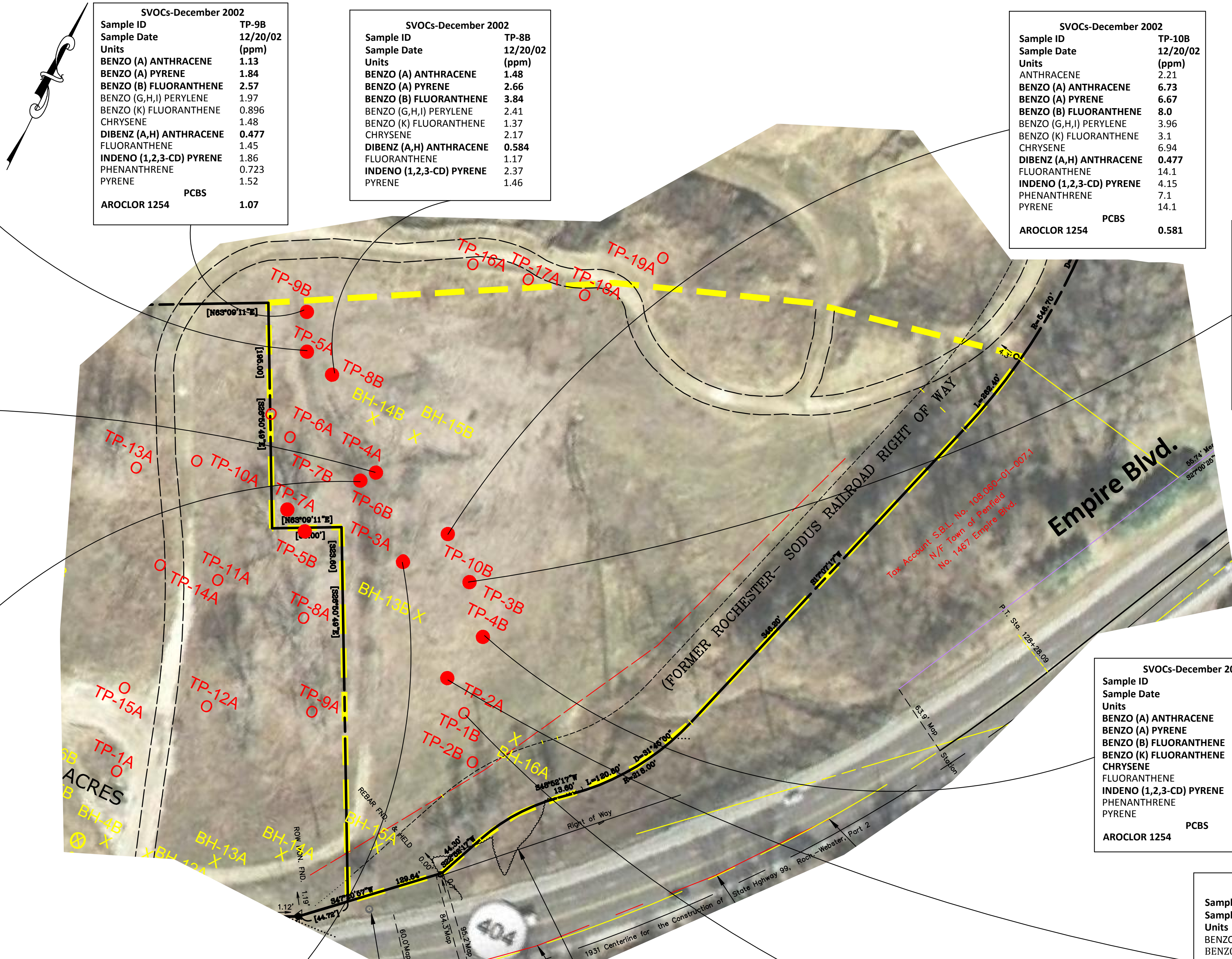
Figure 4, Larger Parcel

1440 Empire Blvd.

Town of Penfield, NY

Scale: 1:3,620

0 0.05 0.1 Miles



SVOCs-November 2002	
Sample ID	TP-5A
Sample Date	11/02
Units	(ppm)
BENZO (A) ANTHRACENE	**18.8**
BENZO (A) PYRENE	**27.4**
BENZO (B) FLUORANTHENE	**39.8**
BENZO (G,H,I) PERYLENE	28.5
BENZO (K) FLUORANTHENE	**20.8**
CHRYSENE	**28.4**
DIBENZ (A,H) ANTHRACENE	**8.94**
FLUORANTHENE	19.9
INDENO (1,2,3-CD) PYRENE	**28.8**
PHENANTHRENE	6.62
PYRENE	21.9
PCBS	
AROCLOR 1254	83.9

SVOCs-December 2002	
Sample ID	TP-9B
Sample Date	12/20/02
Units	(ppm)
BENZO (A) ANTHRACENE	**1.13**
BENZO (A) PYRENE	**1.84**
BENZO (B) FLUORANTHENE	**2.57**
BENZO (G,H,I) PERYLENE	1.97
BENZO (K) FLUORANTHENE	0.896
CHRYSENE	1.48
DIBENZ (A,H) ANTHRACENE	**0.477**
FLUORANTHENE	1.45
INDENO (1,2,3-CD) PYRENE	**1.86**
PHENANTHRENE	0.723
PYRENE	1.52
PCBS	
AROCLOR 1254	1.07

SVOCs-December 2002	
Sample ID	TP-8B
Sample Date	12/20/02
Units	(ppm)
BENZO (A) ANTHRACENE	**1.48**
BENZO (A) PYRENE	**2.66**
BENZO (B) FLUORANTHENE	**3.84**
BENZO (G,H,I) PERYLENE	2.41
BENZO (K) FLUORANTHENE	1.37
CHRYSENE	2.17
DIBENZ (A,H) ANTHRACENE	**0.584**
FLUORANTHENE	1.17
INDENO (1,2,3-CD) PYRENE	**2.37**
PYRENE	1.46

SVOCs-December 2002	
Sample ID	TP-10B
Sample Date	12/20/02
Units	(ppm)
ANTHRACENE	2.21
BENZO (A) ANTHRACENE	**6.73**
BENZO (A) PYRENE	**6.67**
BENZO (B) FLUORANTHENE	**8.0**
BENZO (G,H,I) PERYLENE	3.96
BENZO (K) FLUORANTHENE	3.1
CHRYSENE	6.94
DIBENZ (A,H) ANTHRACENE	**0.477**
FLUORANTHENE	14.1
INDENO (1,2,3-CD) PYRENE	**4.15**
PHENANTHRENE	7.1
PYRENE	14.1
PCBS	
AROCLOR 1254	0.581

SVOCs-November 2002	
Sample ID	TP-4A
Sample Date	11/02
Units	(ppm)
BENZO (A) ANTHRACENE	**33.7**
BENZO (A) PYRENE	**44.6**
BENZO (B) FLUORANTHENE	**63.4**
BENZO (G,H,I) PERYLENE	48.3
BENZO (K) FLUORANTHENE	**37.9**
CHRYSENE	**37.5**
FLUORANTHENE	41.1
PHENANTHRENE	23.5
PYRENE	46.8
PCBS	
AROCLOR 1254	2.15

SVOCs-December 2002	
Sample ID	TP-3B
Sample Date	12/20/02
Units	(ppm)
BENZO (A) ANTHRACENE	**1.90**
BENZO (A) PYRENE	**2.92**
BENZO (B) FLUORANTHENE	**3.48**
BENZO (G,H,I) PERYLENE	2.16
BENZO (K) FLUORANTHENE	1.46
CHRYSENE	**2.30**
DIBENZ (A,H) ANTHRACENE	**5.15**
FLUORANTHENE	3.13
INDENO (1,2,3-CD) PYRENE	**2.25**
PHENANTHRENE	1.42
PYRENE	3.49

SVOCs-December 2002	
Sample ID	TP-6B
Sample Date	12/20/02
Units	(ppm)
BENZO (A) PYRENE	**32.3**
BENZO (B) FLUORANTHENE	**48.6**
BENZO (G,H,I) PERYLENE	29.5
CHRYSENE	**29.5**
INDENO (1,2,3-CD) PYRENE	**29.4**
PYRENE	21.9
PCBS	
AROCLOR 1254	5.89

SVOCs-December 2002	
Sample ID	TP-4B
Sample Date	12/20/02
Units	(ppm)
BENZO (A) ANTHRACENE	**111**
BENZO (A) PYRENE	**85.3**
BENZO (B) FLUORANTHENE	**103**
BENZO (K) FLUORANTHENE	46.3
CHRYSENE	**111**
FLUORANTHENE	265
INDENO (1,2,3-CD) PYRENE	**41.8**
PHENANTHRENE	125
PYRENE	239
PCBS	
AROCLOR 1254	7.87

SVOCs-November 2002	
Sample ID	TP-2A
Sample Date	11/02
Units	(ppm)
BENZO (A) ANTHRACENE	0.367
BENZO (A) PYRENE	0.352
CHRYSENE	0.409
FLUORANTHENE	0.876
NAPHTHALENE	0.923
PHENANTHRENE	0.852
PYRENE	0.765
PCBS	
AROCLOR 1254	28.0

SVOCs-November 2002	
Sample ID	TP-3A
Sample Date	11/02
Units	(ppm)
BENZO (A) ANTHRACENE	**19.6**
BENZO (A) PYRENE	**19.3**
BENZO (B) FLUORANTHENE	**26.3**
BENZO (G,H,I) PERYLENE	21.5
BENZO (K) FLUORANTHENE	**19.3**
CHRYSENE	**18.6**
DIBENZ (A,H) ANTHRACENE	**6.74**
FLUORANTHENE	22.4
PHENANTHRENE	11.1
PYRENE	21.0
PCBS	
AROCLOR 1254	3.45

VOCs-December 2002	
Sample ID	TP-1B
Sample Date	12/20/02
Units	(ppm)
M,P-XYLENE	0.01

LEGEND
Site Boundary
ND: Non-detect
NS: No Standard
J: Estimated Result
JN: Non-routine analyze. Quantitation estimated.
*: Spike of duplicate analysis is not within the quality control limits
Bold: Quantity exceeds TOGS 1.1.1 groundwater standard
GP: Geoprobe ®
BH: Borehole
TP: Test Pit

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Project No. 200229.16
Drawing No. Figure 5
Scale: 1" = 100'
Date NOV. 10, 2010

Project: 1440 Empire Boulevard
Town of Penfield, New York

Drawing: 2002 S□□□Cs, PCBs □□□Cs Detected

Client: 1440 Empire Boulevard Development Corporation

Principal-in-Charge: Gary Passero, P.E.
Project Manager: Peter Morton, C.P.G.
Designed by: Richard Celestino

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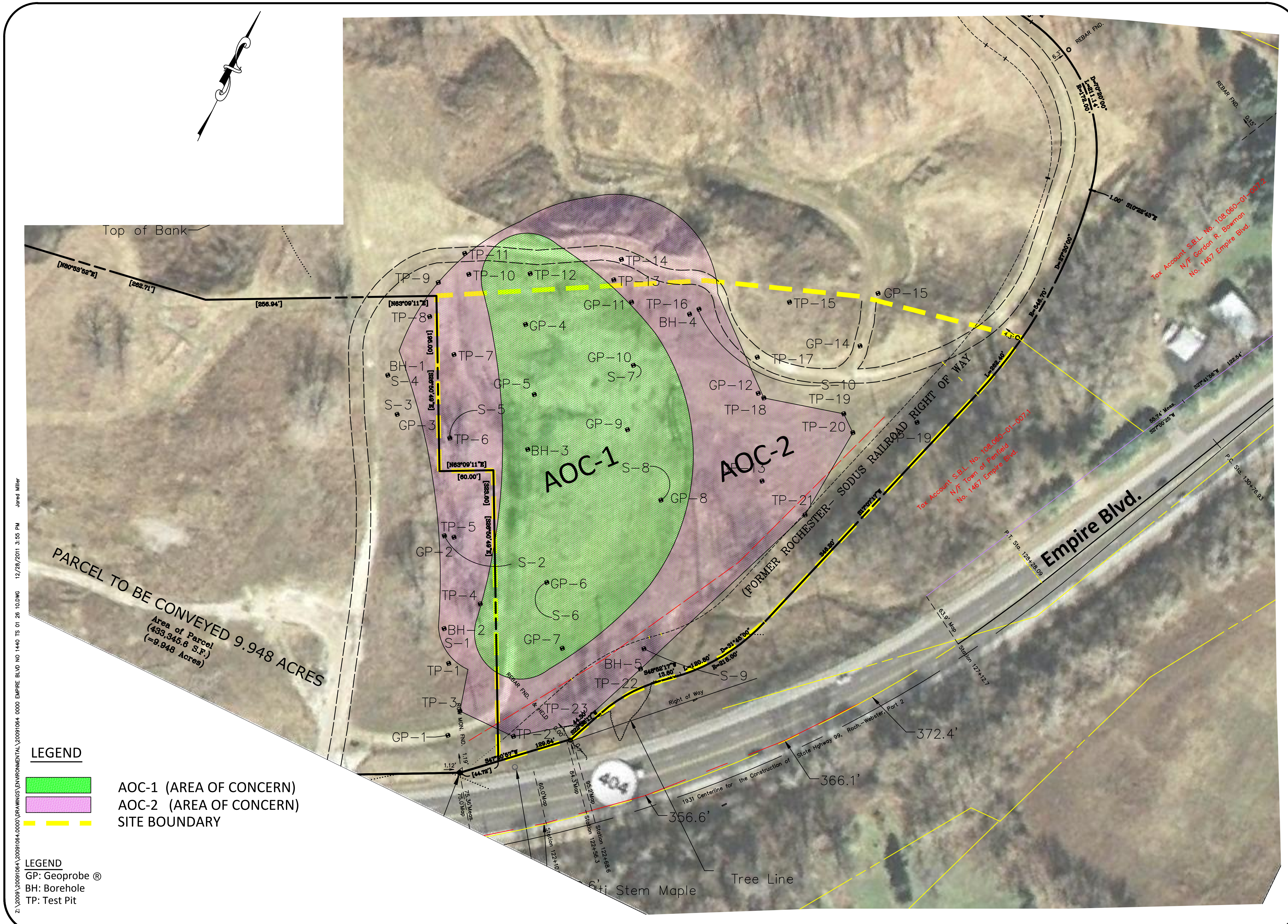

Project No. 200229.16

Drawing No. Figure 6

Scale: 1" = 100'

Date NOV. 10, 2010

Project: 1440 Empire Boulevard, Town of Penfield, New York

Drawing: Areas of Concern (AOCs) and 2009/2010 Sample Locations

Client: 1440 Empire Boulevard Development Corporation

Principal-in-Charge: Gary Passero, P.E.

Project Manager: Peter Morton, C.P.G.

Designed by: Richard Celestino

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Sample ID	BH-1	BH-1	BH-1
(Depth)	(8-10')	(28-30')	(63-65')
Units	(ppm)	(ppm)	(ppm)
Methylene chloride	**J 0.0125**	**J 0.0114**	**J 0.00649**
1,1,1-Trichloroethane	**J 0.00363**	**J 0.00441**	**ND**
Trichloroethane	**J 0.00400**	**0.00584**	**ND**
Trichlorofluoromethane	ND	ND	**J 0.00206**
Acetone	0.0369	**J 0.0202**	**J 0.0227**
Total TICs	0	0	0
Total VOCs	0.05703	0.03601	0.05115

Sample ID	GP 4
(Depth)	(4' - 8')
Units	(ppm)
Tetrachloroethene	0.00304 J
Trichloroethene	0.00565
Total TICs	0.1086
Total VOCs	0.1086

Sample ID	GP 11
(Depth)	(4 - 8')
Units	(ppm)
1, 1, 1-Trichloroethene	<0.00378
Total TICs	0.0227
Total VOCs	0.0227

Sample ID	BH-4	BH-4
(Depth)	(8-10')	(28-30')
Units	(ppm)	(ppm)
Acetone	ND	**J 0.0467**
Total TICs	0	0
Total VOCs	0	0.04991

Sample ID	GP 15
(Depth)	(0' - 4')
Units	(ppm)
Acetone	J 0.0303
Total TICs	30.3
Total VOCs	0

Sample ID	GP 14
(Depth)	(0' - 4')
Units	(ppm)
Acetone	J 0.0360
Total TICs	0
Total VOCs	0

Sample ID	GP 10
(Depth)	(4 - 8')
Units	(ppm)
Trichloroethene	0.00519
Total TICs	0.0227
Total VOCs	0.0227

Sample ID	GP 12
(Depth)	(0' - 4')
Units	(ppm)
Acetone	**J 0.0316**
Total TICs	0
Total VOCs	0.0316

Sample ID	TP-7
(Depth)	N/A
Units	(ug/kg)
Methylene chloride	J 0.177
Ethylbenzene	3.240
m,p-Xylene	8.370
o-Xylene	6.620

Sample ID	GP 3
(Depth)	(4' - 8')
Units	(ppm)
Acetone	**J 0.0343**
Total TICs	0
Total VOCs	0.0343

Sample ID	GP 5
(Depth)	(4' - 8')
Units	(ppm)
Acetone	**J 0.376**

Sample ID	GP 2
(Depth)	(0' - 4')
Units	(ppm)
Acetone	**J 0.0813**

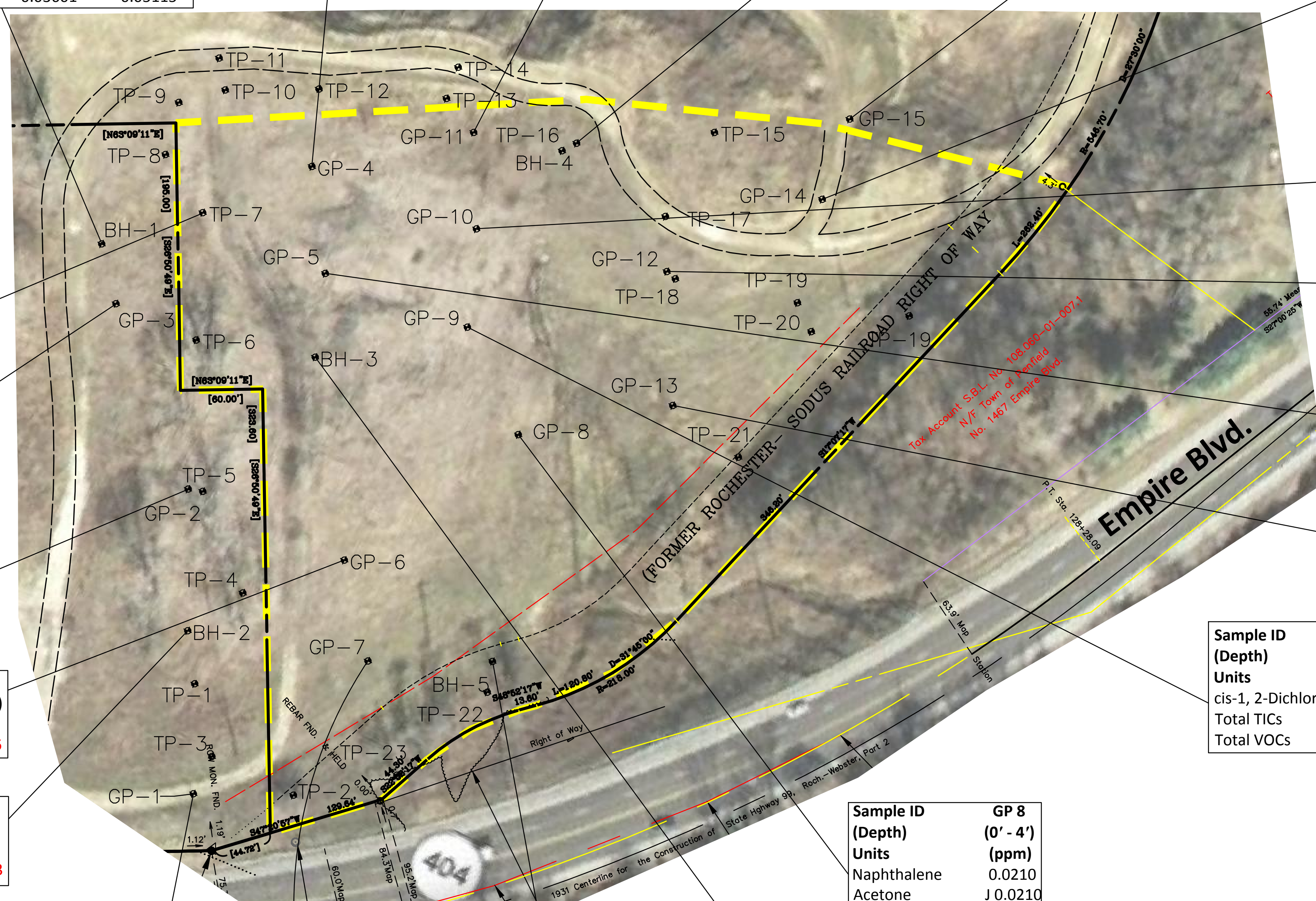
Sample ID	GP 13
(Depth)	(4' - 8')
Units	(ppm)
Acetone	**J 0.420**

Sample ID	GP 6
(Depth)	(4' - 8')
Units	(ppm)
Acetone	**J 0.206**

Sample ID	GP 9
(Depth)	(4' - 8)
Units	(ppm)
cis-1, 2-Dichloroethene	0.00262 J
Total TICs	0.144
Total VOCs	0.0419

Sample ID	BH-2
(Depth)	(63-65')
Units	(ppm)
Acetone	J 0.0703

Sample ID	GP 8
(Depth)	(0' - 4')
Units	(ppm)
Naphthalene	0.0210
Acetone	J 0.0210
Total TICs	0
Total VOCs	0.0419



Sample ID	GP 1
(Depth)	(4' - 8')
Units	(ppm)
Acetone	**J 0.279**

Sample ID	BH-5	BH-5
(Depth)	(8'-10')	(34'-36')
Units	(ppm)	(ppm)
1,2,4-Trimethylbenzene	0.00295 J	0.00233 J
Acetone	**J 0.0394**	**J 0.0457**
Total TICs	0.391	0.1205
Total VOCs	0.08145	0.016855

Sample ID	BH-3
(Depth)	(59-61')
Units	(ppm)
Acetone	**J 0.0850**

Sample ID	GP 7
(Depth)	(0' - 4')
Units	(ppm)
Total TICs	0
Total VOCs	0

Sample ID (Depth) Sampling Date Units	Part 375-6.8(a): Unrestricted Use SCOs (ppm)	Part 375-6.8(b):Restricted Use, Restricted Residential SCOs (ppm)	Table 375-6.8(b): Protection of Groundwater SCOs (ppm)
Methylene chloride	0.05	100	0.05
Ethylbenzene	1	41	1
m,p-Xylene	0.26	100	1.6
o-Xylene	0.26	100	1.6
Acetone	0.05	100	0.05

LEGEND
Site Boundary
J: Estimated Result
GP: Geoprobe ®
BH: Borehole
TP: Test Pit
S: Surface Sample
BOLD: Quanity exceeds Part 375-6.8(a): Unrestricted Use Soil Cleanup Objectives
BOLD: Quanity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCO's
BOLD: Quanity exceeds Part 375-6.8(b): Protection of Groundwater SCOs

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Project No. 200229.16
Drawing No. Figure 7
Scale: 1" = 100'
Date NOV. 10, 2010

Project: 1440 Empire Boulevard, Town of Penfield, New York
Drawing: Soils-VOC Exceedances Part 375 SCOs
Client: 1440 Empire Boulevard Development Corporation
Principal-in-Charge: Gary Passero, P.E.
Project Manager: Peter Morton, C.P.G.
Designed by: Richard Celestino

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585-325-1000 FAX: 585-325-1691
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Engineering Architecture Surveying Planning

Sample ID	BH-1	BH-1	BH-1
(Depth)	(8-10')	(28-30')	(63-65')
Units	(ppm)	(ppm)	(ppm)
Total TICs	0	4.304	0.448
Total SVOCs	0	4.304	0.448

Sample ID	GP 11
(Depth)	(4 - 8')
Units	(ppm)
Total TICs	0
Total SVOCs	0

Sample ID	GP 10
(Depth)	(4 - 8')
Units	(ppm)
Total TICs	0
Total SVOCs	0

Compounds	Part 375-6.8(a): Unrestricted Use SCOs (ppm)	Part 375-6.8(b):Restricted Use, Restricted Residential SCOs (ppm)	Table 375-6.8(b): Protection of Groundwater SCOs (ppm)
Acenaphthene	**20**	100	98
Anthracene	**100**	100	1,000
Benzo (a) anthracene	**1**	1	1
Benzo (a) pyrene	**1**	1	22
Benzo (b) fluoranthene	**1**	1	1.7
Benzo (g,h,i) perylene	**100**	100	1,000
Benzo (k) fluoranthene	**0.8**	3.9	1.7
Chrysene	**1**	3.9	1
Dibenzofuran	**NS**	NS	210
Dibenz (a,h) anthracene	**0.33**	0.33	1,000
Fluoranthene	**100**	100	1,000
Fluorene	**30**	100	386
Indeno (1,2,3-cd) pyrene	**0.5**	0.5	8.2
Naphthalene	**NS**	NS	12
Phenanthrene	**100**	100	1,000
Pyrene	**100**	100	1,000

Sample ID	GP 4
(Depth)	(4' - 8')
Units	(ppm)
Benzo (a) anthracene	3.060
Benzo (a) pyrene	4.950
Benzo (b)fluoranthene	6.890
Benzo (k) fluoranthene	3.050
Chrysene	4.160
Dibenz (a,h) anthracene	1.780
Indeno (1,2,3-cd) pyrene	4.150

Sample ID	BH-4	BH-4
(Depth)	(8-10')	(28-30')
Units	(ppm)	(ppm)
Total TICs	0	0
Total VOCs	0	0

Sample ID	S-5
Units	(ppm)
Benzo (a) anthracene	9.060
Benzo (a) pyrene	15.400
Benzo (b)fluoranthene	18.200
Benzo (k) fluoranthene	12.100
Chrysene	12.600
Dibenz (a,h) anthracene	5.090
Indeno (1,2,3-cd) pyrene	10.200

Sample ID	TP-7
Units	(ppm)
Benzo (b) fluoranthene	1.020

Sample ID	GP 15
(Depth)	(0 - 4')
Units	(ppm)
Total TICs	0
Total SVOCs	0

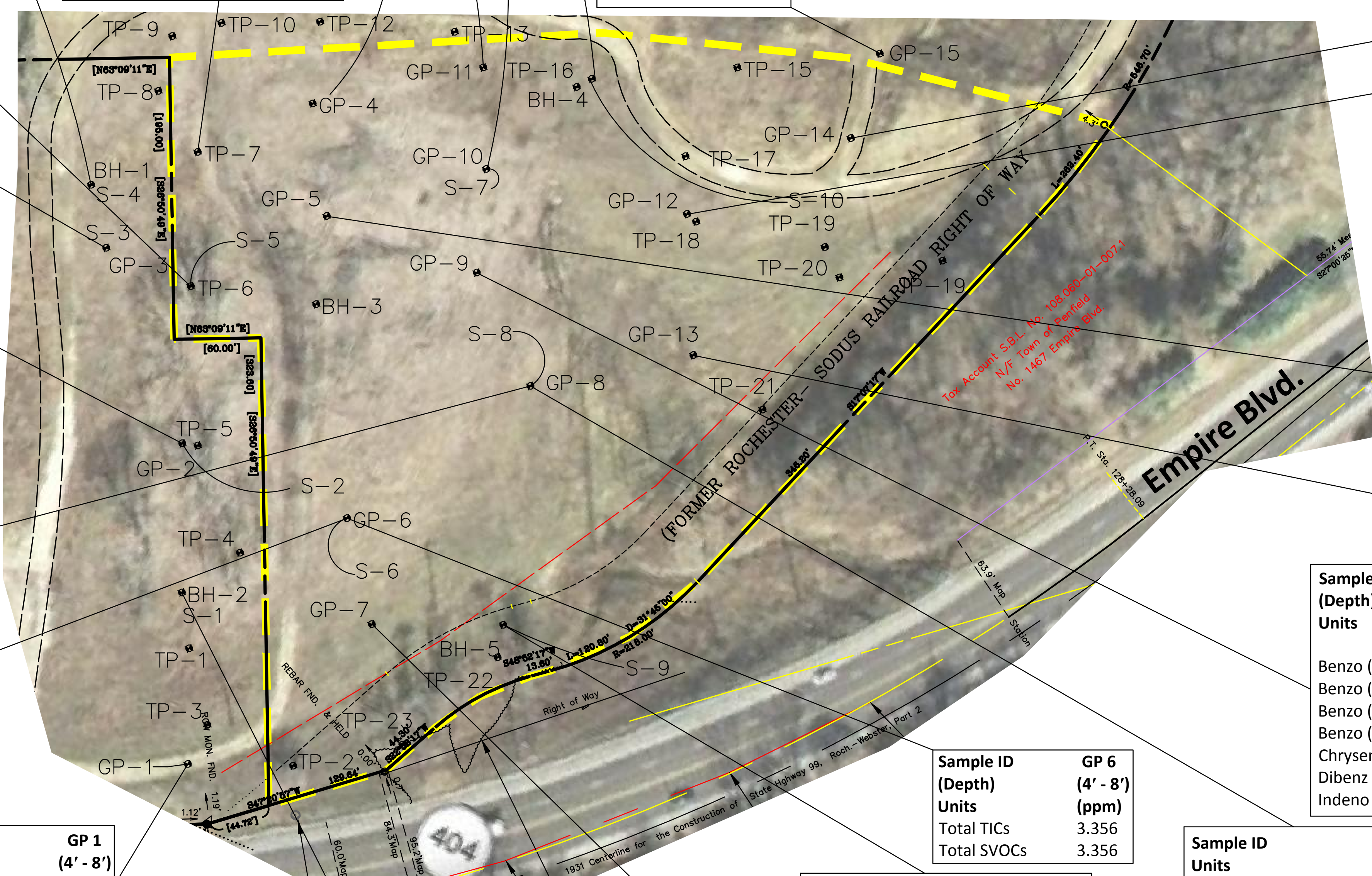
Sample ID	GP 14
(Depth)	(0 - 4')
Units	(ppm)
Total TICs	0
Total SVOCs	0

Sample ID	GP 3
(Depth)	(4' - 8')
Units	(ppm)
Total TICs	0
Total SVOCs	0

Sample ID	GP 12
(Depth)	(0 - 4')
Units	(ppm)
Total TICs	0
Total SVOCs	0

Sample ID	GP 2
(Depth)	(0' - 4')
Units	(ppm)
Bis (2-ethylhexyl) phthalate	0.237 J
Total TICs	0.564
Total SVOCs	0.801

Sample ID	GP 5
(Depth)	(4' - 8')
Units	(ppm)
Benzo (a) anthracene	3.210
Benzo (a) pyrene	4.270
Benzo (b) fluoranthene	4.500
Benzo (k) fluoranthene	3.210
Chrysene	3.900
Dibenz (a,h) anthracene	1.470
Indeno (1,2,3-cd) pyrene	2.640



Sample ID	GP 8
(Depth)	(0' - 4')
Units	(ppm)
Benzo (a) anthracene	9.670
Benzo (a) pyrene	7.150
Benzo (b) fluoranthene	6.050
Benzo (k) fluoranthene	6.360
Chrysene	8.840
Indeno (1,2,3-cd) pyrene	3.590

Sample ID	GP 13
(Depth)	(4 - 8')
Units	(ppm)
Total TICs	187.132
Total SVOCs	187.132

Sample ID	S-6
Units	(ppm)
Benzo (a) pyrene	1.260
Benzo (b) fluoranthene	1.330
Benzo (k) fluoranthene	1.010
Chrysene	1.050
Indeno (1,2,3-cd) pyrene	0.780

Sample ID	GP 9
(Depth)	(4' - 8)
Units	(ppm)
Benzo (a) anthracene	1.430
Benzo (a) pyrene	2.140
Benzo (b) fluoranthene	2.200
Benzo (k) fluoranthene	1.780
Chrysene	1.780
Dibenz (a,h) anthracene	0.626
Indeno (1,2,3-cd) pyrene	1.350

Sample ID	GP 6
(Depth)	(4' - 8')
Units	(ppm)
Total TICs	3.356
Total SVOCs	3.356

Sample ID	GP 1
(Depth)	(4' - 8')
Units	(ppm)
Total TICs	0
Total SVOCs	0

Sample ID	BH-2
(Depth)	(63-65')
Units	(ppm)
Total TICs	0
Total SVOCs	0

Sample ID	GP 7
(Depth)	(0' - 4')
Units	(ppm)
Pyrene	J 0.174
Total TICs	6.727
Total SVOCs	6.901

Sample ID	BH-5	BH-5
(Depth)	(8'-10')	(34'-36')
Units	(ppm)	(ppm)
Fluoranthene	J 0.223	ND
Pyrene	J 0.192	ND
Total TICs	0	0
Total SVOCs	0.607	0

Sample ID	S-8
Units	(ppm)
Benzo (a) anthracene	2.610
Benzo (a) pyrene	2.340
Benzo (b) fluoranthene	2.290
Benzo (k) fluoranthene	1.810
Chrysene	2.580
Dibenz (a,h) anthracene	0.471J
Indeno (1,2,3-cd) pyrene	1.480

LEGEND
Site Boundary
J: Estimated Result
GP: Geoprobe ®
BH: Borehole
TP: Test Pit
S: Surface Sample
BOLD: Quanity exceeds Part 375-6.8(a): Unrestricted Use Soil Cleanup Objectives
BOLD: Quanity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCO's
BOLD: Quanity exceeds Part 375-6.8(b): Protection of Groundwater SCOs

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Project No. 200229.16
Drawing No. Figure 8
Scale: 1" = 100'
Date NOV. 10, 2010

Project: 1440 Empire Boulevard, Town of Penfield, New York
Drawing: Soils–SVOC Exceedances Part 375 SCOs
Client: 1440 Empire Boulevard Development Corporation
Principal-in-Charge: Gary Passero, P.E.
Project Manager: Peter Morton, C.P.G.
Designed by: Richard Celestino

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Compounds	Part 375-6.8(a): Unrestricted Use SCOs (ppm)	Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)	Table 375-6.8(b): Protection of Groundwater SCOs (ppm)
Aldrin	**0.005**	0.97	0.19
alpha-Chlordane	**0.094**	4.2	2.9
4,4'-DDD	**0.0033**	13	14
4,4'-DDE	**0.0033**	8.9	17
4,4'-DDT	**0.0033**	7.9	136
Dieldrin	**0.005**	0.2	0.1
Endrin	**0.014**	11	0.6
Heptachlor Epoxide			

Sample ID	**BH-1**	**BH-1**	**BH-1**
(Depth)	**(8-10')**	**(28-30')**	**(63-65')**
Units	**(ppm)**	**(ppm)**	**(ppm)**
gamma-Chlordane	ND	J 0.00270	ND
Total Pesticides	0	0.00270	0

Sample ID	**BH-4**	**BH-4**
(Depth)	**(8-10')**	**(28-30')**
Units	**(ppm)**	**(ppm)**
delta-BHC	J 0.00207	ND
Total Pesticides	0.00207	0

Sample ID	**GP 11**
(Depth)	**(4 - 8')**
Units	**(ppm)**
4,4'-DDD	**J 0.00571**
4,4'-DDE	**0.00454**
4,4'-DDT	**J 0.0127**
Dieldrin	**0.0158**

Sample ID	**GP 15**
(Depth)	**(0' - 4')**
Units	**(ppm)**
Total Pesticides	0

Sample ID	**S-4**
Units	**(ppm)**
4,4'-DDD	J0.0116*
4,4'-DDT	J0.0238
Dieldrin	JN 0.0152*

Sample ID	**GP 4**
(Depth)	**(4' - 8')**
Units	**(ppm)**
4,4'-DDE	**0.0730**
4,4'-DDT	**0.173**
Dieldrin	**J 0.153***
Heptachlor Epoxide	0.0611

Sample ID	**S-10**
Units	**(ppm)**
4,4'-DDT	0.00477

Sample ID	**TP-7**
(Depth)	**(8'-10')**
Units	**(ppm)**
Aldrin	**J 0.0457***
alpha-Chlordane	**0.172**
4,4'-DDD	**0.367**
4,4'-DDE	**0.282**
4,4'-DDT	**JN 0.750***
Dieldrin	**R 0.574***
Heptachlor Epoxide	0.421

Sample ID	**GP 14**
(Depth)	**(0' - 4')**
Units	**(ppm)**
Total Pesticides	0

Sample ID	**S-7**
Units	**(ppm)**
4,4'-DDD	**J0.00555***
4,4'-DDT	**J0.0116**
Endrin	JN 0.0185*

Sample ID	**GP 3**
(Depth)	**(4' - 8')**
Units	**(ppm)**
Total Pesticides	0

Sample ID	**GP 10**
(Depth)	**(4 - 8')**
Units	**(ppm)**
4,4'-DDD	**JN 0.00365***
4,4'-DDE	**J 0.00779**
4,4'-DDT	**J 0.0206**

Sample ID	**S-5**
Units	**(ppm)**
4,4'-DDD	**J0.0237***
4,4'-DDE	**R0.00774***
4,4'-DDT	0.0794
Dieldrin	JN 0.0407*

Sample ID	**GP 12**
(Depth)	**(0' - 4')**
Units	**(ppm)**
Total Pesticides	0

Sample ID	**GP 2**
(Depth)	**(0' - 4')**
Units	**(ppm)**
4,4'-DDE	**JN 0.0164***
4,4'-DDT	**JN 0.0669***
Dieldrin	**J 0.0486***
Heptachlor Epoxide	JN 0.0251*

Sample ID	**GP 5**
(Depth)	**(4' - 8')**
Units	**(ppm)**
4,4'-DDE	**JN 0.0199***
4,4'-DDT	**0.0913**
Dieldrin	**J 0.0664***
Heptachlor Epoxide	J0.0631*

Sample ID	**S-2**
Units	**(ppm)**
4,4'-DDT	**J0.00440**

Sample ID	**BH-2**
(Depth)	**(63-65')**
Units	**(ppm)**
Endosulfan Sulfate	0.0882*
Total Pesticides	0.0882

Sample ID	**GP 13**
(Depth)	**(4' - 8')**
Units	**(ppm)**
4,4'-DDD	**J 0.00881***
4,4'-DDE	**J 0.00767***
4,4'-DDT	**J 0.00765***
Dieldrin	**0.00506**

Sample ID	**GP 8**
(Depth)	**(0' - 4')**
Units	**(ppm)**
Methoxychlor	J 0.0196*
Total Pesticides	0.0196

Sample ID	**S-1**
Units	**(ppm)**
4,4'-DDD	**0.00395**
4,4'-DDT	**J0.0100**

Sample ID	**GP 1**
(Depth)	**(4' - 8')**
Units	**(ppm)**
Total Pesticides	0

Sample ID	**GP 9**
(Depth)	**(4' - 8)**
Units	**(ppm)**
4,4'-DDT	**J 0.0596**

Sample ID	**S-9**
Units	**(ppm)**
4,4'-DDD	**0.00461**
4,4'-DDT	**0 .00673**

Sample ID	**S-8**
Units	**(ppm)**
4,4'-DDT	**J0.00490**

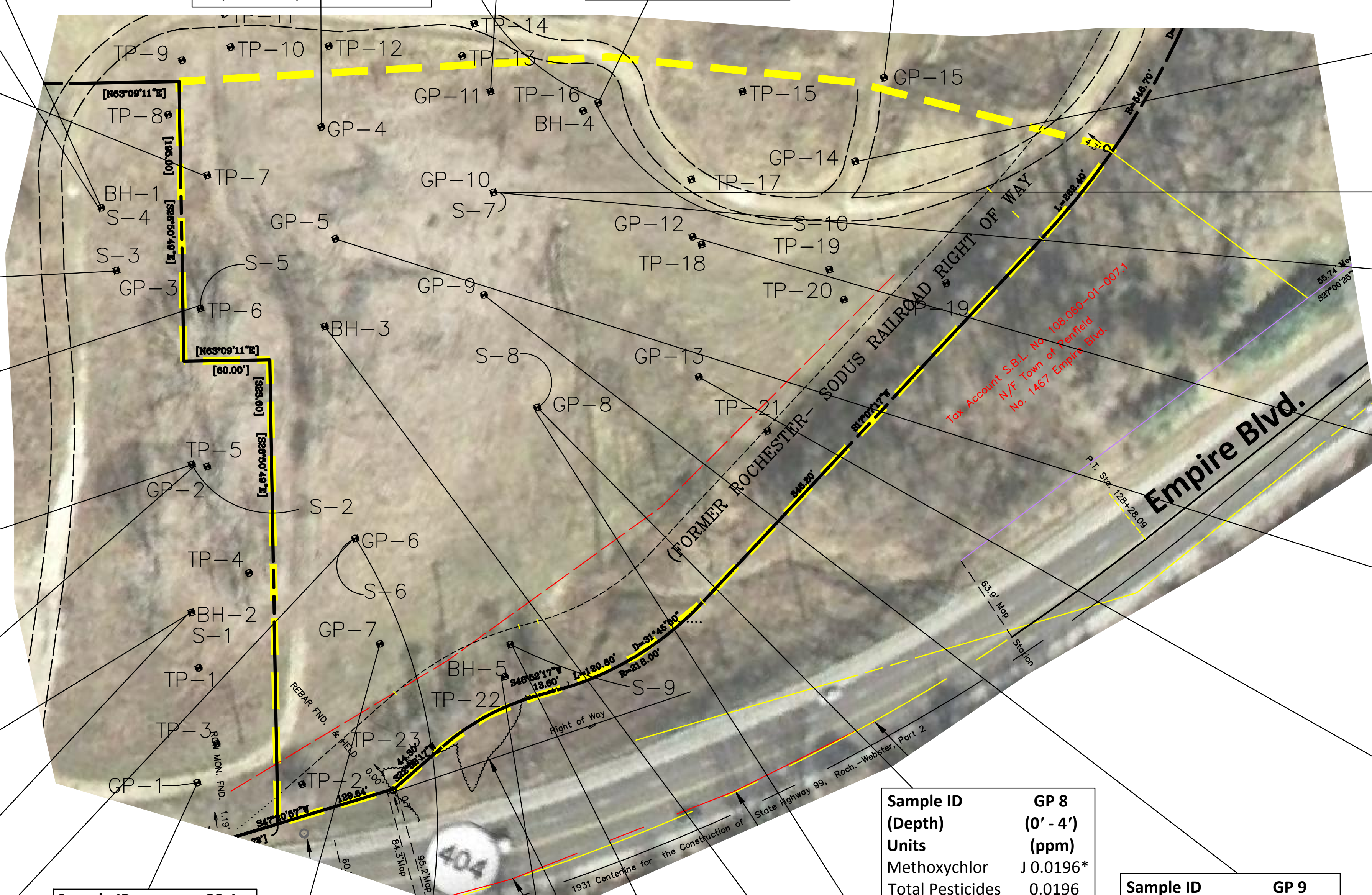
Sample ID	**GP 6**
(Depth)	**(8' -12')**
Units	**(ppm)**
Total Pesticides	0

Sample ID	**GP 7**
(Depth)	**(0' - 4')**
Units	**(ppm)**
4,4'-DDD	**J 0.405***
4,4'-DDE	**JN 0.151***
4,4'-DDT	**1.110**
Dieldrin	**JN 0.869***
Endrin	**J 0.120**
Heptachlor Epoxide	J 0.462*

Sample ID	**S-6**
Units	**(ppm)**
4,4'-DDD	**0.0169**
4,4'-DDE	**JN 0.0865**
Dieldrin	J 0.0243*

Sample ID	**BH-5**
(Depth)	**(8'-10')**
Units	**(ppm)**
4,4'-DDD	**J 0.00508**
4,4'-DDT	**0.00550**

Sample ID	**BH-3**
(Depth)	**(4-6')**
Units	**(ppm)**
4,4'-DDD	**0.107**
4,4'-DDT	**J0.0368***



LEGEND
Site Boundary
J: Estimated Result
GP: Geoprobe ®
BH: Borehole
TP: Test Pit
S: Surface Sample
*: Spike of duplicate analysis is not within the quality control limits
BOLD: Quanity exceeds Part 375-6.8(a): Unrestricted Use Soil Cleanup Objectives
BOLD: Quanity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCO's
BOLD: Quanity exceeds Part 375-6.8(b): Protection of Groundwater SCOs

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Project
1440 Empire Boulevard
Town of Penfield, New York

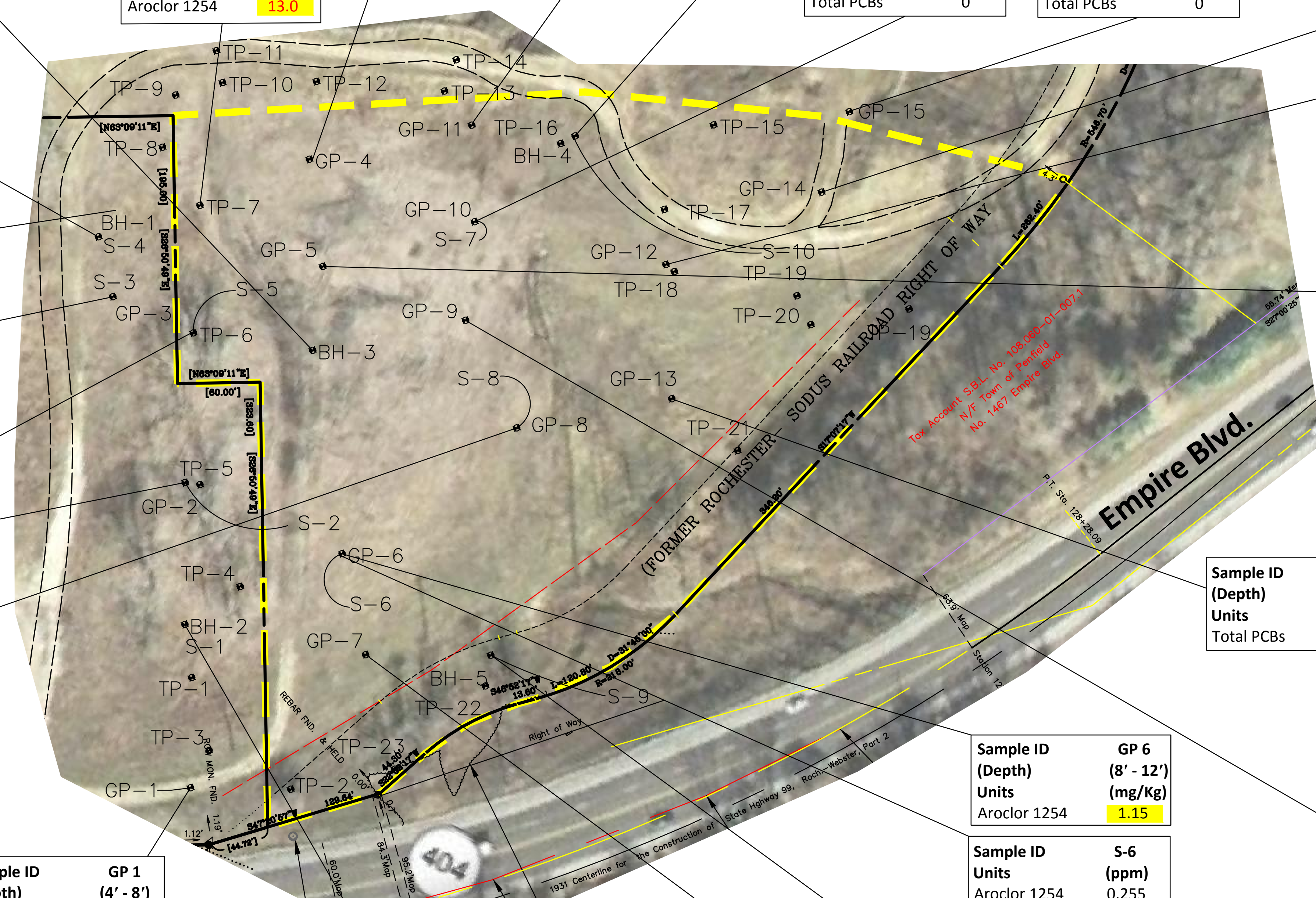
Drawing
Soils–Pesticide Exceedances Part 375 SCOs

Client
1440 Empire Boulevard Development Corporation

Principal-in-Charge Gary Passero, P.E.
Project Manager Peter Morton, C.P.G.
Designed by Richard Celestino

Project No. 200229.16
Drawing No. Figure 9
Scale: 1" = 100'
Date NOV. 10, 2010

Sample ID (Depth) Sampling Date Units	Part 375-6.8(a): Unrestricted Use SCOs (ppm)	Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)	Table 375-6.8(b): Protection of Groundwater SCOs (ppm)
Aroclor 1248	0.1	1	3.2
Aroclor 1254	0.1	1	3.2



Sample ID (Depth) Units	GP 4 (4' -8') (mg/Kg)
Aroclor 1254	**1.16**

Sample ID (Depth) Units	BH-4 (8-10') (ppm)	BH-4 (28-30') (ppm)
Total PCBs	0	0

Sample ID (Depth) Units	GP 11 (4' - 8') (mg/Kg)
Total PCBs	0

Sample ID (Depth) Units	BH-3 (4-6') (ppm)	BH-3 (59-61') (ppm)
Total PCBs	0	0

Sample ID Units	TP 7 (ppm)
Aroclor 1254	**13.0**

Sample ID (Depth) Units	GP 10 (4' - 8') (mg/Kg)
Total PCBs	0

Sample ID (Depth) Units	GP 15 (0' - 4') (mg/Kg)
Total PCBs	0

Sample ID (Depth) Units	GP 14 (0' - 4') (mg/Kg)
Total PCBs	0

Sample ID (Depth) Units	GP 12 (0' - 4') (mg/Kg)
Total PCBs	0

Sample ID (Depth) Units	BH-1 (8-10') (ppm)	BH-1 (28-30') (ppm)	BH-1 (63-65') (ppm)
Total PCBs	0	0	0

Sample ID Units	S-4 (ppm)
Aroclor 1254	0.222

Sample ID (Depth) Units	GP 5 (4' - 8') (mg/Kg)
Aroclor 1248	**1.56**
Aroclor 1254	**1.16**

Sample ID (Depth) Units	GP 3 (4' - 8') (mg/Kg)
Total PCBs	0

Sample ID Units	S-5 (ppm)
Aroclor 1254	0.846

Sample ID (Depth) Units	GP 2 (0' - 4') (mg/Kg)
Aroclor 1254	0.664

Sample ID (Depth) Units	GP 13 (4' - 8') (mg/Kg)
Total PCBs	0

Sample ID (Depth) Units	GP 8 (0' - 4') (mg/Kg)
Total PCBs	0

Sample ID (Depth) Units	GP 6 (8' - 12') (mg/Kg)
Aroclor 1254	**1.15**

Sample ID Units	S-6 (ppm)
Aroclor 1254	0.255

Sample ID (Depth) Units	GP 9 (4' - 8') (mg/Kg)
Aroclor 1254	0.193

Sample ID (Depth) Units	GP 1 (4' - 8') (mg/Kg)
Total PCBs	0

Sample ID (Depth) Units	BH-2 (63-65') (ppm)
Total PCBs	0

Sample ID (Depth) Units	GP 7 (8' - 12') (mg/Kg)
Aroclor 1254	**18.1**

Sample ID (Depth) Units	BH-5 (8-10') (ppm)	BH-5 (34-36') (ppm)
Aroclor 1254	0.0699	ND
Total PCBs	0.0699	0

LEGEND
Site Boundary
J: Estimated Result
GP: Geoprobe ®
BH: Borehole
TP: Test Pit
S: Surface Sample
BOLD: Quanity exceeds Part 375-6.8(a): Unrestricted Use Soil Cleanup Objectives
BOLD: Quanity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCO's
BOLD: Quanity exceeds Part 375-6.8(b): Protection of Groundwater SCOs

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Project No. 200229.16
Drawing No. Figure 10
Scale: 1" = 100'
Date NOV. 10, 2010

Project: 1440 Empire Boulevard, Town of Penfield, New York
Drawing: Soils–PCB Exceedances Part 375 SCOs
Client: 1440 Empire Boulevard Development Corporation
Principal-in-Charge: Gary Passero, P.E.
Project Manager: Peter Morton, C.P.G.
Designed by: Richard Celestino

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100 Liberty Pole Way, Rochester, NY 14604
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Sample ID	BH-1	BH-1	BH-1
(Depth)	(8-10')	(28-30')	(63-65')
Units	(ppm)	ppm)	(ppm)
Aluminum	3310	3330	2550
Barium	17.4	18.1	16.9
Calcium	32800	30300	25900
Chromium	**7.30**	**6.83**	**5.98**
Cobalt	3.41	3.39	2.75
Copper	7.49	7.83	5.07
Iron	9900	9460	7850
Lead	1.86	2.00	1.58
Magnesium	9110	8470	6940
Manganese	243	248	187
Nickel	5.94	5.89	4.69
Potassium	689	687	591
Sodium	201	177	161
Vanadium	16.7	15.6	14.3
Zinc	11.7	11.9	8.58
Total Metals	**56,325**	**52,744**	**44,239**

Sample ID	TP-7
(Depth)	N/A
Units	(mg/kg)
Aluminum	15100
Arsenic	1.20
Barium	51.7
Cadmium	2.13
Calcium	25700
Chromium	**62.2**
Cobalt	5.90
Copper	33.9
Iron	34500
Lead	46.7
Magnesium	7570
Manganese	553
Mercury	0.0364
Nickel	20.8
Potassium	1130
Sodium	207
Vanadium	20.5
Zinc	293
Total Metals	**85,298**

Sample ID	GP 4
(Depth)	(4' - 8')
Units	(ppm)
Chromium	**32.2**
Lead	**166**
Mercury	**0.186**
Nickel	17.2
Zinc	**213**

Sample ID	GP 11
(Depth)	(4 - 8')
Units	(ppm)
Chromium	**12.2**
Lead	**240**
Mercury	**0.482**

Sample ID	BH-4	BH-4
(Depth)	(8-10')	(28-30')
Units	(ppm)	(ppm)
Aluminum	5830	3660
Barium	15.4	15.2
Calcium	1990	40900
Chromium	**10.7**	**8.22**
Cobalt	4.09	4.19
Copper	10.1	6.95
Iron	12800	9200
Lead	2.15	4.96
Magnesium	1400	15800
Manganese	281	278
Nickel	7.79	7.22
Potassium	567	1010
Sodium		208
Vanadium	20.9	20.2
Zinc	20.0	24.6
Total Metals	**22.962**	**71,147**

Sample ID	GP 10
(Depth)	(4 - 8')
Units	(ppm)
Chromium	**11.9**
Lead	**1060**

Sample ID	S-4
Units	(ppm)
Chromium	**11.0**

Sample ID	GP 5
(Depth)	(4' - 8')
Units	(ppm)
Chromium	**18.7**
Lead	**84.7**
Mercury	**0.196**
Zinc	**119**

Sample ID	S-10
Units	(ppm)
Chromium	**11.4**
Mercury	0.240

Sample ID	S-6
Units	(ppm)
Chromium	**13.3**
Lead	67.5

Sample ID	GP 15
(Depth)	(0' - 4')
Units	(ppm)
Chromium	**10.7**

Sample ID	GP 14
(Depth)	(0' - 4')
Units	(ppm)
Chromium	**12.5**

Sample ID	S-3
Units	(ppm)
Chromium	**8.85**

Sample ID	GP 3
(Depth)	(4' - 8')
Units	(ppm)
Chromium	**8.91**

Sample ID	GP 12
(Depth)	(0' - 4')
Units	(ppm)
Chromium	**8.11**

Sample ID	GP 2
(Depth)	(0' - 4')
Units	(ppm)
Barium	**502**
Cadmium	**72.4**
Chromium	**66.2**
Copper	**8870**
Lead	**2140**
Nickel	**208**
Silver	**12.5**
Zinc	**5060**

Sample ID	S-5
Units	(ppm)
Chromium	**8.85**
Lead	137
Mercury	0.576
Nickel	38.2

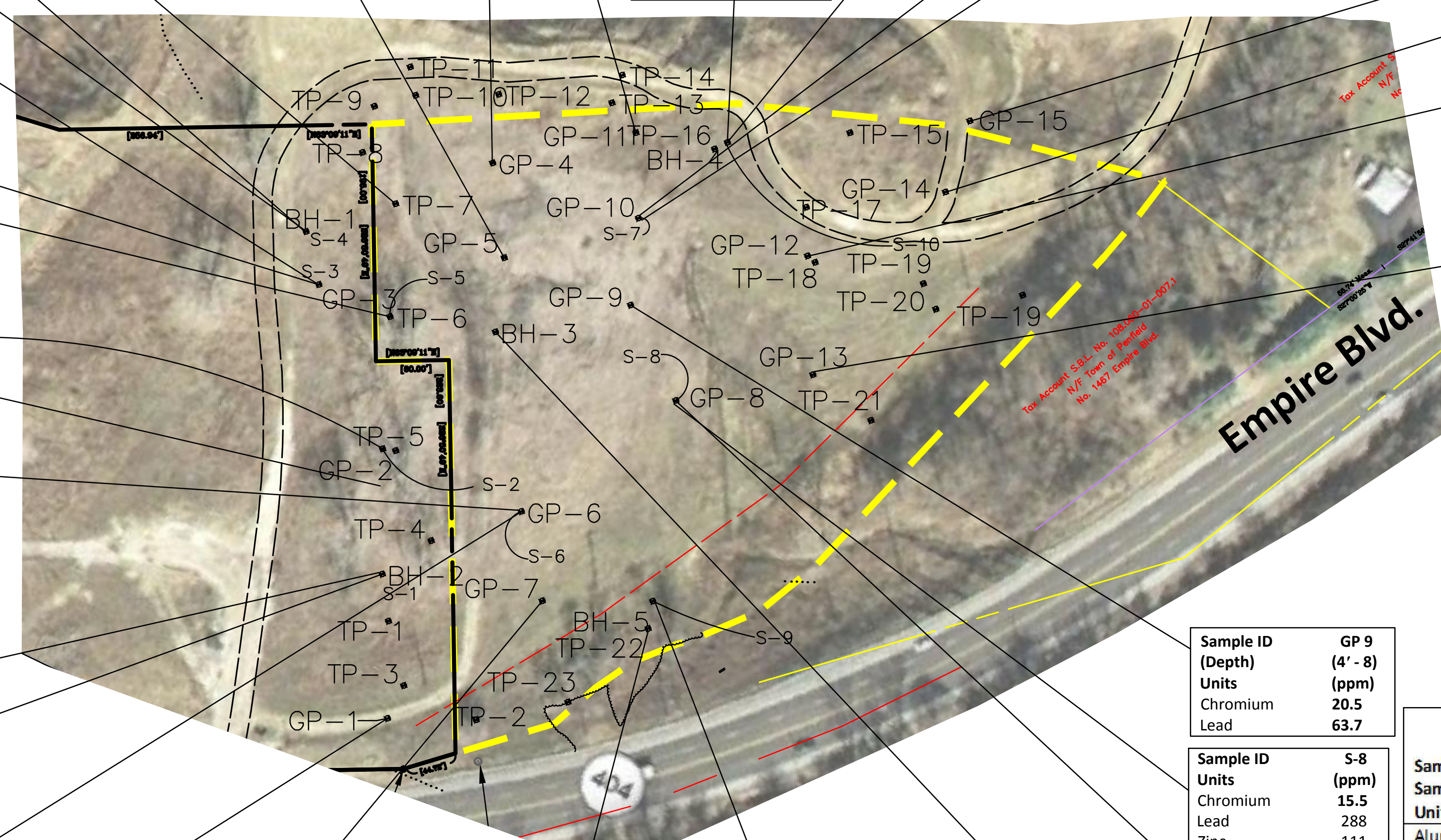
Sample ID	GP 13
(Depth)	(4' - 8')
Units	(ppm)
Chromium	**8.86**

Sample ID	S-2
Units	(ppm)
Chromium	**16.4**

Sample ID	BH-2
(Depth)	(63-65')
Units	(ppm)
Aluminum	4280
Arsenic	2.66
Barium	22.6
Calcium	33500
Chromium	**10.4**
Cobalt	4.32
Copper	7.11
Iron	11200
Lead	2.12
Magnesium	8760
Manganese	298
Nickel	6.95
Potassium	946
Sodium	345
Vanadium	19.2
Zinc	14.7
Total Metals	**59,419**

Sample ID	S-6
Units	(ppm)
Chromium	**22.1**
Lead	118
Zinc	124

Sample ID	S-1
Units	(ppm)
Chromium	**15.0**
Copper	**90.9**



Sample ID	GP 9
(Depth)	(4' - 8)
Units	(ppm)
Chromium	**20.5**
Lead	**63.7**

Sample ID	S-8
Units	(ppm)
Chromium	**15.5**
Lead	288
Zinc	111

Sample ID	GP 6
(Depth)	(8' -12')
Units	(ppm)
Chromium	**13.9**
Lead	**76.2**
Mercury	**0.427**

Sample ID	GP 1
(Depth)	(4' - 8')
Units	(ppm)
Chromium	**9.61**

Sample ID	GP 7
(Depth)	(0' - 4')
Units	(ppm)
Cadmium	**4.69**
Chromium	**302**
Copper	**87.7**
Lead	**84.7**
Nickel	**130**

Sample ID	GP 7
(Depth)	(0' - 4')
Sampling	12/18/09
Units	(ppm)
Cadmium	**4.69**
Chromium	**302**
Copper	**87.7**
Lead	**84.7**
Nickel	**130**

Sample ID	BH-5	BH-5
(Depth)	(8'-10')	(34'-36')
Units	(ppm)	(ppm)
Aluminum	8630	4120
Arsenic	5.15	6.28
Barium	51.7	233
Beryllium	0.546	
Cadmium	0.499	
Calcium	41000	105000
Chromium	**13.8**	**6.29**
Cobalt	5.57	3.65
Copper	21.6	7.35
Iron	15400	9980
Lead	**103**	8.61
Magnesium	13400	57000
Manganese	417	380
Nickel	9.94	7.51
Potassium	1300	2350
Sodium	264	236
Vanadium	21.3	7.35
Zinc	112	22.8
Total Metals	**80,756**	**74,370**

Sample ID	S-9
Units	(ppm)
Chromium	**12.9**

Sample ID	BH-3	BH-3
(Depth)	(4-6')	(59-61')
Units	(ppm)	(ppm)
Aluminum	2940	3170
Antimony	21.8	
Arsenic	**15.0**	1.89
Barium	87.0	14.9
Cadmium	2.11	
Calcium	10800	3820
Chromium	**25.5**	**5.34**
Cobalt	6.50	3.00
Copper	100	5.88
Iron	77100	8630
Lead	**3450**	2.49
Magnesium	2510	2600
Manganese	231	402
Mercury	**0.454**	
Nickel	35.6	5.65
Potassium	565	695
Sodium	264	158
Vanadium	8.81	11.7
Zinc	592	23.9
Total Metals	**98,755**	**19,5450**

Sample ID	GP 8
(Depth)	(0' - 4')
Units	(ppm)
Chromium	**10.7**

Sample ID Sampling Date Units	Part 375-6.8(a): Unrestricted Use SCOs (ppm)	Part 375-6.8(b): Restricted Use, Restricted Residential SCOs (ppm)	Table 375-6.8(b): Protection of Groundwater SCOs (ppm)
Aluminum	NS	NS	NS
Arsenic	13	16	16
Barium	350	400	820
Cadmium	2.5	4.3	7.5
Calcium	NS	NS	NS
Chromium	1	110	19
Cobalt	NS	NS	NS
Copper	50	270	1,720
Iron	NS	NS	NS
Lead	63	400	450
Magnesium	NS	NS	NS
Manganese	1,600	2000	2,000
Mercury	0.18	0.81	0.73
Nickel	30	310	130
Potassium	NS	NS	NS
Sodium	NS	NS	NS
Vanadium	NS	NS	NS
Zinc	109	10,000	2,480

NS: No Standard

LEGEND
Site Boundary
J: Estimated Result
GP: Geoprobe ®
BH: Borehole
TP: Test Pit
S: Surface Sample
BOLD: Quanity exceeds Part 375-6.8(a): Unrestricted Use Soil Cleanup Objectives
BOLD: Quanity exceeds Part 375-6.8(b): Restricted Use, Restricted Residential SCO's
BOLD: Quanity exceeds Part 375-6.8(b): Protection of Groundwater SCOs

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Project No. 200229.16
Drawing No. Figure 11
Scale: 1" = 150'
Date NOV. 10, 2010

Project
1440 Empire Boulevard
Town of Penfield, New York

Drawing
Soils–Metals Exceedances Part 375 SCOs

Client
1440 Empire Boulevard
Development Corporation

Principal-in-Charge Gary Passero, P.E.
Project Manager Peter Morton, C.P.G.
Designed by Richard Celestino

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Sample ID	S 5
Units	(ppm)
Benzo (a) anthracene	9.060
Benzo (a) pyrene	15.400
Benzo (b) fluoranthene	18.200
Benzo (g,h,i) perylene	14.200
Benzo (k)fluoranthene	**12.100**
Chrysene	**12.600**
Dibenz (a,h) anthracene	5.090
Fluoranthene	8.370
Indeno (1,2,3-cd) pyrene	10.200
Pyrene	8.310
Total TICs	37.28
Total SVOCs	**150.81**

Sample ID	S 7
Units	(ppm)
Benzo (a) anthracene	0.478
Benzo (a) pyrene	0.379 J
Benzo (b) fluoranthene	0.352 J
Benzo (g,h,i) perylene	0.225 J
Benzo (k) fluoranthene	0.351 J
Chrysene	0.475
Fluoranthene	0.981
Indeno (1,2,3-cd) pyrene	0.223 J
Phenanthrene	0.616
Pyrene	0.840
Total TICs	24.742
Total SVOCs	29.662

Sample ID	S 10
Units	(ppm)
Benzo (a) anthracene	J 0.281
Benzo (a) pyrene	J 0.239
Benzo (b) fluoranthene	J 0.232
Benzo (g,h,i) perylene	
Benzo (k) fluoranthene	J 0.183
Chrysene	J 0.262
Fluoranthene	0.548
Phenanthrene	J 0.248
Pyrene	0.440
Total TICs	2.000
Total SVOCs	4.433

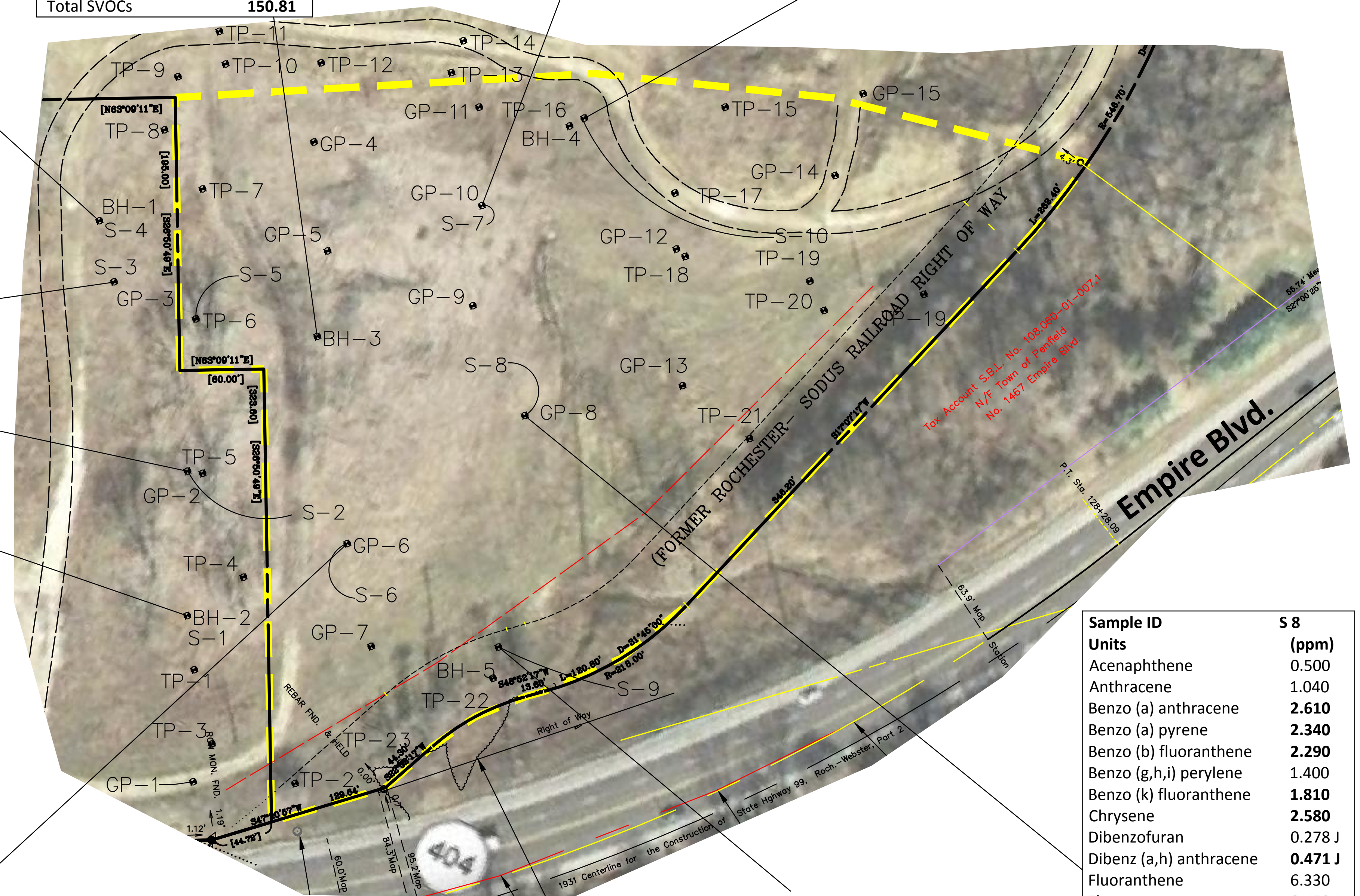
Sample ID	S 4
Units	(ppm)
Benzo (a) anthracene	0.378
Benzo (a) pyrene	0.424
Benzo (b) fluoranthene	0.450
Benzo (g,h,i) perylene	0.376
Benzo (k) fluoranthene	0.356
Chrysene	0.425
Indeno (1,2,3-cd) pyrene	J 0.265
Phenanthrene	J 0.200
Pyrene	0.552
Total TICs	0
Total SVOCs	4.047

Sample ID	S 3
Units	(ppm)
Total TICs	0.345
Total SVOCs	0.345

Sample ID	S 2
Units	(ppm)
Total TICs	0
Total SVOCs	0

Sample ID	S 1
Units	(ppm)
Total TICs	0.466
Total SVOCs	0.466

Sample ID	S 6
Units	(ppm)
Benzo (a) anthracene	0.802
Benzo (a) pyrene	**1.260**
Benzo (b) fluoranthene	**1.330**
Benzo (g,h,i) perylene	1.140
Benzo (k) fluoranthene	**1.010**
Chrysene	**1.050**
Fluoranthene	0.954
Indeno (1,2,3-cd) pyrene	**0.780**
Phenanthrene	J 0.317
Pyrene	0.879
Total TICs	0.673
Total SVOCs	10.195



Sample ID	S 9
Units	(ppm)
Total TICs	0
Total SVOCs	0

Sample ID	S 8
Units	(ppm)
Acenaphthene	0.500
Anthracene	1.040
Benzo (a) anthracene	**2.610**
Benzo (a) pyrene	**2.340**
Benzo (b) fluoranthene	**2.290**
Benzo (g,h,i) perylene	1.400
Benzo (k) fluoranthene	**1.810**
Chrysene	**2.580**
Dibenzofuran	0.278 J
Dibenz (a,h) anthracene	**0.471 J**
Fluoranthene	6.330
Fluorene	0.459 J
Indeno (1,2,3-cd) pyrene	**1.480**
Naphthalene	0.299 J
Phenanthrene	5.250
Pyrene	5.550
Total TICs	37.799
Total SVOCs	**144.972**

LEGEND
Site Boundary
ND: Non-detect
NS: No Standard
J: Estimated Result
JN: Non-routine analyte. Quantitation estimated.
*: Spike of duplicate analysis is not within the quality control limits
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use Soil Cleanup Objectives
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use Restricted Residential SCO's
GP: Geoprobe ®
BH: Borehole
TP: Test Pit

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Project No. 200229.16
Drawing No. Figure 12
Scale: 1" = 100'
Date NOV. 10, 2010

Project: 1440 Empire Boulevard
Town of Penfield, New York

Drawing: Surface Soils–SVOCs Detected

Client: 1440 Empire Boulevard Development Corporation

Principal-in-Charge: Gary Passero, P.E.
Project Manager: Peter Morton, C.P.G.
Designed by: Richard Celestino

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Sample ID	S 5
Units	(ppm)
delta-BHC	J 0.00344
alpha-Chlordane	J 0.0228
4,4'-DDD	**J 0.0237***
4,4'-DDE	**R 0.00774***
4,4'-DDT	**0.0794**
Dieldrin	**JN 0.0407***
Endosulfan Sulfate	R 0.110*
Endrin Aldehyde	0.0150
Heptachlor Epoxide	J 0.0215*
Total Pesticides	0.32428

Sample ID	S 7
Units	(ppm)
alpha-Chlordane	J 0.0351
4,4'-DDD	**J0.00555***
4,4'-DDT	**J0.0116**
Endosulfan Sulfate	JN 0.0813*
Endrin	**JN 0.0185***
Endrin Aldehyde	J 0.00742*
Methoxychlor	J 0.00484
Total Pesticides	0.16431

Sample ID	S 10
Units	(ppm)
alpha-Chlordane	R 0.00302*
gamma-Chlordane	J 0.00327*
4,4'-DDD	J 0.00310*
4,4'-DDT	**0.00477**
DieldrinJ	0.00423
Endosulfan II	J 0.00206*
Methoxychlor	0.00554*
Total Pesticides	0.02599

Sample ID	S 4
Units	(ppm)
alpha-Chlordane	R 0.00619*
gamma-Chlordane	J 0.0125
4,4'-DDD	**J 0.0116***
4,4'-DDE	R 0.00228*
4,4'-DDT	**J 0.0238**
Dieldrin	**JN 0.0152***
Endosulfan II	J 0.0102
Endosulfan Sulfate	R 0.0299*
Endrin Aldehyde	0.00479
Heptachlor Epoxide	J 0.00481*
Total Pesticides	0.12127

Sample ID	S 3
Units	(ppm)
Total Pesticides	0

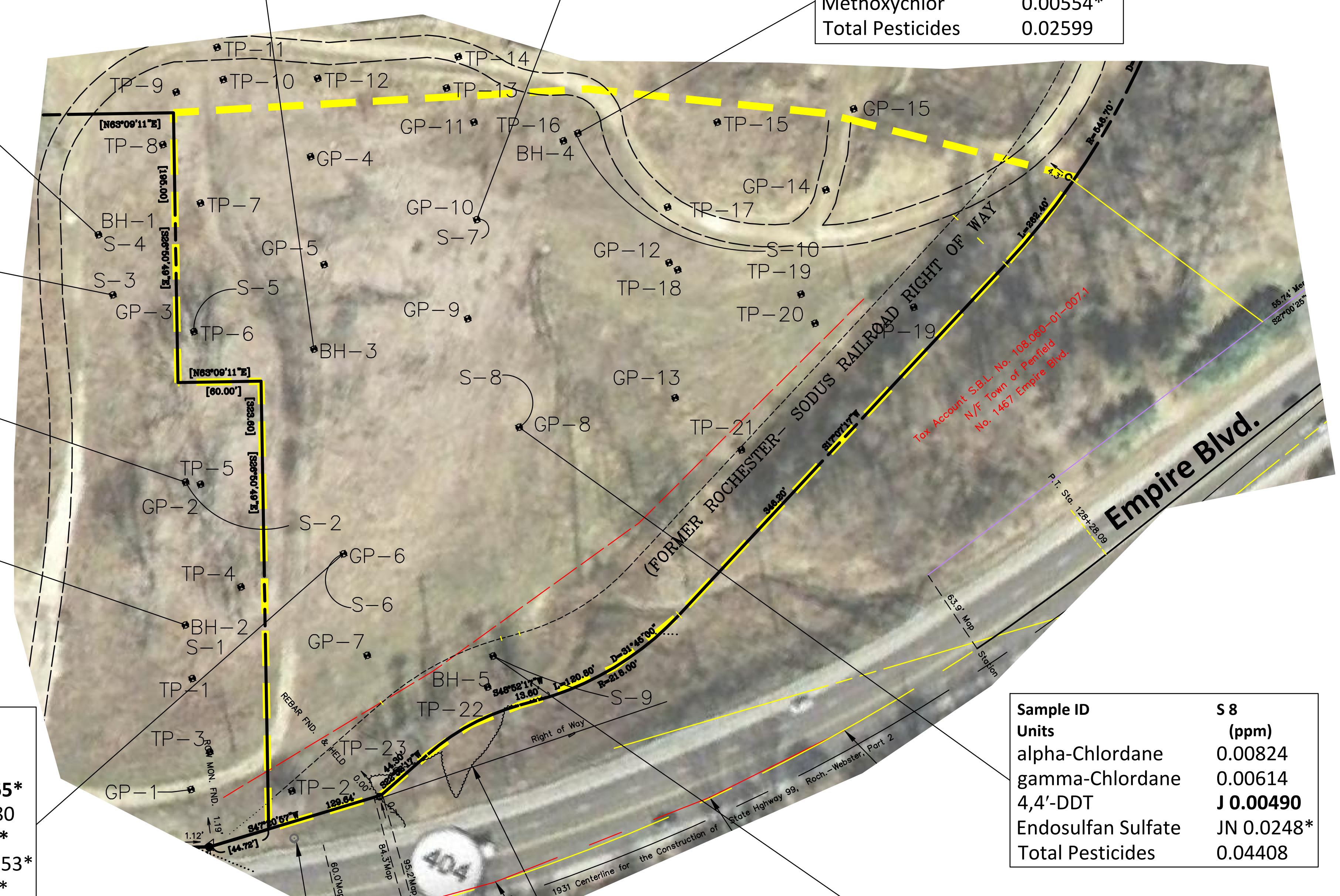
Sample ID	S 2
Units	(ppm)
4,4'-DDT	**J 0.00440**
Total Pesticides	0.00440

Sample ID	S 1
Units	(ppm)
gamma-Chlordane	0.0105
4,4'-DDD	**0.00395**
4,4'-DDT	**J 0.0100**
Endosulfan SulfateJ	0.00552*
MethoxychlorJN	0.00374*
Total Pesticides	0.03371

Sample ID	S 6
Units	(ppm)
4,4'-DDD	**0.0169**
4,4'-DDE	**JN 0.0865***
4,4'-DDT	J<0.00580
Dieldrin	**J 0.0243***
Endrin	JN 0.00753*
Heptachlor Epoxide	J 0.0129*
Total Pesticides	0.14813

Sample ID	S 8
Units	(ppm)
alpha-Chlordane	0.00824
gamma-Chlordane	0.00614
4,4'-DDT	**J 0.00490**
Endosulfan Sulfate	JN 0.0248*
Total Pesticides	0.04408

Sample ID	S 9
Units	(ppm)
4,4'-DDD	**0.00461**
4,4'-DDT	**0.00673**
Total Pesticides	0.01596



LEGEND
Site Boundary
ND: Non-detect
NS: No Standard
J: Estimated Result
JN: Non-routine analyte. Quantitation estimated.
*: Spike of duplicate analysis is not within the quality control limits
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use Soil Cleanup Objectives
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use Restricted Residential SCO's
GP: Geoprobe ®
BH: Borehole
TP: Test Pit

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Project No. 200229.16
Drawing No. Figure 13
Scale: 1" = 100'
Date NOV. 10, 2010

Project: 1440 Empire Boulevard
Town of Penfield, New York

Drawing: Surface Soils–Pesticides Detected

Client: 1440 Empire Boulevard Development Corporation

Principal-in-Charge: Gary Passero, P.E.
Project Manager: Peter Morton, C.P.G.
Designed by: Richard Celestino

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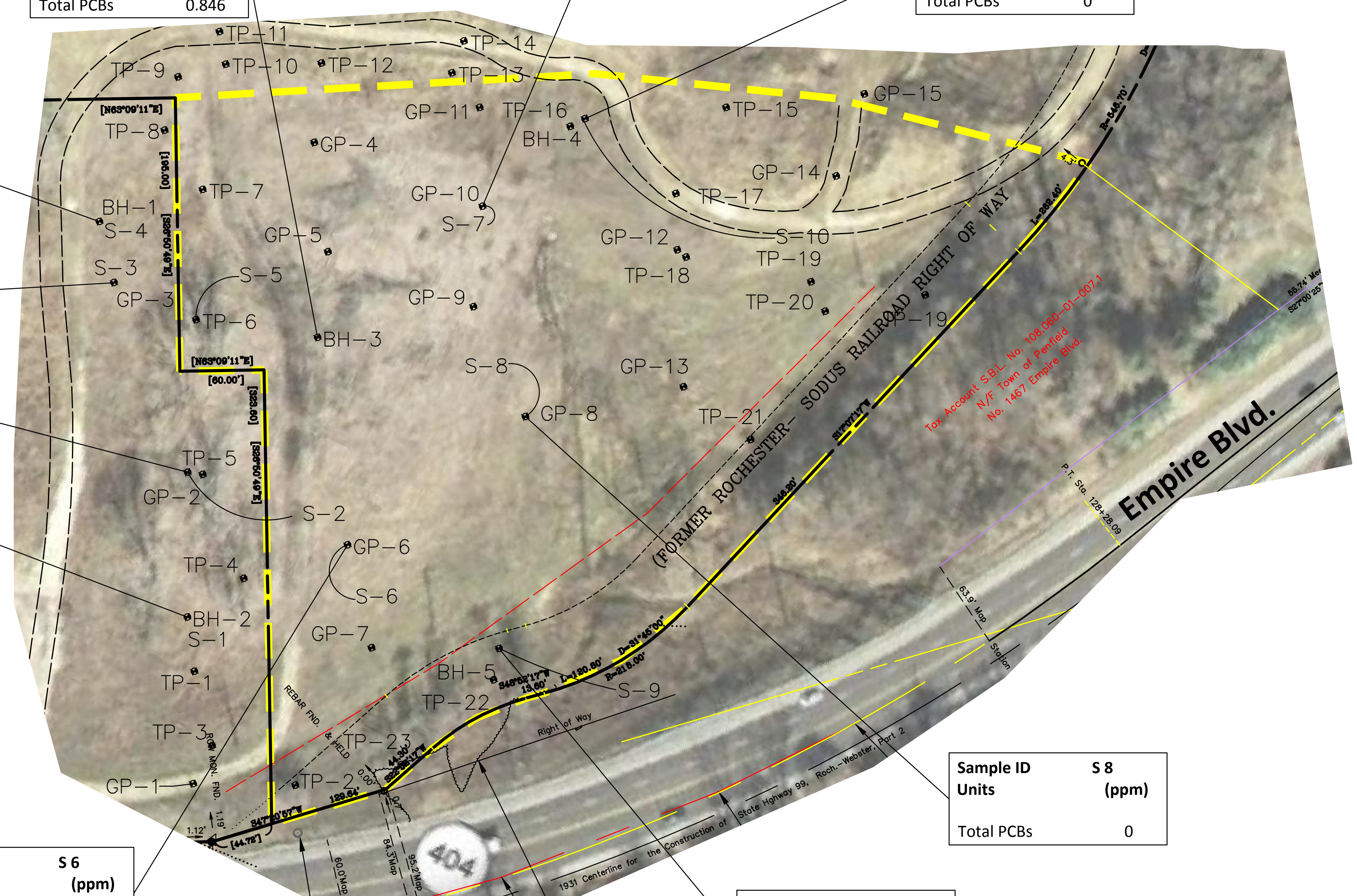

Sample ID	S 5
Units	(ppm)
Aroclor 1254	**0.846**
Total PCBs	0.846

Sample ID	S 7
Units	(ppm)
Total PCBs	0

Sample ID	S 10
Units	(ppm)
Total PCBs	0

Sample ID	S 4
Units	(ppm)
Aroclor 1254	**0.222**
Total PCBs	0.222

Sample ID	S 3
Units	(ppm)
Total PCBs	0

Sample ID	S 2
Units	(ppm)
Aroclor 1254	0.0368
Total PCBs	0.0368

Sample ID	S 1
Units	(ppm)
Aroclor 1254	0.0476
Total PCBs	0.0476

Sample ID	S 8
Units	(ppm)
Total PCBs	0

Sample ID	S 6
Units	(ppm)
Aroclor 1254	**0.255**
Total PCBs	0.255

Sample ID	S 9
Units	(ppm)
Aroclor 1254	0.0640
Total PCBs	0.0640

LEGEND
Site Boundary
ND: Non-detectNS: No Standard
J: Estimated Result
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Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use Soil Cleanup Objectives
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use Restricted Residential SCO's
GP: Geoprobe ®
BH: Borehole
TP: Test Pit

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Project No. 200229.16
Drawing No. Figure 14
Scale: 1" = 100'
Date NOV. 10, 2010

Project: 1440 Empire Boulevard
Town of Penfield, New York

Drawing: Surface Soils-PCBs Detected

Client: 1440 Empire Boulevard Development Corporation

Principal-in-Charge: Gary Passero, P.E.
Project Manager: Peter Morton, C.P.G.
Designed by: Richard Celestino

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Sample ID	S 4
Units	(ppm)
Aluminum	4610
Arsenic	1.49
Barium	29.1
Cadmium	0.632
Calcium	60400
Chromium	**11.0**
Cobalt	3.71
Copper	14.0
Iron	10800
Lead	42.1
Magnesium	9770
Manganese	290
Mercury	0.0237
Nickel	8.65
Potassium	1050
Sodium	138
Vanadium	16.9
Zinc	46.6
Total TAL Metals	87,232.2057

Sample ID	S 5
Units	(ppm)
Aluminum	7860
Arsenic	5.18
Barium	54.5
Cadmium	1.50
Calcium	10700
Chromium	**63.3**
Cobalt	6.92
Copper	48.2
Iron	18700
Lead	**137**
Magnesium	4890
Manganese	322
Mercury	**0.576**
Nickel	**38.2**
Potassium	1070
Sodium	92.9
Vanadium	28.4
Zinc	94.0
Total TAL Metals	44,112.676

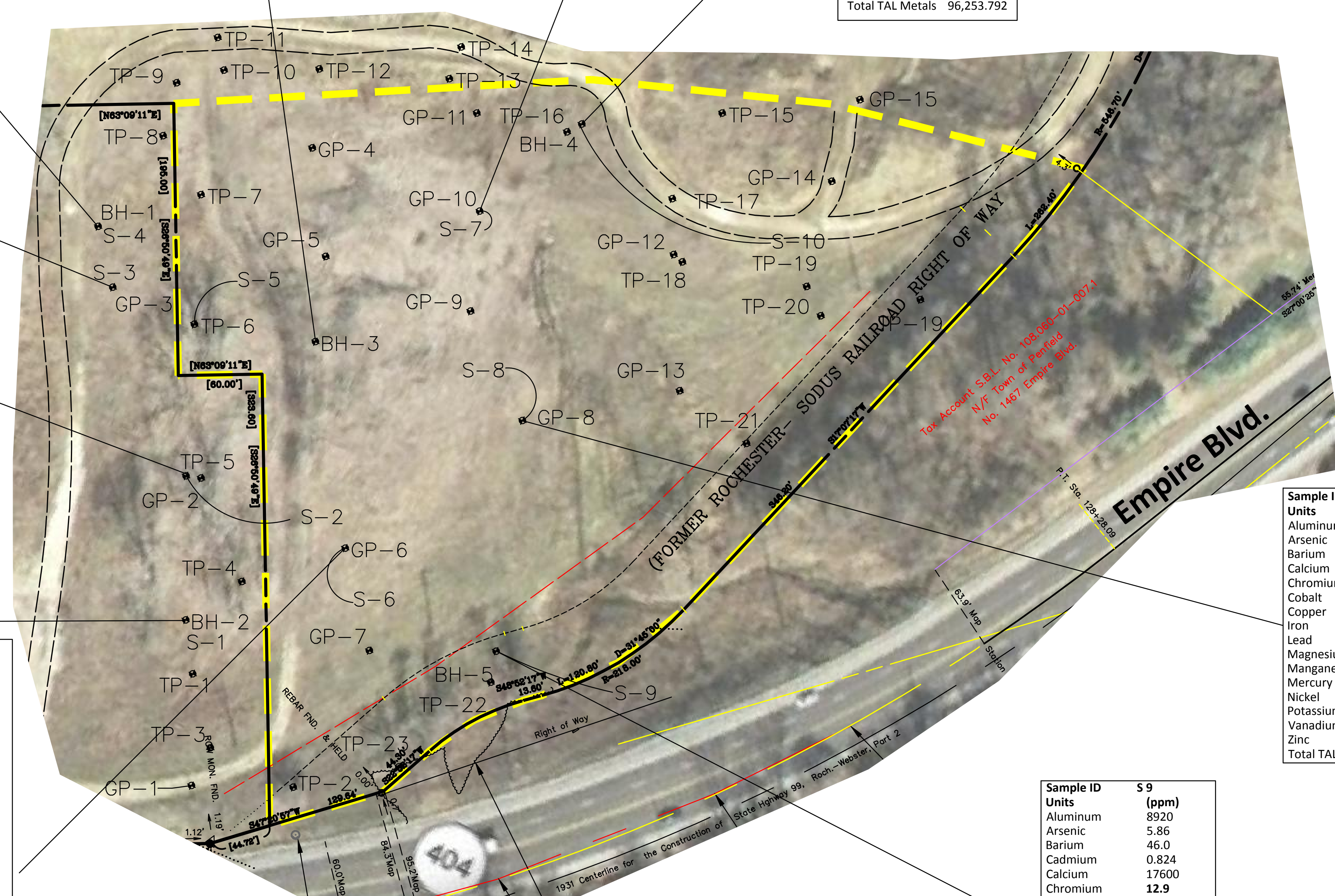
Sample ID	S 7
Units	(ppm)
Aluminum	6820
Arsenic	5.50
Barium	43.9
Calcium	19700
Chromium	**13.3**
Cobalt	5.15
Copper	23.9
Iron	12600
Lead	**67.5**
Magnesium	7340
Manganese	324
Mercury	0.0871
Nickel	11.2
Potassium	1290
Sodium	133
anadium	18.1
Zinc	78.6
Total TAL Metals	48,474.2371

Sample ID	S 10
Units	(ppm)
Aluminum	7560
Arsenic	2.34
Barium	43.7
Cadmium	0.504
Calcium	17500
Chromium	**11.4**
Cobalt	5.92
Copper	17.1
Iron	13700
Lead	34.9
Magnesium	8070
Manganese	387
Mercury	**0.240**
Nickel	12.0
Potassium	1390
Sodium	105
Vanadium	18.5
Zinc	62.3
Total TAL Metals	96,253.792

Sample ID	S 3
Units	(ppm)
Aluminum	4220
Arsenic	3.27
Barium	25.6
Calcium	44800
Chromium	**8.85**
Cobalt	5.51
Copper	8.88
Iron	11000
Lead	2.25
Magnesium	11000
Manganese	409
Nickel	7.56
Potassium	803
Sodium	232
Vanadium	18.4
Zinc	21.7
Total TAL Metals	61,563.77

Sample ID	S 2
Units	(ppm)
Aluminum	9510
Arsenic	5.53
Barium	50.8
Calcium	22400
Chromium	**16.4**
Cobalt	6.9
Copper	16.5
Iron	16000
Lead	22.0
Magnesium	7790
Manganese	451
Mercury	0.0413
Nickel	12.8
Potassium	1440
Vanadium	23.8
Zinc	51.3
Total TAL Metals	57,797.0713

Sample ID	S 1
Units	(ppm)
Aluminum	7860
Arsenic	5.36
Barium	42.1
Cadmium	0.810
Calcium	35700
Chromium	**15.0**
Cobalt	5.30
Copper	**90.9**
Iron	13600
Lead	22.2
Magnesium	17500
Manganese	376
Mercury	0.0560
Nickel	11.3
Potassium	1850
Sodium	167
Vanadium	20.5
Zinc	66.1
Total TAL Metals	77,332.626



Sample ID	S 6
Units	(ppm)
Aluminum	7650
Arsenic	6.92
Barium	54.5
Cadmium	0.874
Calcium	28300
Chromium	**22.1**
Cobalt	6.19
Copper	26.7
Iron	14000
Lead	**118**
Magnesium	12100
Manganese	425
Mercury	0.0609
Nickel	15.5
Potassium	1600
Sodium	141
Vanadium	20.9
Zinc	**124**
Total TAL Metals	64,611.7449

Sample ID	S 8
Units	(ppm)
Aluminum	6650
Arsenic	7.37
Barium	46.7
Calcium	17800
Chromium	**15.5**
Cobalt	5.05
Copper	37.5
Iron	15400
Lead	**288**
Magnesium	7180
Manganese	307
Mercury	0.112
Nickel	11.3
Potassium	978
Vanadium	20.3
Zinc	**111**
Total TAL Metals	48,857.832

Sample ID	S 9
Units	(ppm)
Aluminum	8920
Arsenic	5.86
Barium	46.0
Cadmium	0.824
Calcium	17600
Chromium	**12.9**
Cobalt	6.10
Copper	24.2
Iron	14500
Lead	40.8
Magnesium	7650
Manganese	361
Mercury	0.0445
Nickel	10.7
Potassium	1270
Sodium	115
Vanadium	21.3
Zinc	103
Total TAL Metals	101,375.457

LEGEND
Site Boundary
ND: Non-detect
NS: No Standard
J: Estimated Result
JN: Non-routine analyte. Quantitation estimated.
*: Spike of duplicate analysis is not within the quality control limits
Bold: Quantity exceeds Part 375-6.8(a): Unrestricted Use Soil Cleanup Objectives
Bold: Quantity exceeds Part 375-6.8(b): Restricted Use Restricted Residential SCO's
GP: Geoprobe ®
BH: Borehole
TP: Test Pit

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Project No. 200229.16
Drawing No. Figure 15
Scale: 1" = 100'
Date NOV. 10, 2010

Project: 1440 Empire Boulevard, Town of Penfield, New York
Drawing: Surface Soils–Metals Detected
Client: 1440 Empire Boulevard Development Corporation
Principal-in-Charge: Gary Passero, P.E.
Project Manager: Peter Morton, C.P.G.
Designed by: Richard Celestino

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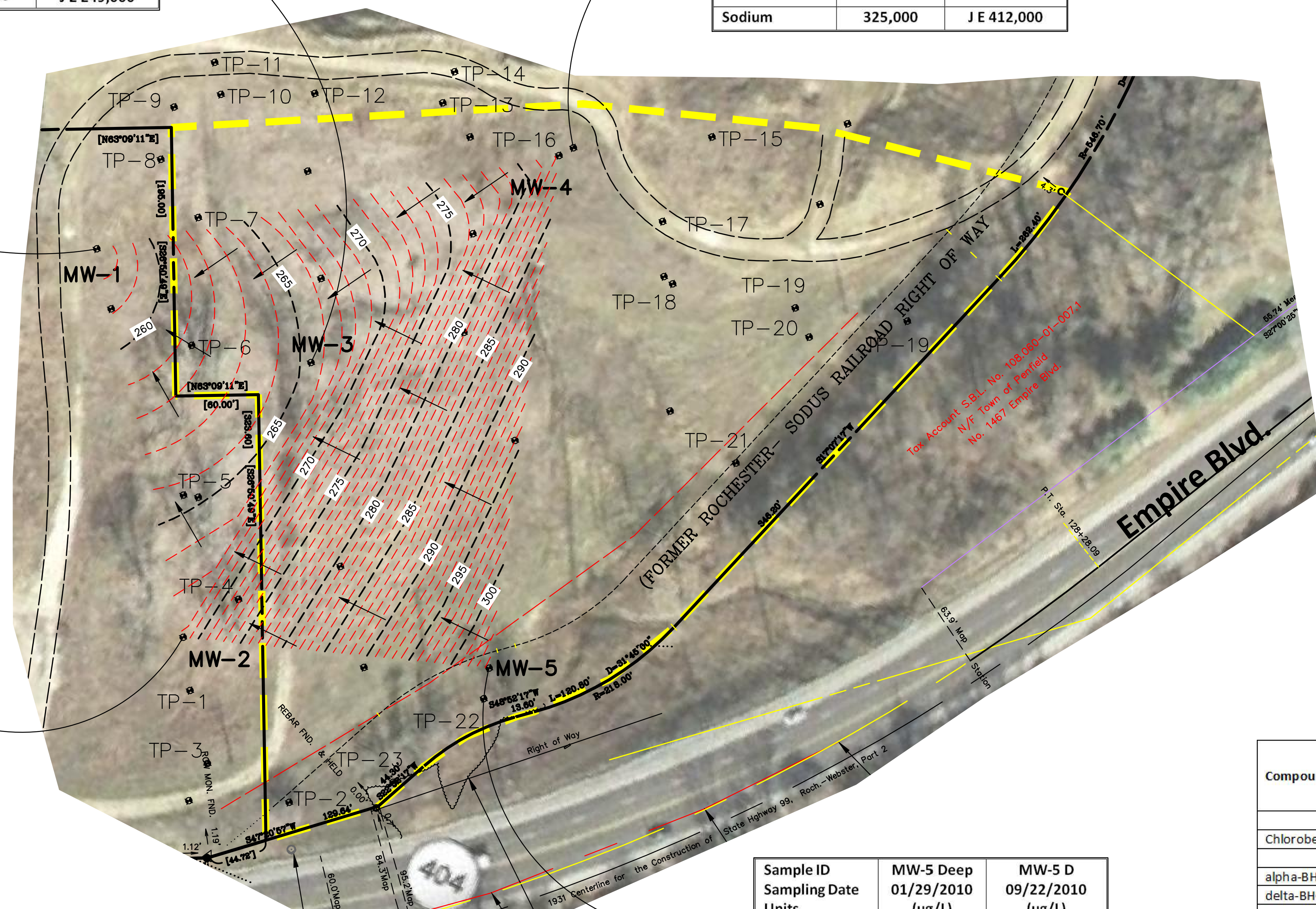
Sample ID Sampling Date Units	MW-3 01/28/2010 (ug/L)	MW-3 09/22/2010 (ug/L)
VOCs		
Chlorobenzene	**5.06**	ND
Pesticides		
alpha-BHC	**J 0.0779***	**J 0.0560**
delta-BHC	ND	**J 0.0550**
Metals		
Iron	**30,600**	**7,710**
Magnesium	**52,600**	**60,800**
Sodium	**205,000**	**J E 249,000**

Sample ID Sampling Date Units	MW-4 01/28/2010 (ug/L)	MW-4 09/23/2010 (ug/L)
Pesticides		
alpha-BHC	ND	**J 0.0548**
delta-BHC	ND	**J 0.0541**
Metals		
Chromium	ND	**61**
Iron	**18,600 M**	**J 19,500**
Magnesium	**54,000**	**58,000**
Manganese	**402**	**447**
Selenium	**14**	J 3.1
Sodium	**325,000**	**J E 412,000**

Sample ID Sampling Date Units	MW-1 01/28/2010 (ug/L)	MW-1 09/23/2010 (ug/L)
VOCs		
Chlorobenzene	3.17	**5.35**
Pesticides		
alpha-BHC	ND	**J 0.0550**
delta-BHC	ND	**J 0.0546**
Metals		
Iron	**26,300**	**J 18,000**
Magnesium	**47,300**	**54,400**
Manganese	**415**	137
Sodium	**181,000**	**J E,M 182,000**



Sample ID Sampling Date Units	MW-2 01/29/2010 (ug/L)	MW-2 09/22/2010 (ug/L)
Pesticides		
delta-BHC	ND	**J 0.0560**
Metals		
Arsenic	**60**	10
Chromium	**160**	7.5
Iron	**137,000**	**J 5,050**
Lead	**110**	10
Magnesium	**210,000**	**58,700**
Manganese	**4,840**	**J 1,790**
Nickel	**119**	ND
Sodium	**582,000**	**J E 437,000**

Sample ID Sampling Date Units	MW-5 Deep 01/29/2010 (ug/L)	MW-5 D 09/22/2010 (ug/L)
Metals		
Arsenic	**33 D**	5
Chromium	**159 M**	ND
Iron	**91,800**	**4,370**
Lead	**61 M**	5
Magnesium	**195,000**	**43,300**
Manganese	**2,650**	57
Sodium	**287,000**	**E 221,000**

Compound	6NYCRR Part 703 Groundwater Quality Standards (ug/L)
VOCs	
Chlorobenzene	5
Pesticides	
alpha-BHC	0.01
delta-BHC	0.04
Metals	
Arsenic	25
Chromium	50
Iron	300
Lead	25
Magnesium	35,000
Manganese	300
Nickel	100
Selenium	10
Sodium	20,000

LEGEND

Site Boundary

BOLD: Concentration exceeds 6NYCRR Part 703 groundwater quality standards

J: Value greater than or equal to the instrument detection limit, but less than the quantition limit.

E: Value estimated or not reported due to the presence of interferences.

M: Matrix spike recovery outside QC limits.

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Project No. 200229.16

Drawing No. Figure 16

Scale: 1" = 100'

Date NOV. 10, 2010

Project: 1440 Empire Boulevard Town of Penfield, New York

Drawing: Groundwater Exceedances Part 703 Groundwater Quality Standards

Client: 1440 Empire Boulevard Development Corporation

Principal-in-Charge: Gary Passero, P.E.

Project Manager: Peter Morton, C.P.G.

Designed by: Richard Celestino

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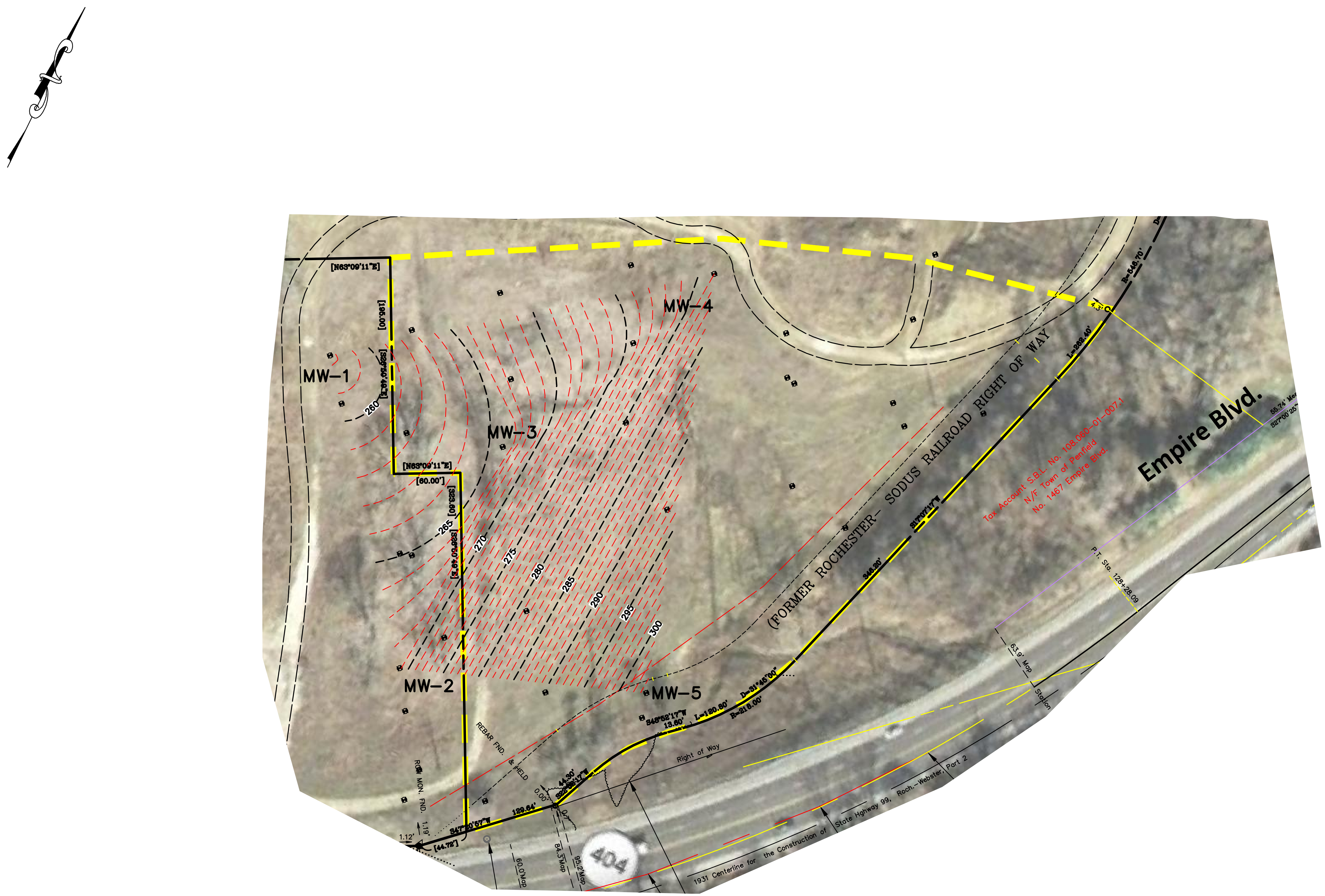

LEGEND
Site Boundary
GP: Geoprobe ®
BH: Borehole
TP: Test Pit

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Project No. 200229.16
Drawing No. Figure 17
Scale: 1" = 100'
Date NOV. 10, 2010

Project
1440 Empire Boulevard
Town of Penfield, New York

Drawing
September 2010 Groundwater Potentiometric Surface

Client
1440 Empire Boulevard Development Corporation

Principal-in-Charge Gary Passero, P.E.
Project Manager Peter Morton, C.P.G.
Designed by Richard Celestino

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Well Construction Schematic Example

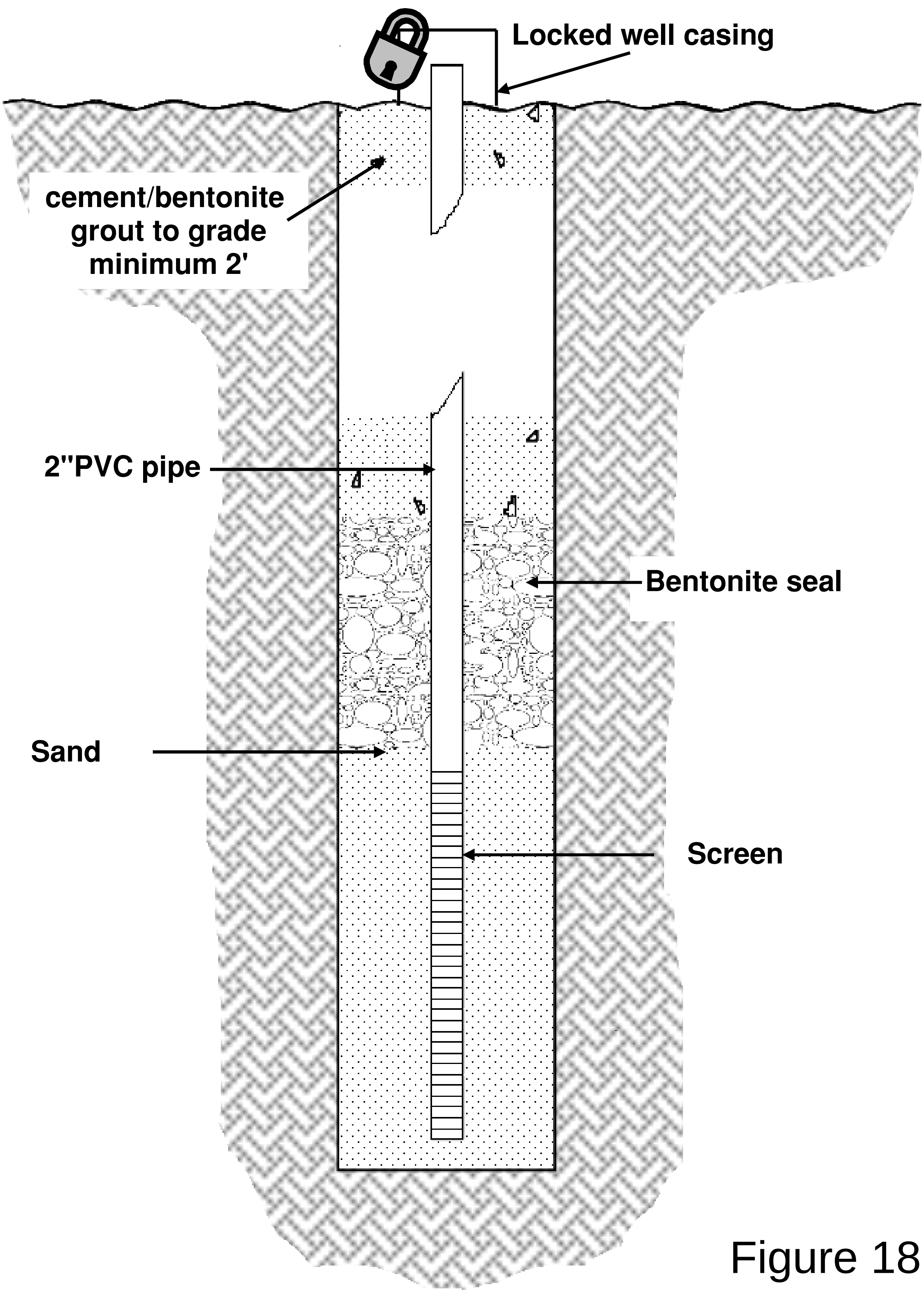
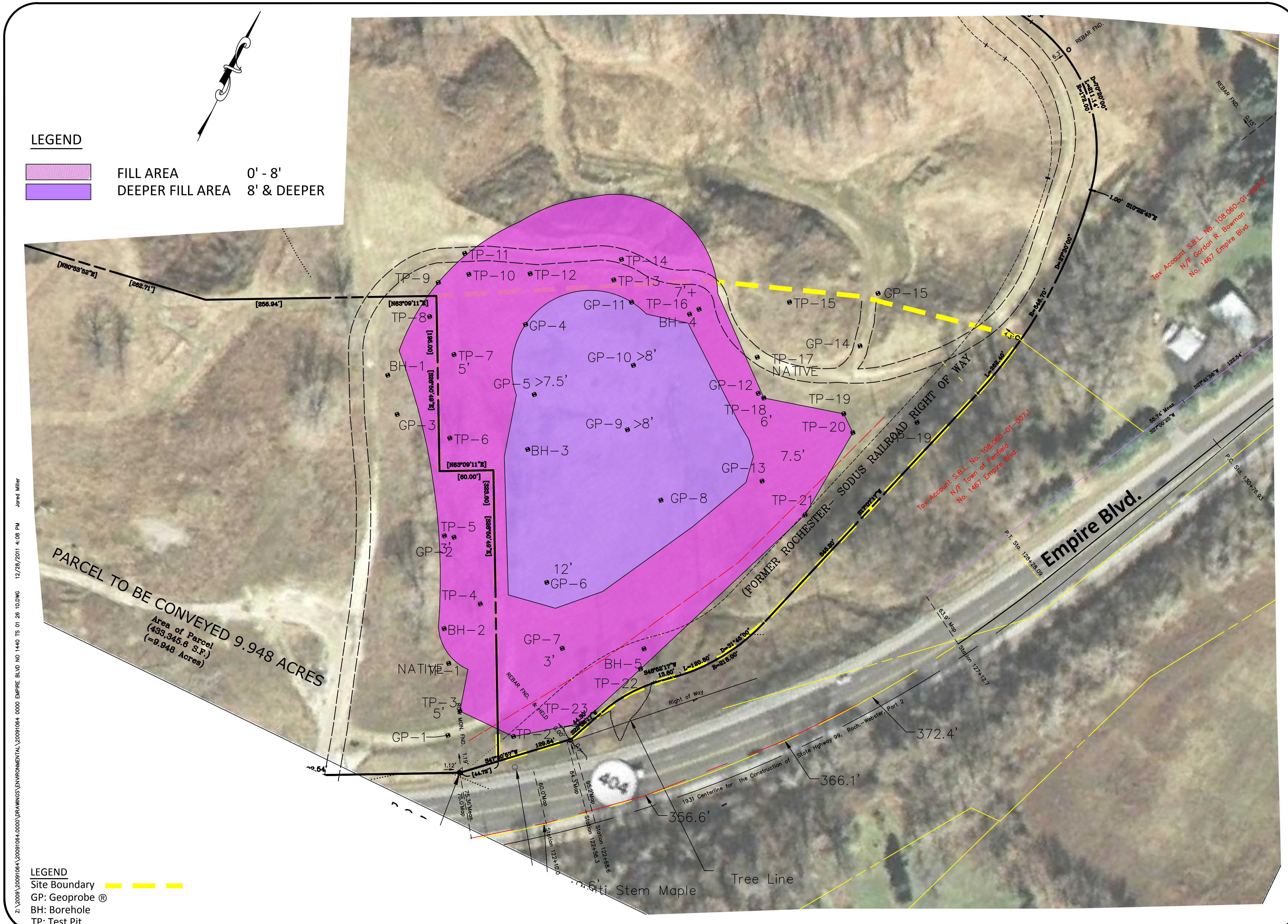


Figure 18



Project No. 200229.16

Drawing No. Figure 19

Scale: 1" = 100'

Date NOV. 10, 2010

Project: 1440 Empire Boulevard, Town of Penfield, New York

Drawing: Fill Boundaries

Client: 1440 Empire Boulevard Development Corporation

Principal-in-Charge: Gary Passero, P.E.

Project Manager: Peter Morton, C.P.G.

Designed by: Richard Celestino

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APPENDIX 1

Passero Associates
February 18, 2003 Investigation Report

Investigation Report
Spill #0012283
1440 Empire Blvd.
Penfield (T)

Passero Associates, P.C.
100 Liberty Pole Way
Rochester, New York 14604

February 18, 2003

P.N. 20229.07

PRIVILEGED AND CONFIDENTIAL

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February 18, 2003

Michael F. Zamiarski, P.E.
Bureau of Spill Prevention & Response
NYSDEC, Region 8
6274 East Avon-Lima Road
Avon, NY 14414

Re: Investigation Report
Spill #0012283
1440 Empire Blvd.
Penfield (T)

Dear Mr. Zamiarski:

Pursuant to our November 7, 2002 meeting at your office, and our meeting with you and Pete Miller on site on November 12, we conducted two days of sampling by Geoprobe and backhoe on November 20, 21, 2002. Ten soil samples, one perched groundwater sample, and one deeper regional groundwater sample were collected for analysis in this round of sampling.

The data that we generated indicated three areas that required additional soil data for delineation purposes. We conducted a second round of soil sampling on December 20 to delineate these areas of concern. All of the sample locations with an "A" designation indicate the samples collected on November 21, 22, 2002.

Samples with a "B" designation were collected on December 20, 2002.

Results are discussed below and tabulated at the end of this document. The Sample Location Map, field notes and all of the analytical data are included.

RESULTS

Soils
Elevated levels of semivolatile organic compounds (SVOCs) and Aroclor 1254 (PCB) were identified on the east side of the access driveway (TP-2 to TP-7 area). SVOC and Aroclor 1254 were also detected on the west side of the driveway. Elevated levels of volatile organic compounds (VOCs) were identified at the southwest side of the driveway located around BH-11.

Perched Water
Saturated soils and perched groundwater were encountered in TP-3 at an approximate depth of 10 feet. The only VOC detected in the perched water was 1.21 ug/L of benzene. Soil boring BH-13B (approximately 50 feet south of TP-3) was subsequently drilled and sampled on December 19; the perched saturated zone extended from approximate depths of 10 feet to

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40 feet below grade. A sample collected from the native silt beneath the perched water is clean.

Borehole 11
The only place where the photoionization detector (PID) indicated VOC contamination was in soils was around the BH-11 location at the southwest side of the driveway. An odor like turpentine that is interpreted as being attributed to weathered petroleum was noted and elevated levels of organic vapors up to 300 ppm were detected in the BH-11 soils. Soils from depths of 8 to 9 feet, 39.5 to 40 feet, and 46.5 to 47 feet below grade were collected and submitted for VOC analysis from BH-11:

BH11-8'-9' A

Compound	**Concentration (ppb)**	**ppm conversion**	**RSCO***
Ethylbenzene	2,510	2.5	5.5
Total Xylenes	81,200	81.2	1.2
1,2,4-Trimethylbenzene	71,500	71.5	N/A
1,3,5-Trimethylbenzene	26,400	26.4	N/A

The total VOC content of the above sample is 181.6 ppm; TAGM 4046 states that Total VOCs should be <10 ppm.

BH11-39.5'-40' A

Compound	**Concentration (ppb)**	**ppm conversion**	**RSCO***
Naphthalene	157	0.2	300
1,2,4-Trimethylbenzene	16.4	0.2	N/A

BH11-46.5'-47' A

Compound	**Concentration (ppb)**	**ppm conversion**	**RSCO***
Non Detect	N/A		

As indicated on the Sample Location Map, delineation was performed around BH-11A on December 20; as agreed upon with you in the field, PID readings only were performed for delineation. Boreholes BH-1B and BH-2B drilled 30 feet to the west and south of BH-11A appear to be clean to depths of 20 feet. BH-3B and -5B demonstrate that VOC contamination extends greater than 30 feet to the east and north of BH-11A. BH-4B and -6B, further feet to the east and north of these points appear to be clean (see Sample Location Map).

Regional Groundwater

Borehole 11 (BH-11) was continuously sampled through 70 feet of dry native silt before saturated conditions were encountered at an approximate depth of 72 feet. Weathered petroleum odors and elevated levels of organic vapors were noted in BH-11 soils. A temporary 1-inch diameter well was installed and sampled (GW-11). The following volatile organic compounds were detected in GW-11:

Total Xylenes	33.3 ug/L
Toluene	9.99 ug/L
Ethylbenzene	2.23 ug/L
1,2-Dichloroethane	6.32 ug/L

The Sample Location Map is included, all of the tabulated data is included in Attachment 1, the analytical data sheets are included in Attachment 2, and test pit and boring logs are included in Attachment 3.

We are exploring the feasibility of several options for treating the contaminated soils allowing for future Site development.

Very truly yours,

Peter S. Morton
Certified Professional Geologist

Attachments

Attachment 1
Tabulated Data

SOILS DATA

SEMIVOLATILE ORGANIC COMPOUNDS (SVOC by STARS 8270)

November 21, 22, 2002

Test Pit 2A (TP-2A)

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	367	0.4	0.224
Benzo (a) pyrene	352	0.4	0.061
Benzo (b) fluoranthene	Non Detect (N/D)		1.1
Benzo (g,h,i) perylene	ND		50
Benzo (k) fluoranthene	ND		1.1
Chrysene	409	0.4	0.4
Fluoranthene	876	0.9	50
Indeno (1,2,3-cd) pyrene	ND		3.2
Naphthalene	923	0.9	13
Phenanthrene	852	0.9	50
Pyrene	765	0.8	50

***NYSDEC TAGM 4046Recommended Soil Cleanup Objective**

TP-3A

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	19,600	19.6	0.224
Benzo (a) pyrene	19,300	19.3	0.061
Benzo (b) fluoranthene	26,300	26.3	1.1
Benzo (g,h,i) perylene	21,500	21.5	50
Benzo (k) fluoranthene	19,300	19.3	1.1
Chrysene	18,600	18.6	0.4
Dibenz (a,h) anthracene	6,740	6.7	
Fluoranthene	22,400	22.4	50
Indeno (1,2,3-cd) pyrene	ND		3.2
Phenanthrene	11,100	11.1	50
Pyrene	21,000	21.0	50

***NYSDEC TAGM 4046Recommended Soil Cleanup Objective**

TP-4A

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	33,700	33.7	0.224
Benzo (a) pyrene	44,600	44.6	0.061
Benzo (b) fluoranthene	63,400	63.4	1.1
Benzo (g,h,i) perylene	48,300	48.3	50
Benzo (k) fluoranthene	37,900	37.9	1.1
Chrysene	37,500	37.5	0.4
Dibenz (a,h) anthracene	ND		
Fluoranthene	41,100	41.1	50
Indeno (1,2,3-cd) pyrene	ND		3.2
Phenanthrene	23,500	23.5	50
Pyrene	46,800	46.8	50

TP-5A

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	18,800	18.8	0.224
Benzo (a) pyrene	27,400	27.4	0.061
Benzo (b) fluoranthene	39,800	39.8	1.1
Benzo (g,h,i) perylene	28,500	28.5	50
Benzo (k) fluoranthene	20,800	20.8	1.1
Chrysene	28,400	28.4	0.4
Dibenz (a,h) anthracene	8,940	8.9	
Fluoranthene	19,900	19.99	50
Indeno (1,2,3-cd) pyrene	28,800	28.8	3.2
Phenanthrene	6,620	6.6	50
Pyrene	21,900	21.9	50

***NYSDEC TAGM 4046Recommended Soil Cleanup Objective**

TP-7A

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	96,000	96	0.224
Benzo (a) pyrene	107,000	107	0.061
Benzo (b) fluoranthene	155,000	155	1.1
Benzo (g,h,i) perylene	109,000	109	50
Benzo (k) fluoranthene	99,100	99.1	1.1
Chrysene	107,000	107	0.4
Dibenz (a,h) anthracene	ND		
Fluoranthene	54,500	54.5	50
Indeno (1,2,3-cd) pyrene	109,000	109	3.2
Phenanthrene	ND		50
Pyrene	78,100	78.1	50

BH15-2'-12' A

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	ND		0.224
Benzo (a) pyrene	ND		0.061
Benzo (b) fluoranthene	ND		1.1
Benzo (g,h,i) perylene	ND		50
Benzo (k) fluoranthene	ND		1.1
Chrysene	ND		0.4
Dibenz (a,h) anthracene	ND		
Fluoranthene	ND		50
Indeno (1,2,3-cd) pyrene	ND		3.2
Phenanthrene	ND		50
Pyrene	ND		50

BH22-6'-8' A

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	ND		0.224
Benzo (a) pyrene	ND		0.061
Benzo (b) fluoranthene	ND		1.1
Benzo (g,h,i) perylene	ND		50
Benzo (k) fluoranthene	ND		1.1
Chrysene	ND		0.4
Dibenz (a,h) anthracene	ND		
Fluoranthene	ND		50
Indeno (1,2,3-cd) pyrene	ND		3.2
Naphthalene	887	0.9	13
Phenanthrene	ND		50
Pyrene	ND		50

POLYCHLORINATED BIPHENYLS (PCB)

The PCB Aroclor 1254 was detected in the following concentrations. The TAGM RSCO for subsurface PCB is 10 ppm.

TP-2A

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	28.0	10

TP-3A

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	3.45	10

TP-4A

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	2.15	10

TP-5A

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	83.9	10

TP-7A

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	5.87	10

BH15-2'-12' A

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

BH22-6'-8' A

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	33.1	10

December 20, 2002

To further delineate the extent of the contamination, we conducted a second round of sampling on December 20, 2002. Because of the consistently elevated SVOC in the fill area east of the driveway, this entire fill area is assumed to be SVOC contaminated. The focus on our December samples in this area was PCB content.

TP-1B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

TP-2B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

TP-3B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

TP-4B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	7.87	10

TP-5B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	1.25	10

TP-6B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	5.89	10

TP-7B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

TP-8B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

TP-9B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	1.07	10

TP-10B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	0.581	10

TP-11B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	1.09	10

TP-12B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

TP-13B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	8.24	10

TP-14B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

TP-15B

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

BH11B-1'-3'

PCB	Concentration (ppm)	RSCO (ppm)
Aroolor 1254	ND	10

BH12B-1'-3'

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

BH13B-41'-42'

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

BH14B-1'-3'

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

BH7B-5'-6'

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

BH8B-3'-4'

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

BH9B-5'-6'

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

BH10B-3'-4'

PCB	Concentration (ppm)	RSCO (ppm)
Aroclor 1254	ND	10

TP-1B

Vo;atile Organic Compounds (VOC)

Compound	**Concentration (ppb)**	**ppm Conversion**	**RSCO***
m,p-Xylene	13.9	0.01	1.2

SVOC

Compound	**Concentration (ppb)**	**ppm Conversion**	**RSCO***
Benzo (a) anthracene	ND		
Benzo (a) pyrene	ND		
Benzo (b) fluoranthene	ND		
Benzo (g,h,i) perylene	ND		
Benzo (k)	ND		

fluoranthene			
Chrysene	ND		
Dibenz (a,h) anthracene	ND		
Fluoranthene	ND		
Indeno (1,2,3-cd) pyrene	ND		
Phenanthrene	ND		
Pyrene	ND		

TP-2B

SVOC

Compound	**Concentration (ppb)**	**ppm Conversion**	**RSCO***
Benzo (a) anthracene	ND		
Benzo (a) pyrene	ND		
Benzo (b) fluoranthene	ND		
Benzo (g,h,i) perylene	ND		
Benzo (k) fluoranthene	ND		
Chrysene	ND		
Dibenz (a,h) anthracene	ND		
Fluoranthene	ND		
Indeno (1,2,3-cd) pyrene	ND		
Phenanthrene	ND		
Pyrene	ND		

TP-3B

Compound	**Concentration (ppb)**	**ppm Conversion**	**RSCO***
Benzo (a) anthracene	1,920	1.9	0.224
Benzo (a) pyrene	2,920	2.9	0.061
Benzo (b) fluoranthene	3,480	3.5	1.1
Benzo (g,h,i) perylene	2,160	2.2	50
Benzo (k)	1,460	1.5	1.1

fluoranthene			
Chrysene	2,300	2.3	0.4
Dibenz (a,h) anthracene	515	0.5	0.014
Fluoranthene	3,130	3.1	50
Indeno (1,2,3-cd) pyrene	2,250	2.3	3.2
Phenanthrene	1,420	1.4	50
Pyrene	3,490	3.5	50

TP-4B

Compound	**Concentration (ppb)**	**ppm Conversion**	**RSCO***
Benzo (a) anthracene	111,000	111	0.224
Benzo (a) pyrene	85,300	85.3	0.061
Benzo (b) fluoranthene	103,000	103	1.1
Benzo (g,h,i) perylene	ND		50
Benzo (k) fluoranthene	46,300	46.3	1.1
Chrysene	111,000	111	0.4
Dibenz (a,h) anthracene	ND		0.014
Fluoranthene	265,000	265	50
Indeno (1,2,3-cd) pyrene	41,800	41.8	3.2
Phenanthrene	125,000	125	50
Pyrene	239,000	239	50

TP-5B

Compound	**Concentration (ppb)**	**ppm Conversion**	**RSCO***
Benzo (a) anthracene	18,000	18	0.224
Benzo (a) pyrene	25,400	25.4	0.061
Benzo (b) fluoranthene	42,400	42.4	1.1
Benzo (g,h,i) perylene	25,300	25.3	50
Benzo (k) fluoranthene	17,000	17	1.1
Chrysene	24,800	24.8	0.4

Dibenz (a,h) anthracene	6,030	6.0	0.014
Fluoranthene	13,300	13.3	50
Indeno (1,2,3-cd) pyrene	25,100	25.1	3.2
Phenanthrene	ND		50
Pyrene	16,100	16.1	50

TP-6B

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	ND		0.224
Benzo (a) pyrene	32,300	32.3	0.061
Benzo (b) fluoranthene	48,600	48.6	1.1
Benzo (g,h,i) perylene	29,500	29.5	50
Benzo (k) fluoranthene	ND		1.1
Chrysene	29,500		0.4
Dibenz (a,h) anthracene	ND		0.014
Fluoranthene	ND		50
Indeno (1,2,3-cd) pyrene	29,400	29.4	3.2
Phenanthrene	ND		50
Pyrene	21,900	21.9	50

TP-7B

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	ND		0.224
Benzo (a) pyrene	ND		0.061
Benzo (b) fluoranthene	ND		1.1
Benzo (g,h,i) perylene	ND		50
Benzo (k) fluoranthene	ND		1.1
Chrysene	ND		0.4
Dibenz (a,h) anthracene	ND		0.014

Fluoranthene	ND		50
Indeno (1,2,3-cd) pyrene	ND		3.2
Phenanthrene	ND		50
Pyrene	ND		50

TP-8B

Compound	**Concentration (ppb)**	**ppm Conversion**	**RSCO***
Benzo (a) anthracene	1,480	1.5	0.224
Benzo (a) pyrene	2,660	2.7	0.061
Benzo (b) fluoranthene	3,840	3.8	1.1
Benzo (g,h,i) perylene	2,410	2.4	50
Benzo (k) fluoranthene	1,370	1.4	1.1
Chrysene	2,170	2.2	0.4
Dibenz (a,h) anthracene	584	0.6	0.014
Fluoranthene	1,170	1.2	50
Indeno (1,2,3-cd) pyrene	2,370	2.4	3.2
Phenanthrene	ND		50
Pyrene	1,460	1.5	50

TP-9B

Compound	**Concentration (ppb)**	**ppm Conversion**	**RSCO***
Benzo (a) anthracene	1,130	1.1	0.224
Benzo (a) pyrene	1,840	1.8	0.061
Benzo (b) fluoranthene	2,570	2.6	1.1
Benzo (g,h,i) perylene	1,970	2.0	50
Benzo (k) fluoranthene	896	0.9	1.1
Chrysene	1,480	1.5	0.4
Dibenz (a,h) anthracene	477	0.5	0.014
Fluoranthene	1,450	1.5	50
Indeno (1,2,3-cd)	1,860	1.9	3.2

pyrene			
Phenanthrene	723	0.7	50
Pyrene	1,520	1.5	50

TP-10B

Compound	**Concentration (ppb)**	**ppm Conversion**	**RSCO***
Anthracene	2,210	2.2	50
Benzo (a) anthracene	6,730	6.7	0.224
Benzo (a) pyrene	6,670	6.7	0.061
Benzo (b) fluoranthene	8,010	8.0	1.1
Benzo (g,h,i) perylene	3,960	4.0	50
Benzo (k) fluoranthene	3,060	3.1	1.1
Chrysene	6,940	6.9	0.4
Dibenz (a,h) anthracene	ND		0.014
Fluoranthene	14,100		50
Indeno (1,2,3-cd) pyrene	4,150	4.2	3.2
Phenanthrene	7,090	7.1	50
Pyrene	14,100	14.1	50

TP-12B

Compound	**Concentration (ppb)**	**ppm Conversion**	**RSCO***
Benzo (a) anthracene	891	0.9	0.224
Benzo (a) pyrene	1,050	1.1	0.061
Benzo (b) fluoranthene	1,230	1.2	1.1
Benzo (g,h,i) perylene	533	0.5	50
Benzo (k) fluoranthene	412	0.4	1.1
Chrysene	821	0.8	0.4
Dibenz (a,h) anthracene	ND		0.014
Fluoranthene	1,170	1.2	50
Indeno (1,2,3-cd) pyrene	628	0.6	3.2

Phenanthrene	ND		50
Pyrene	1,100	1.1	50

TP-14B

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	ND		0.224
Benzo (a) pyrene	ND		0.061
Benzo (b) fluoranthene	ND		1.1
Benzo (g,h,i) perylene	ND		50
Benzo (k) fluoranthene	ND		1.1
Chrysene	ND		0.4
Dibenz (a,h) anthracene	ND		0.014
Fluoranthene	ND		50
Indeno (1,2,3-cd) pyrene	ND		3.2
Phenanthrene	ND		50
Pyrene	ND		50

TP-15B

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	ND		0.224
Benzo (a) pyrene	ND		0.061
Benzo (b) fluoranthene	366	0.4	1.1
Benzo (g,h,i) perylene	ND		50
Benzo (k) fluoranthene	ND		1.1
Chrysene	ND		0.4
Dibenz (a,h) anthracene	ND		0.014
Fluoranthene	360	0.4	50
Indeno (1,2,3-cd) pyrene	ND		3.2
Phenanthrene	ND		50
Pyrene	362	0.4	50

BH-11-1'-3' B

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	ND		
Benzo (a) pyrene	ND		
Benzo (b) fluoranthene	ND		
Benzo (g,h,i) perylene	ND		
Benzo (k) fluoranthene	ND		
Chrysene	ND		
Dibenz (a,h) anthracene	ND		
Fluoranthene	ND		
Indeno (1,2,3-cd) pyrene	ND		
Phenanthrene	ND		
Pyrene	ND		

BH-13-41'-42' B

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	ND		
Benzo (a) pyrene	ND		
Benzo (b) fluoranthene	ND		
Benzo (g,h,i) perylene	ND		
Benzo (k) fluoranthene	ND		
Chrysene	ND		
Dibenz (a,h) anthracene	ND		
Fluoranthene	ND		
Indeno (1,2,3-cd) pyrene	ND		
Phenanthrene	ND		
Pyrene	ND		

Note: All VOCs were *non-detect* in the BH-13-41'-42'B sample.

BH-14-11'-12' B

Compound	Concentration (ppb)	ppm Conversion	RSCO*
Benzo (a) anthracene	ND		
Benzo (a) pyrene	ND		
Benzo (b) fluoranthene	ND		
Benzo (g,h,i) perylene	ND		
Benzo (k) fluoranthene	ND		
Chrysene	ND		
Dibenz (a,h) anthracene	ND		
Fluoranthene	ND		
Indeno (1,2,3-cd) \pyrene	ND		
Phenanthrene	ND		
Pyrene	ND		50

Attachment 2
Analytical Data

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11744
Client Job Number:	20229.04		
Field Location:	TP-2	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	12/02/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 4.34
Aroclor 1221	ND< 4.34
Aroclor 1232	ND< 4.34
Aroclor 1242	ND< 4.34
Aroclor 1248	ND< 4.34
Aroclor 1254	28.0
Aroclor 1260	ND< 4.34

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023161P1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11745
Client Job Number:	20229.04		
Field Location:	TP-3	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	12/03/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.498
Aroclor 1221	ND< 0.498
Aroclor 1232	ND< 0.498
Aroclor 1242	ND< 0.498
Aroclor 1248	ND< 0.498
Aroclor 1254	3.45
Aroclor 1260	ND< 0.498

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023161P2.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11746
Client Job Number:	20229.04		
Field Location:	TP-4	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	12/02/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.424
Aroclor 1221	ND< 0.424
Aroclor 1232	ND< 0.424
Aroclor 1242	ND< 0.424
Aroclor 1248	ND< 0.424
Aroclor 1254	2.15
Aroclor 1260	ND< 0.424

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11747
Client Job Number:	20229.04		
Field Location:	TP-5	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	12/03/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 9.64
Aroclor 1221	ND< 9.64
Aroclor 1232	ND< 9.64
Aroclor 1242	ND< 9.64
Aroclor 1248	ND< 9.64
Aroclor 1254	83.9
Aroclor 1260	ND< 9.64

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023161P4.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11748
Client Job Number:	20229.04		
Field Location:	TP-7	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	12/03/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 2.48
Aroclor 1221	ND< 2.48
Aroclor 1232	ND< 2.48
Aroclor 1242	ND< 2.48
Aroclor 1248	ND< 2.48
Aroclor 1254	5.87
Aroclor 1260	ND< 2.48

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023161P5.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11749
Client Job Number:	20229.04		
Field Location:	BH15-2'-12'	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	11/29/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.549
Aroclor 1221	ND< 0.549
Aroclor 1232	ND< 0.549
Aroclor 1242	ND< 0.549
Aroclor 1248	ND< 0.549
Aroclor 1254	ND< 0.549
Aroclor 1260	ND< 0.549

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11750
Client Job Number:	20229.04		
Field Location:	BH22-6'-8'	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	12/03/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 5.04
Aroclor 1221	ND< 5.04
Aroclor 1232	ND< 5.04
Aroclor 1242	ND< 5.04
Aroclor 1248	ND< 5.04
Aroclor 1254	33.1
Aroclor 1260	ND< 5.04

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023161P7.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11774
Client Job Number:	20229.04		
Field Location:	TP-2	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	11/26/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 347
Anthracene	ND< 347
Benzo (a) anthracene	367
Benzo (a) pyrene	352
Benzo (b) fluoranthene	ND< 347
Benzo (g,h,i) perylene	ND< 347
Benzo (k) fluoranthene	ND< 347
Chrysene	409
Dibenz (a,h) anthracene	ND< 347
Fluoranthene	876
Fluorene	ND< 347
Indeno (1,2,3-cd) pyrene	ND< 347
Naphthalene	923
Phenanthrene	852
Pyrene	765

ELAP Number 10958 Method: EPA 8270C Data File: 9561.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023161S1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11745
Client Job Number:	20229.04		
Field Location:	TP-3	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	11/26/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 3,670
Anthracene	ND< 3,670
Benzo (a) anthracene	19,600
Benzo (a) pyrene	19,300
Benzo (b) fluoranthene	26,300
Benzo (g,h,i) perylene	21,500
Benzo (k) fluoranthene	19,300
Chrysene	18,600
Dibenz (a,h) anthracene	6,740
Fluoranthene	22,400
Fluorene	ND< 3,670
Indeno (1,2,3-cd) pyrene	ND< 3,670
Naphthalene	ND< 3,670
Phenanthrene	11,100
Pyrene	21,000

ELAP Number 10958 Method: EPA 8270C Data File: 9572.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11746
Client Job Number:	20229.04		
Field Location:	TP-4	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	11/27/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 16,800
Anthracene	ND< 16,800
Benzo (a) anthracene	33,700
Benzo (a) pyrene	44,600
Benzo (b) fluoranthene	63,400
Benzo (g,h,i) perylene	48,300
Benzo (k) fluoranthene	37,900
Chrysene	37,500
Dibenz (a,h) anthracene	ND< 16,800
Fluoranthene	41,100
Fluorene	ND< 16,800
Indeno (1,2,3-cd) pyrene	ND< 16,800
Naphthalene	ND< 16,800
Phenanthrene	23,500
Pyrene	46,800

ELAP Number 10958 Method: EPA 8270C Data File: 9573.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023161S3.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: **Passero Associates**

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11747
Client Job Number:	20229.04		
Field Location:	TP-5	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	11/27/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 3,300
Anthracene	ND< 3,300
Benzo (a) anthracene	18,800
Benzo (a) pyrene	27,400
Benzo (b) fluoranthene	39,800
Benzo (g,h,i) perylene	28,500
Benzo (k) fluoranthene	20,800
Chrysene	28,400
Dibenz (a,h) anthracene	8,940
Fluoranthene	19,900
Fluorene	ND< 3,300
Indeno (1,2,3-cd) pyrene	28,800
Naphthalene	ND< 3,300
Phenanthrene	6,620
Pyrene	21,900

ELAP Number 10958 Method: EPA 8270C Data File: 9574.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023161S4.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11748
Client Job Number:	20229.04		
Field Location:	TP-7	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	12/02/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 15,700
Anthracene	ND< 15,700
Benzo (a) anthracene	96,000
Benzo (a) pyrene	107,000
Benzo (b) fluoranthene	155,000
Benzo (g,h,i) perylene	109,000
Benzo (k) fluoranthene	99,100
Chrysene	107,000
Dibenz (a,h) anthracene	ND< 15,700
Fluoranthene	54,500
Fluorene	ND< 15,700
Indeno (1,2,3-cd) pyrene	109,000
Naphthalene	ND< 15,700
Phenanthrene	ND< 15,700
Pyrene	78,100

ELAP Number 10958 Method: EPA 8270C Data File: 9590.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023161S6.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11749
Client Job Number:	20229.04		
Field Location:	BH15-2-12'	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	12/02/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 400
Anthracene	ND< 400
Benzo (a) anthracene	ND< 400
Benzo (a) pyrene	ND< 400
Benzo (b) fluoranthene	ND< 400
Benzo (g,h,i) perylene	ND< 400
Benzo (k) fluoranthene	ND< 400
Chrysene	ND< 400
Dibenz (a,h) anthracene	ND< 400
Fluoranthene	ND< 400
Fluorene	ND< 400
Indeno (1,2,3-cd) pyrene	ND< 400
Naphthalene	ND< 400
Phenanthrene	ND< 400
Pyrene	ND< 400

ELAP Number 10958 Method: EPA 8270C Data File: 9570.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:
Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023161S7.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11750
Client Job Number:	20229.04		
Field Location:	BH22-6-8'	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	12/02/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 344
Anthracene	ND< 344
Benzo (a) anthracene	ND< 344
Benzo (a) pyrene	ND< 344
Benzo (b) fluoranthene	ND< 344
Benzo (g,h,i) perylene	ND< 344
Benzo (k) fluoranthene	ND< 344
Chrysene	ND< 344
Dibenz (a,h) anthracene	ND< 344
Fluoranthene	ND< 344
Fluorene	ND< 344
Indeno (1,2,3-cd) pyrene	ND< 344
Naphthalene	887
Phenanthrene	ND< 344
Pyrene	ND< 344

ELAP Number 10958 Method: EPA 8270C Data File: 9571.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11744
Client Job Number:	20229.04		
Field Location:	TP-2	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Soil	**Date Analyzed:**	11/30/2002

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 1,560
Bromomethane	ND< 1,560
Bromoform	ND< 1,560
Carbon tetrachloride	ND< 1,560
Chloroethane	ND< 1,560
Chloromethane	ND< 1,560
2-Chloroethyl vinyl ether	ND< 1,560
Chloroform	ND< 1,560
Dibromochloromethane	ND< 1,560
1,1-Dichloroethane	ND< 1,560
1,2-Dichloroethane	ND< 1,560
1,1-Dichloroethene	ND< 1,560
cis-1,2-Dichloroethene	ND< 1,560
trans-1,2-Dichloroethene	ND< 1,560
1,2-Dichloropropane	ND< 1,560
cis-1,3-Dichloropropene	ND< 1,560
trans-1,3-Dichloropropene	ND< 1,560
Methylene chloride	ND< 3,900
1,1,2,2-Tetrachloroethane	ND< 1,560
Tetrachloroethene	ND< 1,560
1,1,1-Trichloroethane	ND< 1,560
1,1,2-Trichloroethane	ND< 1,560
Trichloroethene	ND< 1,560
Trichlorofluoromethane	ND< 1,560
Vinyl Chloride	ND< 1,560

Aromatics	Results in ug / Kg
Benzene	ND< 1,560
Chlorobenzene	ND< 1,560
Ethylbenzene	36,200
Toluene	ND< 1,560
m,p - Xylene	191,000
o - Xylene	66,300
Styrene	1,780
1,2-Dichlorobenzene	ND< 1,560
1,3-Dichlorobenzene	ND< 1,560
1,4-Dichlorobenzene	ND< 1,560

Ketones	Results in ug / Kg
Acetone	ND< 7,810
2-Butanone	ND< 3,900
2-Hexanone	ND< 3,900
4-Methyl-2-pentanone	ND< 3,900

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 3,900
Vinyl acetate	ND< 3,900

ELAP Number 10958 Method: EPA 8260B Data File: 63064.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023161V1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Non-potable Water

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11751
Client Job Number:	20229.04		
Field Location:	GW11	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Water	**Date Analyzed:**	11/28/2002

Halocarbons	Results in ug / L
Bromodichloromethane	ND< 2.00
Bromomethane	ND< 2.00
Bromoform	ND< 2.00
Carbon tetrachloride	ND< 2.00
Chloroethane	ND< 2.00
Chloromethane	ND< 2.00
2-Chloroethyl vinyl ether	ND< 2.00
Chloroform	ND< 2.00
Dibromochloromethane	ND< 2.00
1,1-Dichloroethane	ND< 2.00
1,2-Dichloroethane	6.32
1,1-Dichloroethene	ND< 2.00
cis-1,2-Dichloroethene	ND< 2.00
trans-1,2-Dichloroethene	ND< 2.00
1,2-Dichloropropane	ND< 2.00
cis-1,3-Dichloropropene	ND< 2.00
trans-1,3-Dichloropropene	ND< 2.00
Methylene chloride	ND< 5.00
1,1,2,2-Tetrachloroethane	ND< 2.00
Tetrachloroethene	ND< 2.00
1,1,1-Trichloroethane	ND< 2.00
1,1,2-Trichloroethane	ND< 2.00
Trichloroethene	ND< 2.00
Trichlorofluoromethane	ND< 2.00
Vinyl Chloride	ND< 2.00

Aromatics	Results in ug / L
Benzene	ND< 0.700
Chlorobenzene	ND< 2.00
Ethylbenzene	2.23
Toluene	9.99
m,p - Xylene	20.4
o - Xylene	12.9
Styrene	ND< 2.00
1,2-Dichlorobenzene	ND< 2.00
1,3-Dichlorobenzene	ND< 2.00
1,4-Dichlorobenzene	ND< 2.00

Ketones	Results in ug / L
Acetone	ND< 10.0
2-Butanone	ND< 5.00
2-Hexanone	ND< 5.00
4-Methyl-2-pentanone	ND< 5.00

Miscellaneous	Results in ug / L
Carbon disulfide	ND< 5.00
Vinyl acetate	ND< 5.00

ELAP Number 10958 Method: EPA 8260B Data File: 63036.D

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023161V2.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Non-potable Water

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3161
		Lab Sample Number:	11752
Client Job Number:	20229.04		
Field Location:	Pit 3 - W	**Date Sampled:**	11/21/2002
Field ID Number:	N/A	**Date Received:**	11/22/2002
Sample Type:	Water	**Date Analyzed:**	11/26/2002

Halocarbons	Results in ug / L
Bromodichloromethane	ND< 2.00
Bromomethane	ND< 2.00
Bromoform	ND< 2.00
Carbon tetrachloride	ND< 2.00
Chloroethane	ND< 2.00
Chloromethane	ND< 2.00
2-Chloroethyl vinyl ether	ND< 2.00
Chloroform	ND< 2.00
Dibromochloromethane	ND< 2.00
1,1-Dichloroethane	ND< 2.00
1,2-Dichloroethane	ND< 2.00
1,1-Dichloroethene	ND< 2.00
cis-1,2-Dichloroethene	ND< 2.00
trans-1,2-Dichloroethene	ND< 2.00
1,2-Dichloropropane	ND< 2.00
cis-1,3-Dichloropropene	ND< 2.00
trans-1,3-Dichloropropene	ND< 2.00
Methylene chloride	ND< 5.00
1,1,2,2-Tetrachloroethane	ND< 2.00
Tetrachloroethene	ND< 2.00
1,1,1-Trichloroethane	ND< 2.00
1,1,2-Trichloroethane	ND< 2.00
Trichloroethene	ND< 2.00
Trichlorofluoromethane	ND< 2.00
Vinyl Chloride	ND< 2.00

Aromatics	Results in ug / L
Benzene	1.21
Chlorobenzene	ND< 2.00
Ethylbenzene	ND< 2.00
Toluene	ND< 2.00
m,p - Xylene	ND< 2.00
o - Xylene	ND< 2.00
Styrene	ND< 2.00
1,2-Dichlorobenzene	ND< 2.00
1,3-Dichlorobenzene	ND< 2.00
1,4-Dichlorobenzene	ND< 2.00

Ketones	Results in ug / L
Acetone	ND< 10.0
2-Butanone	ND< 5.00
2-Hexanone	ND< 5.00
4-Methyl-2-pentanone	ND< 5.00

Miscellaneous	Results in ug / L
Carbon disulfide	ND< 5.00
Vinyl acetate	ND< 5.00

ELAP Number 10958 Method: EPA 8260B Data File: 62993.D

Comments: ND denotes Non Detect
ug / L = microgram per Liter

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023161V3.XLS

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 * (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

REPORT TO:
COMPANY: Passero Associates
ADDRESS: 100 Liberty Pole Way
CITY: Rochester STATE: NY ZIP: 14604
PHONE: 325-1000 FAX: 325-1691
ATTN: Pete Morton
COMMENTS: full 8260 < STARS TCL

INVOICE TO:
COMPANY: Same
ADDRESS:
CITY: STATE: ZIP:
PHONE: FAX:
ATTN:

LAB PROJECT #: 02-3161
CLIENT PROJECT #: 20229.04
TURNAROUND TIME: (WORKING DAYS) 1 2 3 STD 5 [X] OTHER

PROJECT NAME/SITE NAME: 1440 Empire Blvd

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	full 8260	STARS 8270	PCB	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	11-21-02		X		TP-2	Soil	1	X	X	X		11744
2	↓		X		TP-3	↓	1		X	X		11745
3	↓		X		TP-4	↓	1		X	X		11746
4	↓		X		TP-5	↓	1		X	X		11747
5	↓		X		TP-7	↓	1		X	X		11748
6	↓		X		BH15- 2'-12'	↓	1		X	X		11749
7	↓		X		BH 22 -6'-8'	↓	1		X	X		11750
8	↓			X	GW11	Aq	2	X				11751
9	↓			X	Pit 3 -W	↓	2	X				11752
10												

LAB USE ONLY

SAMPLE CONDITION: Check box if acceptable or note deviation:
CONTAINER TYPE: ✓ PRESERVATIONS: ✓ HOLDING TIME: ✓ TEMPERATURE: ✓ 5°C

Sampled By: TMorton Date/Time: 11-21-02
Relinquished By: KMorton Date/Time: 11-22-02 7:45
Received By: [signature] Date/Time: 11/22 07:45
Relinquished By: Date/Time:
Received By: Date/Time:
Received @ Lab By: [signature] Date/Time: 11/22/02 0910
Total Cost:
P.I.F.

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 * (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

REPORT TO		INVOICE TO	
COMPANY:	Passero Associates	COMPANY:	Same
ADDRESS:	100 Liberty Pole Way	ADDRESS:	
CITY: Rochester	STATE: NY ZIP: 14604	CITY:	STATE: ZIP:
PHONE: 325-1000	FAX: 325-1691	PHONE:	FAX:
ATTN:	Pete Morton	ATTN:	
COMMENTS:	full 8260 < STARS TCL		

PROJECT NAME/SITE NAME: 1440 Empire Blvd.

LAB PROJECT #: 02-3145

CLIENT PROJECT #: 20229.04

TURNAROUND TIME: (WORKING DAYS): 1 [ ] 2 [ ] 3 [ ] STD 5 [X] OTHER [ ]

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	full 8260	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	11-20-02	1150	X		BH 11-8'-9'	Soil	1	X		11660
2		1400	X		BH 11 - 39.5'-40'	|	1	X		11661
3		1700	X		BH 11 - 46.5-47'	↓	1	X		11662
4										
5										
6										
7										
8										
9										
10										

LAB USE ONLY

SAMPLE CONDITION: Check box if acceptable or note deviation:

CONTAINER TYPE: [✓] PRESERVATIONS: [✓] HOLDING TIME: [✓] TEMPERATURE: [✓] 18°C

Sampled By: [signature]	Date/Time: 11-21-02 800	Relinquished By:	Date/Time:
Relinquished By: "	Date/Time: "	Received By:	Date/Time:
Received By: [signature] 11/21/02	Date/Time: 0800	Received @ Lab By: Pamela M. Blair	Date/Time: 11/21/02 @ 8:50

Total Cost:

P.I.F.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3145
		Lab Sample Number:	11660
Client Job Number:	20229.04		
Field Location:	BH11-8'-9'	**Date Sampled:**	11/20/2002
Field ID Number:	N/A	**Date Received:**	11/21/2002
Sample Type:	Soil	**Date Analyzed:**	11/29/2002

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 2,150
Bromomethane	ND< 2,150
Bromoform	ND< 2,150
Carbon tetrachloride	ND< 2,150
Chloroethane	ND< 2,150
Chloromethane	ND< 2,150
2-Chloroethyl vinyl ether	ND< 2,150
Chloroform	ND< 2,150
Dibromochloromethane	ND< 2,150
1,1-Dichloroethane	ND< 2,150
1,2-Dichloroethane	ND< 2,150
1,1-Dichloroethene	ND< 2,150
cis-1,2-Dichloroethene	ND< 2,150
trans-1,2-Dichloroethene	ND< 2,150
1,2-Dichloropropane	ND< 2,150
cis-1,3-Dichloropropene	ND< 2,150
trans-1,3-Dichloropropene	ND< 2,150
Methylene chloride	ND< 5,370
1,1,2,2-Tetrachloroethane	ND< 2,150
Tetrachloroethene	ND< 2,150
1,1,1-Trichloroethane	ND< 2,150
1,1,2-Trichloroethane	ND< 2,150
Trichloroethene	ND< 2,150
Trichlorofluoromethane	ND< 2,150
Vinyl Chloride	ND< 2,150

Aromatics	Results in ug / Kg
Benzene	ND< 2,150
Chlorobenzene	ND< 2,150
Ethylbenzene	2,510
Toluene	ND< 2,150
m,p - Xylene	53,500
o - Xylene	27,700
Styrene	ND< 2,150
1,2-Dichlorobenzene	ND< 2,150
1,3-Dichlorobenzene	ND< 2,150
1,4-Dichlorobenzene	ND< 2,150

Ketones	Results in ug / Kg
Acetone	ND< 10,700
2-Butanone	ND< 5,370
2-Hexanone	ND< 5,370
4-Methyl-2-pentanone	ND< 5,370

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 5,370
Vinyl acetate	ND< 5,370

ELAP Number 10958 Method: EPA 8260B Data File: 63063.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023145V1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges (Additional STARS Compounds)

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3145
		Lab Sample Number:	11660
Client Job Number:	20229.04		
Field Location:	BH11-8'-9'	**Date Sampled:**	11/20/2002
Field ID Number:	N/A	**Date Received:**	11/21/2002
Sample Type:	Soil	**Date Analyzed:**	11/29/2002

Aromatics	Results in ug / Kg	Aromatics	Results in ug / Kg
n-Butylbenzene	ND< 2,150	1,2,4-Trimethylbenzene	71,500
sec-Butylbenzene	ND< 2,150	1,3,5-Trimethylbenzene	26,400
tert-Butylbenzene	ND< 2,150		
n-Propylbenzene	ND< 2,150	**Miscellaneous**	
Isopropylbenzene	ND< 2,150	Methyl tert-Butyl Ether	ND< 2,150
p-Isopropyltoluene	ND< 2,150		
Naphthalene	17,300		

ELAP Number 10958 Method: EPA 8260B Data File: 63063.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023145V4.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3145
		Lab Sample Number:	11661
Client Job Number:	20229.04		
Field Location:	BH11-39.5'-40'	**Date Sampled:**	11/20/2002
Field ID Number:	N/A	**Date Received:**	11/21/2002
Sample Type:	Soil	**Date Analyzed:**	11/26/2002

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 8.64
Bromomethane	ND< 8.64
Bromoform	ND< 8.64
Carbon tetrachloride	ND< 8.64
Chloroethane	ND< 8.64
Chloromethane	ND< 8.64
2-Chloroethyl vinyl ether	ND< 8.64
Chloroform	ND< 8.64
Dibromochloromethane	ND< 8.64
1,1-Dichloroethane	ND< 8.64
1,2-Dichloroethane	ND< 8.64
1,1-Dichloroethene	ND< 8.64
cis-1,2-Dichloroethene	ND< 8.64
trans-1,2-Dichloroethene	ND< 8.64
1,2-Dichloropropane	ND< 8.64
cis-1,3-Dichloropropene	ND< 8.64
trans-1,3-Dichloropropene	ND< 8.64
Methylene chloride	ND< 21.6
1,1,2,2-Tetrachloroethane	ND< 8.64
Tetrachloroethene	ND< 8.64
1,1,1-Trichloroethane	ND< 8.64
1,1,2-Trichloroethane	ND< 8.64
Trichloroethene	ND< 8.64
Trichlorofluoromethane	ND< 8.64
Vinyl Chloride	ND< 8.64

Aromatics	Results in ug / Kg
Benzene	ND< 8.64
Chlorobenzene	ND< 8.64
Ethylbenzene	ND< 8.64
Toluene	ND< 8.64
m,p - Xylene	ND< 8.64
o - Xylene	ND< 8.64
Styrene	ND< 8.64
1,2-Dichlorobenzene	ND< 8.64
1,3-Dichlorobenzene	ND< 8.64
1,4-Dichlorobenzene	ND< 8.64

Ketones	Results in ug / Kg
Acetone	ND< 43.2
2-Butanone	ND< 21.6
2-Hexanone	ND< 21.6
4-Methyl-2-pentanone	ND< 21.6

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 21.6
Vinyl acetate	ND< 21.6

ELAP Number 10958 Method: EPA 8260B Data File: 62987.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023145V2.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges (Additional STARS Compounds)

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3145
		Lab Sample Number:	11661
Client Job Number:	20229.04		
Field Location:	BH11-39.5'-40'	**Date Sampled:**	11/20/2002
Field ID Number:	N/A	**Date Received:**	11/21/2002
Sample Type:	Soil	**Date Analyzed:**	11/26/2002

Aromatics	Results in ug / Kg	Aromatics	Results in ug / Kg
n-Butylbenzene	ND< 8.64	1,2,4-Trimethylbenzene	16.4
sec-Butylbenzene	ND< 8.64	1,3,5-Trimethylbenzene	ND< 8.64
tert-Butylbenzene	ND< 8.64		
n-Propylbenzene	ND< 8.64	**Miscellaneous**	
Isopropylbenzene	ND< 8.64	Methyl tert-Butyl Ether	ND< 8.64
p-Isopropyltoluene	ND< 8.64		
Naphthalene	157		

ELAP Number 10958 Method: EPA 8260B Data File: 62987.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3145
		Lab Sample Number:	11662
Client Job Number:	20229.04		
Field Location:	BH11-46.5'-47'	**Date Sampled:**	11/20/2002
Field ID Number:	N/A	**Date Received:**	11/21/2002
Sample Type:	Soil	**Date Analyzed:**	11/26/2002

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 10.3
Bromomethane	ND< 10.3
Bromoform	ND< 10.3
Carbon tetrachloride	ND< 10.3
Chloroethane	ND< 10.3
Chloromethane	ND< 10.3
2-Chloroethyl vinyl ether	ND< 10.3
Chloroform	ND< 10.3
Dibromochloromethane	ND< 10.3
1,1-Dichloroethane	ND< 10.3
1,2-Dichloroethane	ND< 10.3
1,1-Dichloroethene	ND< 10.3
cis-1,2-Dichloroethene	ND< 10.3
trans-1,2-Dichloroethene	ND< 10.3
1,2-Dichloropropane	ND< 10.3
cis-1,3-Dichloropropene	ND< 10.3
trans-1,3-Dichloropropene	ND< 10.3
Methylene chloride	ND< 25.7
1,1,2,2-Tetrachloroethane	ND< 10.3
Tetrachloroethene	ND< 10.3
1,1,1-Trichloroethane	ND< 10.3
1,1,2-Trichloroethane	ND< 10.3
Trichloroethene	ND< 10.3
Trichlorofluoromethane	ND< 10.3
Vinyl Chloride	ND< 10.3

Aromatics	Results in ug / Kg
Benzene	ND< 10.3
Chlorobenzene	ND< 10.3
Ethylbenzene	ND< 10.3
Toluene	ND< 10.3
m,p - Xylene	ND< 10.3
o - Xylene	ND< 10.3
Styrene	ND< 10.3
1,2-Dichlorobenzene	ND< 10.3
1,3-Dichlorobenzene	ND< 10.3
1,4-Dichlorobenzene	ND< 10.3

Ketones	Results in ug / Kg
Acetone	ND< 51.4
2-Butanone	ND< 25.7
2-Hexanone	ND< 25.7
4-Methyl-2-pentanone	ND< 25.7

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 25.7
Vinyl acetate	ND< 25.7

ELAP Number 10958 Method: EPA 8260B Data File: 62988.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges (Additional STARS Compounds)

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3145
		Lab Sample Number:	11662
Client Job Number:	20229.04		
Field Location:	BH11-46.5'-47'	**Date Sampled:**	11/20/2002
Field ID Number:	N/A	**Date Received:**	11/21/2002
Sample Type:	Soil	**Date Analyzed:**	11/26/2002

Aromatics	Results in ug / Kg	Aromatics	Results in ug / Kg
n-Butylbenzene	ND< 10.3	1,2,4-Trimethylbenzene	ND< 10.3
sec-Butylbenzene	ND< 10.3	1,3,5-Trimethylbenzene	ND< 10.3
tert-Butylbenzene	ND< 10.3		
n-Propylbenzene	ND< 10.3	**Miscellaneous**	
Isopropylbenzene	ND< 10.3	Methyl tert-Butyl Ether	ND< 10.3
p-Isopropyltoluene	ND< 10.3		
Naphthalene	ND< 25.7		

ELAP Number 10958 Method: EPA 8260B Data File: 62968.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023145V6.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12690
Client Job Number:	20229.05		
Field Location:	TP-1	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.449
Aroclor 1221	ND< 0.449
Aroclor 1232	ND< 0.449
Aroclor 1242	ND< 0.449
Aroclor 1248	ND< 0.449
Aroclor 1254	ND< 0.449
Aroclor 1260	ND< 0.449

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434P1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	Lab Project Number:	02-3434
		Lab Sample Number:	12691
Client Job Number:	20229.05		
Field Location:	TP-2	Date Sampled:	12/20/2002
Field ID Number:	N/A	Date Received:	12/20/2002
Sample Type:	Soil	Date Analyzed:	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.465
Aroclor 1221	ND< 0.465
Aroclor 1232	ND< 0.465
Aroclor 1242	ND< 0.465
Aroclor 1248	ND< 0.465
Aroclor 1254	ND< 0.465
Aroclor 1260	ND< 0.465

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	Lab Project Number:	02-3434
		Lab Sample Number:	12692
Client Job Number:	20229.05		
Field Location:	TP-3	Date Sampled:	12/20/2002
Field ID Number:	N/A	Date Received:	12/20/2002
Sample Type:	Soil	Date Analyzed:	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.528
Aroclor 1221	ND< 0.528
Aroclor 1232	ND< 0.528
Aroclor 1242	ND< 0.528
Aroclor 1248	ND< 0.528
Aroclor 1254	ND< 0.528
Aroclor 1260	ND< 0.528

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434p3.xls

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ENVIRONMENTAL SERVICES, INC.
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PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12693
Client Job Number:	20229.05		
Field Location:	TP-4	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/30/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 5.28
Aroclor 1221	ND< 5.28
Aroclor 1232	ND< 5.28
Aroclor 1242	ND< 5.28
Aroclor 1248	ND< 5.28
Aroclor 1254	7.87
Aroclor 1260	ND< 5.28

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434r4.xls

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12694
Client Job Number:	20229.05		
Field Location:	TP-5	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.381
Aroclor 1221	ND< 0.381
Aroclor 1232	ND< 0.381
Aroclor 1242	ND< 0.381
Aroclor 1248	ND< 0.381
Aroclor 1254	1.24
Aroclor 1260	ND< 0.381

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434P4.XLS

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PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	Lab Project Number:	02-3434
		Lab Sample Number:	12695
Client Job Number:	20229.05		
Field Location:	TP-6	Date Sampled:	12/20/2002
Field ID Number:	N/A	Date Received:	12/20/2002
Sample Type:	Soil	Date Analyzed:	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.523
Aroclor 1221	ND< 0.523
Aroclor 1232	ND< 0.523
Aroclor 1242	ND< 0.523
Aroclor 1248	ND< 0.523
Aroclor 1254	5.89
Aroclor 1260	ND< 0.523

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

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ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12696
Client Job Number:	20229.05		
Field Location:	TP-7	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.415
Aroclor 1221	ND< 0.415
Aroclor 1232	ND< 0.415
Aroclor 1242	ND< 0.415
Aroclor 1248	ND< 0.415
Aroclor 1254	ND< 0.415
Aroclor 1260	ND< 0.415

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger; Technical Director

Chain of Custody provides additional sample information

File ID: 023434P6.XLS

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PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12697
Client Job Number:	20229.05		
Field Location:	TP-8	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.415
Aroclor 1221	ND< 0.415
Aroclor 1232	ND< 0.415
Aroclor 1242	ND< 0.415
Aroclor 1248	ND< 0.415
Aroclor 1254	ND< 0.415
Aroclor 1260	ND< 0.415

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434P7.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12698
Client Job Number:	20229.05		
Field Location:	TP-9	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.457
Aroclor 1221	ND< 0.457
Aroclor 1232	ND< 0.457
Aroclor 1242	ND< 0.457
Aroclor 1248	ND< 0.457
Aroclor 1254	1.07
Aroclor 1260	ND< 0.457

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023434P8.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12699
Client Job Number:	20229.05		
Field Location:	TP-10	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.372
Aroclor 1221	ND< 0.372
Aroclor 1232	ND< 0.372
Aroclor 1242	ND< 0.372
Aroclor 1248	ND< 0.372
Aroclor 1254	0.581
Aroclor 1260	ND< 0.372

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434P9.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12700
Client Job Number:	20229.05		
Field Location:	TP-11	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.400
Aroclor 1221	ND< 0.400
Aroclor 1232	ND< 0.400
Aroclor 1242	ND< 0.400
Aroclor 1248	ND< 0.400
Aroclor 1254	1.09
Aroclor 1260	ND< 0.400

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434Q1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.

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PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12701
Client Job Number:	20229.05		
Field Location:	TP-12	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.418
Aroclor 1221	ND< 0.418
Aroclor 1232	ND< 0.418
Aroclor 1242	ND< 0.418
Aroclor 1248	ND< 0.418
Aroclor 1254	ND< 0.418
Aroclor 1260	ND< 0.418

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434O2.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12702
Client Job Number:	20229.05		
Field Location:	TP-13	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/30/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 1.80
Aroclor 1221	ND< 1.80
Aroclor 1232	ND< 1.80
Aroclor 1242	ND< 1.80
Aroclor 1248	ND< 1.80
Aroclor 1254	8.24
Aroclor 1260	ND< 1.80

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger; Technical Director

Chain of Custody provides additional sample information

File ID: 023434R5.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12703
Client Job Number:	20229.05		
Field Location:	TP-14	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.345
Aroclor 1221	ND< 0.345
Aroclor 1232	ND< 0.345
Aroclor 1242	ND< 0.345
Aroclor 1248	ND< 0.345
Aroclor 1254	ND< 0.345
Aroclor 1260	ND< 0.345

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12704
Client Job Number:	20229.05		
Field Location:	TP-15	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.450
Aroclor 1221	ND< 0.450
Aroclor 1232	ND< 0.450
Aroclor 1242	ND< 0.450
Aroclor 1248	ND< 0.450
Aroclor 1254	ND< 0.450
Aroclor 1260	ND< 0.450

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12705
Client Job Number:	20229.05		
Field Location:	BH 11-1'-3'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/28/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.457
Aroclor 1221	ND< 0.457
Aroclor 1232	ND< 0.457
Aroclor 1242	ND< 0.457
Aroclor 1248	ND< 0.457
Aroclor 1254	ND< 0.457
Aroclor 1260	ND< 0.457

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023434Q5.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12706
Client Job Number:	20229.05		
Field Location:	BH 12-2'-3'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/28/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.500
Aroclor 1221	ND< 0.500
Aroclor 1232	ND< 0.500
Aroclor 1242	ND< 0.500
Aroclor 1248	ND< 0.500
Aroclor 1254	ND< 0.500
Aroclor 1260	ND< 0.500

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12690
Client Job Number:	20229.05		
Field Location:	TP-1	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.449
Aroclor 1221	ND< 0.449
Aroclor 1232	ND< 0.449
Aroclor 1242	ND< 0.449
Aroclor 1248	ND< 0.449
Aroclor 1254	ND< 0.449
Aroclor 1260	ND< 0.449

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12691
Client Job Number:	20229.05		
Field Location:	TP-2	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.465
Aroclor 1221	ND< 0.465
Aroclor 1232	ND< 0.465
Aroclor 1242	ND< 0.465
Aroclor 1248	ND< 0.465
Aroclor 1254	ND< 0.465
Aroclor 1260	ND< 0.465

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12692
Client Job Number:	20229.05		
Field Location:	TP-3	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.528
Aroclor 1221	ND< 0.528
Aroclor 1232	ND< 0.528
Aroclor 1242	ND< 0.528
Aroclor 1248	ND< 0.528
Aroclor 1254	ND< 0.528
Aroclor 1260	ND< 0.528

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434p3.xls

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12693
Client Job Number:	20229.05		
Field Location:	TP-4	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/30/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 5.28
Aroclor 1221	ND< 5.28
Aroclor 1232	ND< 5.28
Aroclor 1242	ND< 5.28
Aroclor 1248	ND< 5.28
Aroclor 1254	7.87
Aroclor 1260	ND< 5.28

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434r4.xls

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12694
Client Job Number:	20229.05		
Field Location:	TP-5	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.381
Aroclor 1221	ND< 0.381
Aroclor 1232	ND< 0.381
Aroclor 1242	ND< 0.381
Aroclor 1248	ND< 0.381
Aroclor 1254	1.24
Aroclor 1260	ND< 0.381

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434P4.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12695
Client Job Number:	20229.05		
Field Location:	TP-6	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.523
Aroclor 1221	ND< 0.523
Aroclor 1232	ND< 0.523
Aroclor 1242	ND< 0.523
Aroclor 1248	ND< 0.523
Aroclor 1254	5.89
Aroclor 1260	ND< 0.523

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434P5.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12696
Client Job Number:	20229.05		
Field Location:	TP-7	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/27/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.415
Aroclor 1221	ND< 0.415
Aroclor 1232	ND< 0.415
Aroclor 1242	ND< 0.415
Aroclor 1248	ND< 0.415
Aroclor 1254	ND< 0.415
Aroclor 1260	ND< 0.415

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12707
Client Job Number:	20229.05		
Field Location:	BH 13-41'-42'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/28/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.402
Aroclor 1221	ND< 0.402
Aroclor 1232	ND< 0.402
Aroclor 1242	ND< 0.402
Aroclor 1248	ND< 0.402
Aroclor 1254	ND< 0.402
Aroclor 1260	ND< 0.402

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12708
Client Job Number:	20229.05		
Field Location:	BH 14-11'-12'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/28/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.488
Aroclor 1221	ND< 0.488
Aroclor 1232	ND< 0.488
Aroclor 1242	ND< 0.488
Aroclor 1248	ND< 0.488
Aroclor 1254	ND< 0.488
Aroclor 1260	ND< 0.488

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434Q8.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12709
Client Job Number:	20229.05		
Field Location:	BH 7-5'-6'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/28/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.400
Aroclor 1221	ND< 0.400
Aroclor 1232	ND< 0.400
Aroclor 1242	ND< 0.400
Aroclor 1248	ND< 0.400
Aroclor 1254	ND< 0.400
Aroclor 1260	ND< 0.400

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12710
Client Job Number:	20229.05		
Field Location:	BH 8-3'-4'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/28/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.466
Aroclor 1221	ND< 0.466
Aroclor 1232	ND< 0.466
Aroclor 1242	ND< 0.466
Aroclor 1248	ND< 0.466
Aroclor 1254	ND< 0.466
Aroclor 1260	ND< 0.466

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023434R1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12711
Client Job Number:	20229.05		
Field Location:	BH 9-5'-6'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/28/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.400
Aroclor 1221	ND< 0.400
Aroclor 1232	ND< 0.400
Aroclor 1242	ND< 0.400
Aroclor 1248	ND< 0.400
Aroclor 1254	ND< 0.400
Aroclor 1260	ND< 0.400

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434R2.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

PCB Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12712
Client Job Number:	20229.05		
Field Location:	BH 10-3'-4'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/28/2002

PCB Identification	Results in mg / Kg
Aroclor 1016	ND< 0.477
Aroclor 1221	ND< 0.477
Aroclor 1232	ND< 0.477
Aroclor 1242	ND< 0.477
Aroclor 1248	ND< 0.477
Aroclor 1254	ND< 0.477
Aroclor 1260	ND< 0.477

ELAP Number 10958 Method: EPA 8082

Comments: ND denotes Non Detect
mg / Kg = milligram per Kilogram

Signature:
Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434R3.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12690
Client Job Number:	20229.05		
Field Location:	TP-1	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/24/2002

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 8.54
Bromomethane	ND< 8.54
Bromoform	ND< 8.54
Carbon tetrachloride	ND< 8.54
Chloroethane	ND< 8.54
Chloromethane	ND< 8.54
2-Chloroethyl vinyl ether	ND< 8.54
Chloroform	ND< 8.54
Dibromochloromethane	ND< 8.54
1,1-Dichloroethane	ND< 8.54
1,2-Dichloroethane	ND< 8.54
1,1-Dichloroethene	ND< 8.54
cis-1,2-Dichloroethene	ND< 8.54
trans-1,2-Dichloroethene	ND< 8.54
1,2-Dichloropropane	ND< 8.54
cis-1,3-Dichloropropene	ND< 8.54
trans-1,3-Dichloropropene	ND< 8.54
Methylene chloride	ND< 21.3
1,1,2,2-Tetrachloroethane	ND< 8.54
Tetrachloroethene	ND< 8.54
1,1,1-Trichloroethane	ND< 8.54
1,1,2-Trichloroethane	ND< 8.54
Trichloroethene	ND< 8.54
Trichlorofluoromethane	ND< 8.54
Vinyl Chloride	ND< 8.54

Aromatics	Results in ug / Kg
Benzene	ND< 8.54
Chlorobenzene	ND< 8.54
Ethylbenzene	ND< 8.54
Toluene	ND< 8.54
m,p - Xylene	13.9
o - Xylene	ND< 8.54
Styrene	ND< 8.54
1,2-Dichlorobenzene	ND< 8.54
1,3-Dichlorobenzene	ND< 8.54
1,4-Dichlorobenzene	ND< 8.54

Ketones	Results in ug / Kg
Acetone	ND< 42.7
2-Butanone	ND< 21.3
2-Hexanone	ND< 21.3
4-Methyl-2-pentanone	ND< 21.3

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 21.3
Vinyl acetate	ND< 21.3

ELAP Number 10958 Method: EPA 8260B Data File: 63309.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434V1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges (Additional STARS Compounds)

Client: Passero Associates

Client Job Site:	1440 Empire Blvd.	**Lab Project Number:**	02-3434
		Lab Sample Number:	12690
Client Job Number:	20229.05		
Field Location:	TP-1	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/24/2002

Aromatics	Results in ug / Kg	Aromatics	Results in ug / Kg
n-Butylbenzene	ND< 8.54	1,2,4-Trimethylbenzene	ND< 8.54
sec-Butylbenzene	ND< 8.54	1,3,5-Trimethylbenzene	ND< 8.54
tert-Butylbenzene	ND< 8.54		
n-Propylbenzene	ND< 8.54	**Miscellaneous**	
Isopropylbenzene	ND< 8.54	Methyl tert-Butyl Ether	ND< 8.54
p-Isopropyltoluene	ND< 8.54		
Naphthalene	ND< 21.3		

ELAP Number 10958 Method: EPA 8260B Data File: 63309.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434V3.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12690
Client Job Number:	20229.05		
Field Location:	TP-1	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/23/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 368
Anthracene	ND< 368
Benzo (a) anthracene	ND< 368
Benzo (a) pyrene	ND< 368
Benzo (b) fluoranthene	ND< 368
Benzo (g,h,i) perylene	ND< 368
Benzo (k) fluoranthene	ND< 368
Chrysene	ND< 368
Dibenz (a,h) anthracene	ND< 368
Fluoranthene	ND< 368
Fluorene	ND< 368
Indeno (1,2,3-cd) pyrene	ND< 368
Naphthalene	ND< 368
Phenanthrene	ND< 368
Pyrene	ND< 368

ELAP Number 10958 Method: EPA 8270C Data File: 9833.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434S1.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12692
Client Job Number:	20229.05		
Field Location:	TP-2	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/23/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 377
Anthracene	ND< 377
Benzo (a) anthracene	ND< 377
Benzo (a) pyrene	ND< 377
Benzo (b) fluoranthene	ND< 377
Benzo (g,h,i) perylene	ND< 377
Benzo (k) fluoranthene	ND< 377
Chrysene	ND< 377
Dibenz (a,h) anthracene	ND< 377
Fluoranthene	ND< 377
Fluorene	ND< 377
Indeno (1,2,3-cd) pyrene	ND< 377
Naphthalene	ND< 377
Phenanthrene	ND< 377
Pyrene	ND< 377

ELAP Number 10958 Method: EPA 8270C Data File: 9834.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434S2.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12692
Client Job Number:	20229.05		
Field Location:	TP-3	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/23/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 461
Anthracene	ND< 461
Benzo (a) anthracene	1,920
Benzo (a) pyrene	2,920
Benzo (b) fluoranthene	3,480
Benzo (g,h,i) perylene	2,160
Benzo (k) fluoranthene	1,460
Chrysene	2,300
Dibenz (a,h) anthracene	515
Fluoranthene	3,130
Fluorene	ND< 461
Indeno (1,2,3-cd) pyrene	2,250
Naphthalene	ND< 461
Phenanthrene	1,420
Pyrene	3,490

ELAP Number 10958 Method: EPA 8270C Data File: 9835.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023434S3.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12693
Client Job Number:	20229.05		
Field Location:	TP-4	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/26/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 40,700
Anthracene	ND< 40,700
Benzo (a) anthracene	111,000
Benzo (a) pyrene	85,300
Benzo (b) fluoranthene	103,000
Benzo (g,h,i) perylene	ND< 40,700
Benzo (k) fluoranthene	46,300
Chrysene	111,000
Dibenz (a,h) anthracene	ND< 40,700
Fluoranthene	265,000
Fluorene	ND< 40,700
Indeno (1,2,3-cd) pyrene	41,800
Naphthalene	ND< 40,700
Phenanthrene	125,000
Pyrene	239,000

ELAP Number 10958 Method: EPA 8270C Data File: 9863.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12694
Client Job Number:	20229.05		
Field Location:	TP-5	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/26/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 3,550
Anthracene	ND< 3,550
Benzo (a) anthracene	18,000
Benzo (a) pyrene	25,400
Benzo (b) fluoranthene	42,400
Benzo (g,h,i) perylene	25,300
Benzo (k) fluoranthene	17,000
Chrysene	24,800
Dibenz (a,h) anthracene	6,030
Fluoranthene	13,300
Fluorene	ND< 3,550
Indeno (1,2,3-cd) pyrene	25,100
Naphthalene	ND< 3,550
Phenanthrene	ND< 3,550
Pyrene	16,100

ELAP Number 10958 Method: EPA 8270C Data File: 9864.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:
Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023434S5.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12695
Client Job Number:	20229.05		
Field Location:	TP-6	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/26/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 19,900
Anthracene	ND< 19,900
Benzo (a) anthracene	ND< 19,900
Benzo (a) pyrene	32,300
Benzo (b) fluoranthene	48,600
Benzo (g,h,i) perylene	29,500
Benzo (k) fluoranthene	ND< 19,900
Chrysene	29,500
Dibenz (a,h) anthracene	ND< 19,900
Fluoranthene	ND< 19,900
Fluorene	ND< 19,900
Indeno (1,2,3-cd) pyrene	29,400
Naphthalene	ND< 19,900
Phenanthrene	ND< 19,900
Pyrene	21,900

ELAP Number 10958 Method: EPA 8270C Data File: 9865.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434S6.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12696
Client Job Number:	20229.05		
Field Location:	TP-7	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/24/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 353
Anthracene	ND< 353
Benzo (a) anthracene	ND< 353
Benzo (a) pyrene	ND< 353
Benzo (b) fluoranthene	ND< 353
Benzo (g,h,i) perylene	ND< 353
Benzo (k) fluoranthene	ND< 353
Chrysene	ND< 353
Dibenz (a,h) anthracene	ND< 353
Fluoranthene	ND< 353
Fluorene	ND< 353
Indeno (1,2,3-cd) pyrene	ND< 353
Naphthalene	ND< 353
Phenanthrene	ND< 353
Pyrene	ND< 353

ELAP Number 10958 Method: EPA 8270C Data File: 9839.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434S7.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	Lab Project Number:	02-3434
		Lab Sample Number:	12697
Client Job Number:	20229.05		
Field Location:	TP-8	Date Sampled:	12/20/2002
Field ID Number:	N/A	Date Received:	12/20/2002
Sample Type:	Soil	Date Analyzed:	12/24/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 356
Anthracene	ND< 356
Benzo (a) anthracene	1,480
Benzo (a) pyrene	2,660
Benzo (b) fluoranthene	3,840
Benzo (g,h,i) perylene	2,410
Benzo (k) fluoranthene	1,370
Chrysene	2,170
Dibenz (a,h) anthracene	584
Fluoranthene	1,170
Fluorene	ND< 356
Indeno (1,2,3-cd) pyrene	2,370
Naphthalene	ND< 356
Phenanthrene	ND< 356
Pyrene	1,460

ELAP Number 10958 Method: EPA 8270C Data File: 9840.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434S8.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	Lab Project Number:	02-3434
		Lab Sample Number:	12698
Client Job Number:	20229.05		
Field Location:	TP-9	Date Sampled:	12/20/2002
Field ID Number:	N/A	Date Received:	12/20/2002
Sample Type:	Soil	Date Analyzed:	12/24/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 442
Anthracene	ND< 442
Benzo (a) anthracene	1,130
Benzo (a) pyrene	1,840
Benzo (b) fluoranthene	2,570
Benzo (g,h,i) perylene	1,970
Benzo (k) fluoranthene	896
Chrysene	1,480
Dibenz (a,h) anthracene	477
Fluoranthene	1,450
Fluorene	ND< 442
Indeno (1,2,3-cd) pyrene	1,860
Naphthalene	ND< 442
Phenanthrene	723
Pyrene	1,520

ELAP Number 10958 Method: EPA 8270C Data File: 9841.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434S9.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	Lab Project Number:	02-3434
		Lab Sample Number:	12699
Client Job Number:	20229.05		
Field Location:	TP-10	Date Sampled:	12/20/2002
Field ID Number:	N/A	Date Received:	12/20/2002
Sample Type:	Soil	Date Analyzed:	12/26/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 1,750
Anthracene	2,210
Benzo (a) anthracene	6,730
Benzo (a) pyrene	6,670
Benzo (b) fluoranthene	8,010
Benzo (g,h,i) perylene	3,960
Benzo (k) fluoranthene	3,060
Chrysene	6,940
Dibenz (a,h) anthracene	ND< 1,750
Fluoranthene	14,100
Fluorene	ND< 1,750
Indeno (1,2,3-cd) pyrene	4,150
Naphthalene	ND< 1,750
Phenanthrene	7,090
Pyrene	14,100

ELAP Number 10958 Method: EPA 8270C Data File: 9866.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12701
Client Job Number:	20229.05		
Field Location:	TP-12	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/24/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 292
Anthracene	ND< 292
Benzo (a) anthracene	891
Benzo (a) pyrene	1,050
Benzo (b) fluoranthene	1,230
Benzo (g,h,i) perylene	533
Benzo (k) fluoranthene	412
Chrysene	821
Dibenz (a,h) anthracene	ND< 292
Fluoranthene	1,170
Fluorene	ND< 292
Indeno (1,2,3-cd) pyrene	628
Naphthalene	ND< 292
Phenanthrene	ND< 292
Pyrene	1,100

ELAP Number 10958 Method: EPA 8270C Data File: 9843.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023434T2.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12703
Client Job Number:	20229.05		
Field Location:	TP-14	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/26/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 309
Anthracene	ND< 309
Benzo (a) anthracene	ND< 309
Benzo (a) pyrene	ND< 309
Benzo (b) fluoranthene	ND< 309
Benzo (g,h,i) perylene	ND< 309
Benzo (k) fluoranthene	ND< 309
Chrysene	ND< 309
Dibenz (a,h) anthracene	ND< 309
Fluoranthene	ND< 309
Fluorene	ND< 309
Indeno (1,2,3-cd) pyrene	ND< 309
Naphthalene	ND< 309
Phenanthrene	ND< 309
Pyrene	ND< 309

ELAP Number 10958 Method: EPA 8270C Data File: 9867.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434T3.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC. 179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	Lab Project Number:	02-3434
		Lab Sample Number:	12704
Client Job Number:	20229.05		
Field Location:	TP-15	Date Sampled:	12/20/2002
Field ID Number:	N/A	Date Received:	12/20/2002
Sample Type:	Soil	Date Analyzed:	12/26/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 306
Anthracene	ND< 306
Benzo (a) anthracene	ND< 306
Benzo (a) pyrene	ND< 306
Benzo (b) fluoranthene	366
Benzo (g,h,i) perylene	ND< 306
Benzo (k) fluoranthene	ND< 306
Chrysene	ND< 306
Dibenz (a,h) anthracene	ND< 306
Fluoranthene	360
Fluorene	ND< 306
Indeno (1,2,3-cd) pyrene	ND< 306
Naphthalene	ND< 306
Phenanthrene	ND< 306
Pyrene	362

ELAP Number 10958 Method: EPA 8270C Data File: 9868.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434T4.XLS

PARADIGM
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179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	Lab Project Number:	02-3434
		Lab Sample Number:	12705
Client Job Number:	20229.05		
Field Location:	BH 11-1'-3'	Date Sampled:	12/20/2002
Field ID Number:	N/A	Date Received:	12/20/2002
Sample Type:	Soil	Date Analyzed:	12/24/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 326
Anthracene	ND< 326
Benzo (a) anthracene	ND< 326
Benzo (a) pyrene	ND< 326
Benzo (b) fluoranthene	ND< 326
Benzo (g,h,i) perylene	ND< 326
Benzo (k) fluoranthene	ND< 326
Chrysene	ND< 326
Dibenz (a,h) anthracene	ND< 326
Fluoranthene	ND< 326
Fluorene	ND< 326
Indeno (1,2,3-cd) pyrene	ND< 326
Naphthalene	ND< 326
Phenanthrene	ND< 326
Pyrene	ND< 326

ELAP Number 10958 Method: EPA 8270C Data File: 9848.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434T5.XLS

PARADIGM
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179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12707
Client Job Number:	20229.05		
Field Location:	BH 13-41'-42'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/24/2002

Base / Neutrals	Results in ug / Kg
Acenaphthene	ND< 327
Anthracene	ND< 327
Benzo (a) anthracene	ND< 327
Benzo (a) pyrene	ND< 327
Benzo (b) fluoranthene	ND< 327
Benzo (g,h,i) perylene	ND< 327
Benzo (k) fluoranthene	ND< 327
Chrysene	ND< 327
Dibenz (a,h) anthracene	ND< 327
Fluoranthene	ND< 327
Fluorene	ND< 327
Indeno (1,2,3-cd) pyrene	ND< 327
Naphthalene	ND< 327
Phenanthrene	ND< 327
Pyrene	ND< 327

ELAP Number 10958 Method: EPA 8270C Data File: 9849.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger, Technical Director

Chain of Custody provides additional sample information

File ID: 023434T6.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Semi-Volatile STARS Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12708
Client Job Number:	20229.05		
Field Location:	BH 14-11'-12'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/24/2002

Base / Neutrals	Results In ug / Kg
Acenaphthene	ND< 344
Anthracene	ND< 344
Benzo (a) anthracene	ND< 344
Benzo (a) pyrene	ND< 344
Benzo (b) fluoranthene	ND< 344
Benzo (g,h,i) perylene	ND< 344
Benzo (k) fluoranthene	ND< 344
Chrysene	ND< 344
Dibenz (a,h) anthracene	ND< 344
Fluoranthene	ND< 344
Fluorene	ND< 344
Indeno (1,2,3-cd) pyrene	ND< 344
Naphthalene	ND< 344
Phenanthrene	ND< 344
Pyrene	ND< 344

ELAP Number 10958 Method: EPA 8270C Data File: 9850.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434T7.XLS

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 * (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

plot 3

REPORT TO:		INVOICE TO:	
COMPANY: Passero Assoc.		COMPANY: Same	
ADDRESS: 100 Liberty Pole Way		ADDRESS:	
CITY: Rochester	STATE: NY ZIP: 14604	CITY:	STATE: ZIP:
PHONE: 325-1000	FAX: 325-1691	PHONE:	FAX:
ATTN: Pete Morton		ATTN:	

LAB PROJECT #: ~~02~~-3434
CLIENT PROJECT #: 20229.05
TURNAROUND TIME: (WORKING DAYS) ☐ 1 ☐ 2 ☐ 3 ☒ 5 (STD) OTHER ☐

PROJECT NAME/SITE NAME: 1440 Empire Blvd.

COMMENTS: 8260 < TCL / STARS

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	8260 full	STARS 8270	PCB	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	12-20-02		X		TP-1	Soil	2	X	X	X		12690
2					TP-2		1		X	X		12691
3					TP-3				X	X		12692
4					TP-4				X	X		12693
5					TP-5				X	X		12694
6					TP-6				X	X		12695
7					TP-7				X	X		12696
8					TP-8				X	X		12697
9					TP-9				X	X		12698
10					TP-10				X	X		12699

LAB USE ONLY

SAMPLE CONDITION: Check box if acceptable or note deviation: CONTAINER TYPE: ☐ PRESERVATIONS: ☐ HOLDING TIME: ☐ TEMPERATURE: ☐

Sampled By: Pete Morton	Date/Time: 12-19-02/ 8:45 → 17:00	Relinquished By:	Date/Time:
Relinquished By: P Morton	Date/Time: 12-20 1130	Received By:	Date/Time:
Received By:	Date/Time:	Received @ Lab By: [signature]	Date/Time: 12/20/02 11:30

Total Cost:

P.I.F.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 * (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

p 2 of 3

REPORT TO:		INVOICE TO:	
COMPANY: Passero Assoc.		COMPANY: Same	
ADDRESS: 100 Liberty Pole Way		ADDRESS:	
CITY: Rochester STATE: NY ZIP: 14604		CITY: STATE: ZIP:	
PHONE: 325-1000	FAX: 325-1691	PHONE:	FAX:
ATTN: Pete Morton		ATTN:	

LAB PROJECT #:

CLIENT PROJECT #: 20229.05

TURNAROUND TIME: (WORKING DAYS) 1 ☐ 2 ☐ 3 ☐ STD ☒ 5 OTHER ☐

PROJECT NAME/SITE NAME: 1440 Empire Blvd.

COMMENTS: 8260 < TCL STARS

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	8260 full	STARS 8270	PCB	REMARKS	PARADIGM LAB SAMPLE NUMBER
1	12-20-02				TP-11	Soil	1			X		12700
2					TP-12				X	X		12701
3					TP-13					X		12702
4					TP-14				X	X		12703
5					TP-15				X	X		12704
6					BH 11- 1'-3'				X	X		12705
7					BH 12 - 2'-3'					X		12706
8					BH 13 - 41'-42'			X	X	X		12707
9					BH14 - 11'-12'				X	X		12708
10												

LAB USE ONLY

SAMPLE CONDITION: Check box if acceptable or note deviation: CONTAINER TYPE: ☐ PRESERVATIONS: ☐ HOLDING TIME: ☐ TEMPERATURE: ☐

Sampled By: [signature]	Date/Time: 12-19-02 / 8457 17:00	Relinquished By:	Date/Time:
Relinquished By: [signature]	Date/Time: 12-20 1130	Received By:	Date/Time:
Received By:	Date/Time:	Received @ Lab By: [signature]	Date/Time: 12/20/02 11:30

Total Cost:

P.I.F.

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 * (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

p 3 of 3

REPORT TO		INVOICE TO	
COMPANY:	Passero Assoc.	COMPANY:	Same
ADDRESS:	100 Liberty Pole Way	ADDRESS:	
CITY: Rochester	STATE: NY ZIP: 14604	CITY:	STATE: ZIP:
PHONE: 325-1000	FAX: 325-1691	PHONE:	FAX:
ATTN:	Pete Morton	ATTN:	
COMMENTS:	8260 < TCL STARS		

LAB PROJECT #:

CLIENT PROJECT #: 20229.05

TURNAROUND TIME: (WORKING DAYS) 1 ☐ 2 ☐ 3 ☐ STD 5 ☒ OTHER ☐

PROJECT NAME/SITE NAME: 1440 Empire Blvd.

REQUESTED ANALYSIS

DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	8260 full	STARS 8270	PCB	REMARKS	PARADIGM LAB SAMPLE NUMBER
1 12-20-02				BH7 – 5'-6'	Soil	1			X		12709
2				BH8 – 3'-4'					X		12710
3				BH9 – 5'-6'					X		12711
4				BH10 – 3'-4'					X		12712
5											
6											
7											
8											
9											
10											

LAB USE ONLY

SAMPLE CONDITION: Check box if acceptable or note deviation:
CONTAINER TYPE: ☐ PRESERVATIONS: ☐ HOLDING TIME: ☐ TEMPERATURE: ☐

Sampled By: [signature]	Date/Time: 12-19-02 / 845 → 1700	Relinquished By:	Date/Time:
Relinquished By: [signature]	Date/Time: 12-20 1130	Received By:	Date/Time:
Received By:	Date/Time:	Received @ Lab By: [signature]	Date/Time: 12/20/02 11:30

Total Cost:

P.I.F.

PARADIGM
ENVIRONMENTAL SERVICES, INC.
179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges

Client: Passero Associates

Client Job Site:	1440 Empire Blvd	**Lab Project Number:**	02-3434
		Lab Sample Number:	12707
Client Job Number:	20229.05		
Field Location:	BH13-41'-42'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/24/2002

Halocarbons	Results in ug / Kg
Bromodichloromethane	ND< 7.31
Bromomethane	ND< 7.31
Bromoform	ND< 7.31
Carbon tetrachloride	ND< 7.31
Chloroethane	ND< 7.31
Chloromethane	ND< 7.31
2-Chloroethyl vinyl ether	ND< 7.31
Chloroform	ND< 7.31
Dibromochloromethane	ND< 7.31
1,1-Dichloroethane	ND< 7.31
1,2-Dichloroethane	ND< 7.31
1,1-Dichloroethene	ND< 7.31
cis-1,2-Dichloroethene	ND< 7.31
trans-1,2-Dichloroethene	ND< 7.31
1,2-Dichloropropane	ND< 7.31
cis-1,3-Dichloropropene	ND< 7.31
trans-1,3-Dichloropropene	ND< 7.31
Methylene chloride	ND< 18.3
1,1,2,2-Tetrachloroethane	ND< 7.31
Tetrachloroethene	ND< 7.31
1,1,1-Trichloroethane	ND< 7.31
1,1,2-Trichloroethane	ND< 7.31
Trichloroethene	ND< 7.31
Trichlorofluoromethane	ND< 7.31
Vinyl Chloride	ND< 7.31

Aromatics	Results in ug / Kg
Benzene	ND< 7.31
Chlorobenzene	ND< 7.31
Ethylbenzene	ND< 7.31
Toluene	ND< 7.31
m,p - Xylene	ND< 7.31
o - Xylene	ND< 7.31
Styrene	ND< 7.31
1,2-Dichlorobenzene	ND< 7.31
1,3-Dichlorobenzene	ND< 7.31
1,4-Dichlorobenzene	ND< 7.31

Ketones	Results in ug / Kg
Acetone	ND< 36.5
2-Butanone	ND< 18.3
2-Hexanone	ND< 18.3
4-Methyl-2-pentanone	ND< 18.3

Miscellaneous	Results in ug / Kg
Carbon disulfide	ND< 18.3
Vinyl acetate	ND< 18.3

ELAP Number 10958 Method: EPA 8260B Data File: 63310.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

File ID: 023434V2.XLS

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue Rochester, New York 14608 (585) 647 - 2530 FAX (585) 647 - 3311

Volatile Analysis Report for Soils/Solids/Sludges (Additional STARS Compounds)

Client: Passero Associates

Client Job Site:	1440 Empire Blvd.	**Lab Project Number:**	02-3434
		Lab Sample Number:	12707
Client Job Number:	20229.05		
Field Location:	BH13 - 41'-42'	**Date Sampled:**	12/20/2002
Field ID Number:	N/A	**Date Received:**	12/20/2002
Sample Type:	Soil	**Date Analyzed:**	12/24/2002

Aromatics	Results in ug / Kg	Aromatics	Results in ug / Kg
n-Butylbenzene	ND< 7.31	1,2,4-Trimethylbenzene	ND< 7.31
sec-Butylbenzene	ND< 7.31	1,3,5-Trimethylbenzene	ND< 7.31
tert-Butylbenzene	ND< 7.31		
n-Propylbenzene	ND< 7.31	**Miscellaneous**	
Isopropylbenzene	ND< 7.31	Methyl tert-Butyl Ether	ND< 7.31
p-Isopropyltoluene	ND< 7.31		
Naphthalene	ND< 18.3		

ELAP Number 10958 Method: EPA 8260B Data File: 63310.D

Comments: ND denotes Non Detect
ug / Kg = microgram per Kilogram

Signature:

Bruce Hoogesteger: Technical Director

Chain of Custody provides additional sample information

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 * (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

REPORT TO:
COMPANY: Passero Assoc.
ADDRESS: 100 Liberty Pole Way
CITY: Rochester STATE: NY ZIP: 14604
PHONE: 325-1000 FAX: 325-1691
ATTN: Pete Morton
COMMENTS: 8260 < TCL STARS

INVOICE TO:
COMPANY: Same
ADDRESS:
CITY: STATE: ZIP:
PHONE: FAX:
ATTN:

LAB PROJECT #:
CLIENT PROJECT #: 20229.05

TURNAROUND TIME: (WORKING DAYS)
☐ 1 ☐ 2 ☐ 3 ☒ 5 STD ☐ OTHER

PROJECT NAME/SITE NAME: 1440 Empire Blvd.

REQUESTED ANALYSIS

DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	8260 full	STARS 8270	PCB	REMARKS	PARADIGM LAB SAMPLE NUMBER
1 12-20-02		X		TP-1	Soil	2	X	X	X		
2				TP-2		1		X	X		
3				TP-3				X	X		
4				TP-4				X	X		
5				TP-5				X	X		
6				TP-6				X	X		
7				TP-7				X	X		
8				TP-8				X	X		
9				TP-9				X	X		
10				TP-10				X	X		

LAB USE ONLY

SAMPLE CONDITION: Check box if acceptable or note deviation:
CONTAINER TYPE: ☐ PRESERVATIONS: ☐ HOLDING TIME: ☐ TEMPERATURE: ☐

Sampled By: Pete Mort Date/Time: 12-19-02/845→1700
Relinquished By: [signature] Date/Time: 12-20 1130
Received By: Date/Time:

Relinquished By: Date/Time:
Received By: Date/Time:
Received @ Lab By: [signature] Date/Time: 12/20/02 11:30

Total Cost:

P.I.F.

PARADIGM
ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 * (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

REPORT TO		INVOICE TO			
COMPANY:	Passero Assoc.	COMPANY:	Same	LAB PROJECT #:	CLIENT PROJECT #: 20229.05
ADDRESS:	100 Liberty Pole Way	ADDRESS:			
CITY: Rochester	STATE: NY ZIP: 14604	CITY:	STATE: ZIP:	TURNAROUND TIME: (WORKING DAYS)	
PHONE: 325-1000	FAX: 325-1691	PHONE:	FAX:	STD	OTHER
ATTN:	Pete Morton	ATTN:		☐1 ☐2 ☐3 ☒5	☐

PROJECT NAME/SITE NAME: 1440 Empire Blvd.

COMMENTS: 8260 < TCL STARS

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	8260 full		STARS 8270		PCB					REMARKS	PARADIGM LAB SAMPLE NUMBER
1	12-20-02				TP-11	Soil	1					X						
2					TP-12					X		X						
3					TP-13							X						
4					TP-14					X		X						
5					TP-15					X		X						
6					BH 11- 1'-3'					X		X						
7					BH 12 - 2'-3'							X						
8					BH 13 - 41'-42'			X		X		X						
9					BH 14 - 11'-12'					X		X						
10																		

LAB USE ONLY

SAMPLE CONDITION: Check box if acceptable or note deviation: CONTAINER TYPE: ☐ PRESERVATIONS: ☐ HOLDING TIME: ☐ TEMPERATURE: ☐

Sampled By: [signature]	Date/Time: 12-19-02 / 8:45 / 17:00	Relinquished By:	Date/Time:
Relinquished By: [signature]	Date/Time: 12-20 11:30	Received By:	Date/Time:
Received By:	Date/Time:	Received @ Lab By: [signature]	Date/Time: 12/20/02 11:30

Total Cost:

P.I.F.

PARADIGM ENVIRONMENTAL SERVICES, INC.

179 Lake Avenue
Rochester, NY 14608
(585) 647-2530 * (800) 724-1997
FAX: (585) 647-3311

CHAIN OF CUSTODY

REPORT TO:	INVOICE TO:		
COMPANY: Passero Assoc.	COMPANY: Same	LAB PROJECT #:	CLIENT PROJECT #: 20229.05
ADDRESS: 100 Liberty Pole Way	ADDRESS:		
CITY: Rochester STATE: NY ZIP: 14604	CITY: STATE: ZIP:	TURNAROUND TIME: (WORKING DAYS) 1 ☐ 2 ☐ 3 ☐ STD 5 ☒ OTHER ☐	
PHONE: 325-1000 FAX: 325-1691	PHONE: FAX:		
ATTN: Pete Morton	ATTN:		

PROJECT NAME/SITE NAME: 1440 Empire Blvd.

COMMENTS: 8260 < TCL STARS

REQUESTED ANALYSIS

	DATE	TIME	COMPOSITE	GRAB	SAMPLE LOCATION/FIELD ID	MATRIX	NUMBER CONTAINERS	8260 full		STARS 8270		PCB						REMARKS	PARADIGM LAB SAMPLE NUMBER
1	12-20-02				BH7 - 5'-6'	Soil	1					X							
2					BH8 - 3'-4'							X							
3					BH9 - 5'-6'							X							
4					BH10 - 3'-4'							X							
5																			
6																			
7																			
8																			
9																			
10																			

LAB USE ONLY

SAMPLE CONDITION: Check box if acceptable or note deviation: CONTAINER TYPE: ☐ PRESERVATIONS: ☐ HOLDING TIME: ☐ TEMPERATURE: ☐

Sampled By: [signature]	Date/Time: 12-19-02 / 8:45 - 17:00	Relinquished By:	Date/Time:	Total Cost:
Relinquished By: [signature]	Date/Time: 12-20 11:30	Received By:	Date/Time:	
Received By:	Date/Time:	Received @ Lab By: [signature]	Date/Time: 12/20/02 11:30	P.I.F.

Attachment 3
Soil Logs

1440 Empire Blvd.

P.N. 20229.04
Nov. ~~20~~ 21, 2002

PHASE II GEOPROBE

	Description	PID
TP - 1		
~~BH~~ - **-0'-4'**	clean silt to 6'	0
-4'-8'		

	Description	PID
TP-2		
~~BH~~ - **-0'-4'**	fill debris, plastic, bottles cans, 1956 newspaper,	up to 300 odor down to 12' deep
90' north of pile **~~4'~~-8'**		

TP2 8260/8270, PCB

	Description	PID
TP-3		
BH - **-0'-4'**	black silt,	± 0
185' north of pole **-4'-8'** Pit 3-W aq sample	perched H_2O ±10' looks like oil on top	

	Description	PID
TP-4		
BH - **-0'-4'**	black silt, concrete, wood	0
-4'-8'		
TP - 5	± 8' black fill soils above native clay	0

1440 Empire Blvd.

P.N. 20229.04
Nov. 2~~0~~, 2002
21

PHASE II GEOPROBE

	Description	PID
TP - 6		
~~BH~~ - -0'-4'	clean native SILT to 10' deep	0
-4'-8'		

	Description	PID
TP-7		
~~BH~~ - -0'-4'	black fill soil to 8' deep	0
-4'-8'	pit 10', native SILT	

	Description	PID
TP 8		
~~BH~~ - 8 -0'-4'	8' grey SILT	0
-4'-8'		

	Description	PID
TP9		
~~BH~~ 6 -0'-4'	6' grey SILT	0
-4'-8'		

TP 10, 11, 12 clean SILT to 6' depth

1440 Empire Blvd.

P.N. 20229.04
Nov. 20, 2002

PHASE II GEOPROBE

	Description	PID
TP13-15		
BH - -0'-4'	clean SILT to 6'	~
-4'-8'		

	Description	PID
TP 16		
BH - -0'-4'	±3 feet fill, no odor native SILT	0
-4'-8'		

	Description	PID
TP17		
BH - -0'-4'	clean rocky fill soil 8' clean rock/brick concrete	0
-4'-8'		

	Description	PID
TP18		
BH - -0'-4'	same	
-4'-8'		

TP19 — 8' of clean native SILT

1440 Empire Blvd.

P.N. 20229.04
Nov. 20, 2002

PHASE II GEOPROBE

	Description	PID
SW corner		
BH - 1 -0'-4'	clean f SAND w tr silt to 3.5, loose SILT @ 3.5	0
-4'-8'	clean loose dry SILT	

	Description	PID
60' east		
BH - 2 -0'-4'	clean moist tn-brn SILT	0
-4'-8'	clean brn SILT, wet-sat @ 7'	
8-12	wet SILT	
12-16-20	clean moist tan SILT	
	16-20 dry tan SILT	

	Description	PID
60' east		
BH - 3 -0'-4'	clean dry SILT to 12'	0
-4'-8'		

	Description	PID
BH - 4 -0'-4'	clean dry SILT to 8'	0
-4'-8'		

1440 Empire Blvd.

P.N. 20229.04
Nov. 20, 2002

PHASE II GEOPROBE

	Description Randy said they worked these top soils	PID
BH - 5 -0'-4'	top 2' SAND w/ rk frags 2' SILT	0
-4'-8'	Clean SILT 12'	

	Description	PID
BH - 6 -0'-4'	Clean topsoil, f. TILL silt/clay,	0
-4'-8'	f. tan loose SILT → 12'	

	Description	PID
BH - 7 -0'-4'	SILT, 2" layer @ ±5' w/ piece of brick/ceramic, 0	0
-4'-8'	the rest is CLEAN SILT to 16'	

	Description	PID
BH - 8 -0'-4'	Clean SILT to 8'	0
-4'-8'		

1440 Empire Blvd.

P.N. 20229.04
Nov. 20, 2002

PHASE II GEOPROBE

	Description	PID
BH - 9 -0'-4'	clean SILT to 8'	0
-4'-8'		

	Description	PID
BH - 10 -0'-4'	clean SILT to 8'	0
-4'-8'		

	Description	PID
* BH - 11 -0'-4'	~~clean~~ SILT ~~to 4~~ paint-like fumes odor, PID	0 - 4 up to 250, smells like fumes
-4'-8'		

BH11 - PID
8-9 - 450
11-12 - 250
12-16 - 2-300 range
16-20 - "
20-22 "
22-24 "
24-27 "
27-31 - 28' - 260
30' - 100
31' - 100
31-34 160 ppm
60 ppm
34-36 up to 300
36-38 185
150
<10
38-40 100
15
0
40-42 peaks @ 115
42-44
44-47

BH11-8'-9' - 8260 full

	Description	PID
BH - -0'-4'		
-4'-8'		

44-47 ≈ 6" H_2O
47-50 - up to 35 ppm
0

1440 Empire Blvd.

P.N. 20229.04
Nov. 20, 2002

PHASE II GEOPROBE

	Description	PID
BH - 12 - **0'-4'**	8' clean tan SILT	0
-4'-8'		

	Description	PID
BH - 13 - **0'-4'**		
-4'-8'	8' clean tan SILT	0

	Description	PID
BH - 14 - **0'-4'**	8' clean SILT	0
-4'-8'		

	Description	PID
BH - 15 - **0'-4'**	2 ft of c SAND, brick, clean native SILT	0
-4'-8'		

BH 16 0 - 8 fill sand, brick, burnt wood 0
8 - 12
12 - 16 black burnt native SILT

1440 Empire Blvd.

P.N. 20229.04
Nov. 20, 2002

PHASE II GEOPROBE

	Description	PID
BH -17 -0'-4'	clean SILT	0
-4'-8'		
8 - 12		

	Description	PID
BH -18 -0'-4'	clean SILT to 8'	
-4'-8'		

	Description	PID
BH -19 -0'-4'	clean SILT to 8'	
-4'-8'		

	Description	PID
BH -20 -0'-4'		
-4'-8'		
21	clean SILT to 8'	

1440 Empire Blvd.

P.N. 20229.04
Nov. 20, 2002

PHASE II GEOPROBE

	Description	PID
BH -22-0'-4'	m-c clean fill SAND	0
-4'-8'	m moist Black fill	
8'-12'	black f-m-c fill	
12-16	m-c SAND	
16-20	", w/ brick	
20-24	native SILT ± 21'	

	Description	PID
BH - -0'-4'		
-4'-8'		

	Description	PID
BH -23-0'-4'	dry clean SILT to 35 ft deep, no wate	
-4'-8'		

	Description	PID
BH - -0'-4'		
-4'-8'		

1440 Empire

P.N. 20229.06
12-19-02

PHASE II GEOPROBE

B

TP south from TP-2

	Description	PID
~~BH~~ - -0'-4'	14' of fill, went to	
-4'-8'	19', sampled 19' depth	
	grey SILT	

	Description	PID
BH - 3B -0'-4'	8' of S/D	< 1 ppm
-4'-8'		

	Description	PID
BH - 4B -0'-4'	8' of S/D	< 1
-4'-8'		

	Description	PID
BH - 7B -0'-4'	Native silt	
-4'-8'		

1440 Empire Blvd.

P.N. 20229.05
12-19-02

PHASE II GEOPROBE

	Description	PID
30' west of 11		
BH - 1 -0'-4'	0 - 20' clean native SILT	0
1B -4'-8'		

	Description	PID
30' south of "		
BH - 2 -0'-4'		
2B -4'-8'		

	Description	PID
30' - East of "		
BH - 3 -0'-4'		
	12'	900
3B -4'-8'		

	Description	PID
30' East of		
BH - 4 -0'-4'	clean to 20'	0
4B -4'-8'		

1440 Empire

P.N. 20029.06
12-19-02

PHASE II GEOPROBE

30' N of "

BH -5 -0'-4'

5B -4'-8'

Description: 4-5 odor

PID: up to 250

60' N of "

BH - -0'-4'

6B -4'-8'

Description

PID

BH -7,8,9 -0'-4'

-4'-8'

Description: fill to 8'

PID

BH -10,11,12 -0'-4'

-4'-8'

Description: black c SAND fill

PID

1440 Empire

P.N. 20229.06
12-19-02

PHASE II GEOPROBE

13B

	Description	PID
BH - ~~13~~ -0'-~~4'~~ 0-40'	fill, saturated, black stain + sheen	
-~~4'~~-8'		
40-42	Native SILT	

	Description	PID
BH - 15 -0'-~~4'~~	sat, black stain to 22 ft	
-~~4'~~-8'		
0-22		

	Description	PID
BH - -0'-4'		
-4'-8'		

	Description	PID
BH - -0'-4'		
-4'-8'		

APPENDIX 2

Well Logs, PID Specifications, CAMP Logs

HOLE NUMBER: MW 1

DATE: 01/16/10

ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corporation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	DESCRIPTION AND CLASSIFICATION	REC.
0	1	6	12	12	12	24	0.0	Extremely moist, dark brown (SANDY-SILT) topsoil / fill with little very fine size sand, compact (0.5) Moist, brown (SILT) with trace very fine size sand, compact, thinly bedded with occasional thin (SILTY-SAND) lenses below 9.0 feet	1.6'
	2	9	10	18	15	28	0.0		1.5'
5									
	3	13	16	19	19	35	0.0		1.3'
10									
	4	19	16	16	18	32	0.0		1.9'
15									
18.0	5	10	12	11	14	23	0.0	Moist, brown (SILTY-SAND) with very fine size sand, little to some silt, compact, thinly bedded	1.8'
20									

MONITORING WELL / REMARKS: 2" PVC Riser; Cement / Bentonite Grout

COMMENTS: Topsoil to 0.5 foot over silty slack water sediment with trace sand to 18.0 feet over water sorted and deposited sand with little to some silt to 23.0 feet over silty slack water sediment to 33.0 feet over water sorted and deposited sand with little silt to end of boring

LOGGED BY: Dale M. Gramza / Senior Geologist PAGE 1

HOLE NUMBER: MW 1

DATE: 01/16/10

ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/ 6	6/ 12	12/ 18	18/ 24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
20									See Previous Sheet				
23.0	6	14	20	22	22	42	0.0		Moist, brown (SILT) with trace very fine size sand, dense in place, thinly bedded One wet layer from 28.0 to 29.0 feet with thin (CLAYEY-SILT) lenses noticed between 28.5 and 29.0 feet	1.5'		2" PVC Riser	
25													
	7	13	34	32	32	66	0.0			1.8'			
30													
33.0	8	12	16	22	24	38	0.0		Moist, brown (SILTY-SAND) with very fine size sand, little silt, dense in place, loose when disturbed, thinly bedded			Cement / Bentonite Grout	
35													
	9	12	23	24	23	47	0.0						
40													

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 1

DATE: 01/16/10 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
40									Moist, brown (SILTY-SAND) with very fine size sand, little silt, dense to very dense in place, loose when disturbed, thinly bedded				
	10	12	18	24	25	42	0.0					2" PVC Riser	
45													
	11	17	27	37	51	64	0.0					Cement / Bentonite Grout	
50													
											53.0		
	12	28	30	31	32	61	0.0					Bentonite Seal	
55													
											56.5	#2 Size Sand	
	13	18	24	27	32	51	0.0				58.5	2" 10 Slot PVC Screen	
60									60.0				

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 1

DATE: 01/16/10 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/ 6	6/ 12	12/ 18	18/ 24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
60									Moist, brown (SILTY-SAND) with very fine size sand, little silt, very dense in place, thinly bedded				
	14	17					0.0					2" 10 Slot PVC Screen	
			28			59							
				31									
					35								
65													
									68.0				
	15	14					0.0		Wet, gray (SILTY-SAND) with very fine size sand, little silt, dense to compact, thinly bedded			#2 Size Sand	
			24			48							
				24									
					28								
70													
	16	13					0.0						
			14			27							
				13									
					16								
75													
	17	WR					0.0				78.5		WR = Sampler Penetration with Weight of Rods and Hammer
			6			13			Boring Completed at 80.0 feet				
				7									
					9				80.0		80.0		
80													

LOGGED BY: Dale M. Gramza / Senior Geologist PAGE 4

HOLE NUMBER: MW 2

DATE: 12/14/09 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	DESCRIPTION AND CLASSIFICATION	REC.	REMARKS
0	1	4	3	5	8	8	0.0	Moist, dark brown (SANDY-SILT) topsoil / fill with some very fine size sand, loose (0.4)	1.3'	
								Moist, faintly mottled, brown to light brown (SILT) with trace to little very fine size sand, loose to dense, weakly thinly bedded with occasional thin (CLAYEY-SILT) lenses		
	2	4	5	9	9	14	0.0		2.0'	2" PVC Riser
5										
	3	13	20	27	31	47	0.0		1.8'	
10										
13.0	4	12	19	20	2	39	0.0	Moist, light brown (SILTY-SAND) with very fine size sand, little silt, dense to very dense in place, thinly bedded	1.6'	Cement / Bentonite Grout
15										
	5	16	28	26	23	54	0.0		1.7'	
20										

COMMENTS: Topsoil / fill to 0.4 foot over coarse silty slack water sediment with trace to little sand to 13.0 feet over water sorted and deposited sand with little silt to 24.0 feet over silty slack water sediment to 26.0 feet over water sorted and deposited sand with little silt to 43.0 feet over silty slack water sediment to 44.0 feet over water sorted and deposited sand with little silt to 58.0 feet over coarse silty glacial drift to end of boring

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 2

DATE: 12/14/09 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corporation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
20									Moist, light brown (SILTY-SAND) with very fine size sand, little silt, dense in place, thinly bedded				
	6	7					0.0			1.7'			
			14			38			24.0				
				24					Wet, brown (SILT) with trace very fine size sand, dense, thinly bedded			2" PVC Riser Pipe	
25					28								
									26.0				
									Moist, brown (SILTY-SAND) with very fine size sand, little silt, very dense to dense in place, thinly bedded				
	7	18					0.0			1.3'			
			38			86							
				48									
30					50/3"								
	8	24					0.0			1.5		Cement / Bentonite Grout	
			41			91							
				50									
35					52								
	9	12					0.0			1.9			
			18			37							
				19									
40					24								

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 2

DATE: 12/14/09

ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
40									Moist, brown (SILTY-SAND) with very fine size sand, little silt, very dense in place, thinly bedded				
43.0	10	5	7	24	28	31	0.0		Extremely moist to wet, brown (SILT) with trace clay, compact, bedded with thin (CLAYEY-SILT) lenses	1.7'		2" PVC Riser Pipe	
44.0									Moist, brown (SILTY-SAND) with very fine size sand, little silt, very dense in place, loose when disturbed, thinly bedded				
45													
47	11	13	27	38	39	65	0.0			1.5'		Cement / Bentonite Grout	
50													
51.0											51.0	Bentonite Seal	
53.0	12	20	33	47	49	80	0.0			1.5'	53.0		
54.0											54.0	2" 10 Slot PVC Screen	
55													
58.0	13	11	20	35	39	55	0.0		See Next Sheet	1.0'		#2 Size Sand	
60													

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 2

DATE: 12/14/09 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/ 6	6/ 12	12/ 18	18/ 24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
60									Wet, brown (SILTY-SAND) with very fine to fine size sand, little silt, very dense in place, thinly bedded				
	14	20								1.8'		2" 10 Slot PVC Screen	
			47			94							
				47									
					47								
65													
									67.0				
									Wet, brown (SANDY-SILT) with 5 to 15% gravel, little to some very fine size sand, very dense to compact, massive soil structure to weakly stratified				
	15	53								1.8'			
			62			>112							
				50/3"									
70												#2 Size Sand	
	16	8								1.5"			
			16			34					74.0		
				18									
					14				75.0		75.0		
75									Boring Completed at 75.0 feet				
80													

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 3

DATE: 12/16/09

ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

SN	0/6	6/12	12/18	18/24	N	OVM	REC.
1	2	5	12	25	17	0.0	0.6'
2	4	6	6	5	12	0.0	1.5'
3	4	8	12	14	20	2.0	2.0'
4	4	3	10	50/2"	13	0.0	0.8'
5	6	6				0.0	1.8'

DESCRIPTION AND CLASSIFICATION

- 0.0–0.5: Moist, dark gray (SILTY-SAND) fill with very fine size sand, little silt, compact
- 0.5–4.5: Moist, brown (SANDY-SILT) fill with 5 to 10% gravel, little very fine size sand, compact
- 4.5–13.0: Moist, dark gray to black (SANDY-SILT) fill with 3 to 5% gravel, little very fine size sand, compact
- 13.0–16.0: Extremely moist, dark brown, gravelly (SANDY-SILT) fill with 15 to 25% gravel, and fibrous wood material, little very fine size sand, compact
- 16.0–: Extremely moist, brown to dark brown, gravelly (SILTY-SAND) fill with 20 to 40% gravel and red brick fragments, very fine to fine size sand
  Strong Naphtha/Mothball Odor

MONITORING WELL / REMARKS

2" PVC Riser Pipe

Cement / Bentonite Grout

COMMENTS

Sandy fill to 0.5 foot over coarse silty fill with trace gravel to 13.0 feet over coarse silty soil fill with little gravel to 16.0 feet over sandy fill with some gravel and bricks to 35.5 feet over water sorted and deposited sand with little silt to 62.0 feet over coarse silty glacial drift to refusal

Tough Drilling from 16.0' to 18.0'

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 3

DATE: 12/16/09 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
20				7		13			Extremely moist, brown to dark brown (SILTY-SAND) fill with brick and wood debris, occasional black rubber, very fine to fine size sand, compact				
					10								
	6	12					0.0			0.5'		2" PVC Riser Pipe	
			12										
25						23							
				11									
					7								
	7	2					8.0			0.5'		Cement / Bentonite Grout	
			5										
30						13							
				8									
					11								
	8	7					0.0			0.3'			
			7										
35						16							
				9					35.5				
					5				Moist, olive gray (SILTY-SAND) with very fine size sand, compact, thinly bedded				
	9	6					0.0						
			7										
40													

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 3

DATE: 12/16/09 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
40				9		16			Moist, olive gray (SILTY-SAND) with very fine size sand, compact, thinly bedded				
					9								
	10	8					0.0			0.7'		2" PVC Riser Pipe	
			7										
45				8		15							
					10								
	11	5					0.0			1.8'		Cement / Bentonite Grout	
			5										
50				4		9							
					8								
											52.0	Bentonite Seal	
	12	7					0.0			2.0'			
			10										
55				15		25					55.0		
					16							#2 Size Sand	
											57.0	2" 10 Slot PVC Screen	
	13	4					0.0						
			7										
60									60.0				

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 3

DATE: 12/16/09 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
60				9		16			Wet, gray (SILTY-SAND) with very fine to fine size sand, compact, thinly bedded				
					10								
62.0									Extremely moist, brown, gravelly (SANDY- SILT) with 15 to 25% gravel, some very fine sand, massive soil structure to weakly thinly bedded			2" 10 Slot PVC Screen	
							0.0						
	14	8											
			11										
65						23							
				12									
					12								
							0.0						
	15	28										#2 Size Sand	
			55										
70						111							
				56									
					50/5"								
72.5											72.5		
73.0									Auger Refusal at 73.0 feet		73.0		
75													
80													

LOGGED BY: Dale M. Gramza / Senior Geologist PAGE 4 of 4

HOLE NUMBER: MW 4

DATE: 01/04/10 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL / REMARKS	COMMENTS
0	1	3	12	12	8	24	0.0	Moist, dark brown (SANDY-SILT) topsoil with little very fine size sand, compact (0.5)	1.6'		Topsoil to 0.5 foot over silty slack water sediment to 18.0 feet over water sorted and deposited sand with little silt to 43.0 feet over coarse silty glacial drift to end of boring
								Moist, light yellowish brown (SILT) with trace very fine size sand, loose to dense in place, thinly bedded			
5	2	3	2	3	4	5	0.0		1.5'	2" PVC Riser	
10	3	1	4	5	5	9	0.0		1.3'		
15	4	9	17	20	16	37	0.0		1.9'	Cement / Bentonite Grout	
18.0	5	14	19	25	25	44	0.0	Moist, brown (SILTY-SAND) with very fine size sand, little silt, dense in place, loose when disturbed, thinly bedded	1.8'		
20										20.0	

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 4

DATE: 01/04/10 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
20									Moist, brown (SILTY-SAND) with very fine size sand, little silt, dense in place, loose when disturbed, thinly bedded			Bentonite Seal	
											22.0		
	6	10					0.0			1.5'		#2 Size Sand	
			19								24.0		
				25		44							
					20								
25													
	7	20					0.0			1.8'			
			27			64							
				37									
					37								
30													
									33.0				
	8	13					0.0		Wet, faintly mottled, brown (SILTY-SAND) with very fine size sand, little silt, dense in place loose when disturbed, thinly bedded			2" 10 Slot PVC Screen	
			17			41							
				24									
					24								
35													
	9	24											
			50/5"			>50							
40													

LOGGED BY: Dale M. Gramza / Senior Geologist PAGE 2 of 3

HOLE NUMBER: MW 4

DATE: 01/04/10 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
40									Wet, faintly mottled, brown (SILTY-SAND) with very fine size sand, little silt, dense in place loose when disturbed, thinly bedded 43.0			2" 10 Slot PVC Screen	
	10	14	14	24	30	38			Extremely moist, gray, gravelly (SANDY- SILT) with 15 to 25% gravel, little very fine size sand, dense, massive soil structure to weakly thinly bedded 45.0		44.0	#2 Size Sand	
45									Boring Completed at 45.0 feet		45.0		
50													
55													
60													

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 5 Deep

DATE: 12/14/09 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
0	1	4	5	4	10	9	0.0		Wet, dark brown (SANDY-SILT) topsoil / fill with some very fine size sand, loose 0.5 Extremely moist, brown (SANDY-SILT) fill with 5 to 15% gravel, with glass and fibrous wood material, little very fine size sand, loose	1.6'			Topsoil / fill to 0.5 foot over coarse silty fill with trace gravel and little sand to 5.5 feet over silty lake sediment to 14.0 feet over water sorted and deposited sand with trace to little silt to 18.0 feet over silty glacial drift to 23.0 feet over sandy slack water sediment with little to some silt to 28.0 feet over coarse silty glacial drift with some gravel to refusal
5	2	2	4	4	8	8	0.0		5.5 Extremely moist, faintly mottled, olive gray (SILT), compact, thinly bedded with thin (CLAYEY-SILT) lenses	1.5'		2" PVC Riser Pipe	
	3	8	7	10	9	17	0.0			1.3'		Cement / Bentonite Grout	
10													
	4	3	4	4	4	8	0.0		14.0 Moist, gray (SILTY-SAND) with very fine size sand, trace to little silt, loose, thinly bedded	1.9'			
15									18.0				
	5	14	25	30	35	55	0.0		Moist, gray, gravelly (SILT) with 20 to 40% gravel, trace very fine size sand, very dense, massive soil structure to weakly stratified	1.8'			
20													

LOGGED BY: Dale M. Gramza / Senior Geologist

HOLE NUMBER: MW 5 Deep

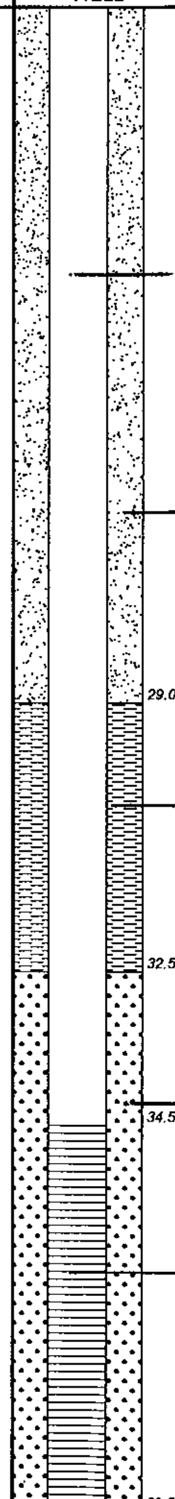
DATE: 12/14/09 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/6	6/12	12/18	18/24	N	OVM	DESCRIPTION AND CLASSIFICATION	REC.	REMARKS	COMMENTS
20 – 23.0								Moist, gray, gravelly (SILT) with 20 to 40% gravel, trace very fine size sand, very dense, massive soil structure to weakly stratified			
23.0 – 28.0	6	8	8	10	14	18	0.0	Wet, brown (SILTY-SAND) with very fine size sand, little to some silt, compact, thinly bedded	1.5'	2" PVC Riser Pipe; Cement / Bentonite Grout	
28.0 – 39.5	7	24	44	50/5"		>94	0.0	Extremely moist, faintly mottled, brown to grayish brown (SANDY-SILT) with 20 to 40% gravel, little very fine size sand, very dense, massive soil structure to weakly stratified	1.8'	Bentonite Seal	Water Level at 28.4' BGS at Completion
	8	54	51	50/3"		>101	0.0			#2 Size Sand; 2" 10 Slot PVC Screen	
	9	75/3"									
39.5								Auger Refusal at 39.5 feet			



LOGGED BY: Dale M. Gramza / Senior Geologist PAGE 2 of 2

HOLE NUMBER: MW5 Shallow

DATE: 12/15/2009

ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

Depth	SN	0/ 6	6/ 12	12/ 18	18/ 24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
0									Drilled with 4 1/4" HSA without Sampling to 28.0' bgs				
5												2" PVC Riser Pipe	
10												Cement / Bentonite Grout	
15											17.0		
20											20.0	Bentonite Seal	

LOGGED BY:

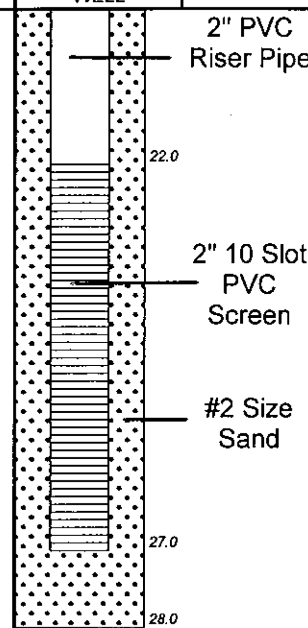
HOLE NUMBER: MW5 Shallow

DATE: 12/15/2009 ELEVATION:

PROJECT: Subsurface Investigation and Monitoring Well Installation at 1440 Empire Boulevard, Town of Penfield, New York

PREPARED FOR: 1440 Empire Boulevard Development Corportation

BORING LOCATION: See Map

SN	0/6	6/12	12/18	18/24	N	OVM	LITH	DESCRIPTION AND CLASSIFICATION	REC.	MONITORING WELL	REMARKS	COMMENTS
								28.0				

20

25

30

35

40

LOGGED BY:

Geoprobe and Test Pits

1440 Empire Blvd P.N. 20229.17
Penfield, NY
Phase II Geoprobe **Date:** December 16, 2009-January21, 2010

Borehole	**Depth**	**Description**	**PID**
GP-1	0′-4′	6 in. topsoil, broken stone to tan SILT	0
	4′-8′	Tan SILT with trace fine sand and gravel. Sample collected	0
Borehole	**Depth**	**Description**	**PID**
GP-2	0′-4′	Fill to native SILT, gravel layer at 3.5 ft., sampled collected.	0
	4′-8′	Tan SILT	0
Borehole	**Depth**	**Description**	**PID**
GP-3	0′-4′	4 in. topsoil to tan SILT	0
	4′-8′	Tan SILT. Sample collected.	0
Borehole	**Depth**	**Description**	**PID**
GP-4	0′-4′	Fill with glass and gravel layers	0
	4′-8′	Fill with glass, gravel, and wood to native SILT some gravel. Sample collected	1.5
Borehole	**Depth**	**Description**	**PID**
GP-5	0′-4′	Fill with ash, gravel. Petroleum odor.	5.0
	4′-8′	Fill with ash. Refusal at 7.5 ft. sample collected	5.4
Borehole	**Depth**	**Description**	**PID**
GP-6	0′-4′	Fill with gravel, rock, petroleum odor, staining at 4 ft.	1.6
	4′-8′	Fill with brick, staining and petroleum odor at 7 ft.	1.6
	8′-12′	Fill with brick, to stained native SILT with a petroleum odor to native SILT and clay sample and duplicate taken	179

1440 Empire Blvd
Penfield, NY
Phase II Geoprobe

P.N. 20229.17

Date:12-21-09

Borehole	**Depth**	**Description**	**PID**
GP-7	0′-4′	Fill with glass and brick to native SILT at 3 ft. Sample collected.	0.3
Borehole	**Depth**	**Description**	**PID**
GP-8	0′-4′	Fill to native SILT at 2 ft. Sample collected	0
	4′-8′	Tan SILT.	0
Borehole	**Depth**		**PID**
GP-9	0′-4′	Fill with rock, plastic and organic material.	0.4
	4′-8′	Fill some staining, sample collected. Refusal on wood at 8 ft	0.6
Borehole	**Depth**	**Description**	**PID**
GP-10	0′-4′	Fill with brick and stone, staining at 3 ft.	0
	4′-8′	Fill with stone. Refusal at 8 ft. sample collected	0
Borehole	**Depth**	**Description**	**PID**
GP-11	0′-4′	Fill with concrete and organic material.	0
	4′-8′	Fill to native SILT sample collected	1.9
Borehole	**Depth**	**Description**	**PID**
GP-12	0′-4′	Native tan SILT.	0

1440 Empire Blvd
Penfield, NY
Phase II Geoprobe

P.N. 20229.17

Date:12-21-09

Borehole	**Depth**	**Description**	**PID**
GP-13	0′-4′	Fill with glass some staining	1.1
	4′-8′	Fill with staining and petroleum odor to native SILT at 7.5 ft. Sample collected.	3.9
Borehole	**Depth**	**Description**	**PID**
GP-14	0′-4′	Native tan SILT.	0
Borehole	**Depth**		**PID**
GP-15	0′-4′	Native tan SILT	0

Test Pits

Test Pit	**Depth**		**Description**	**PID**
TP-1	5ft	Empire	Native	0
Test Pit	**Depth**		**Description**	**PID**
TP-2	3ft	Empire	Native to Fill Glass, brick, metal	0
Test Pit	**Depth**		**Description**	**PID**
TP-3	5ft		Fill to Native	0
Test Pit	**Depth**		**Description**	**PID**
TP-4	3ft		Fill to Native	0
Test Pit	**Depth**		**Description**	**PID**
TP-5	3ft		Fill to Native at GP-2	0

Test Pit	**Depth**	**Description**	**PID**
TP-6		Fill to Native	0
Test Pit	**Depth**	**Description**	**PID**
TP-7	5ft	Fill with petroleum odor/staining 1.5 ft.-4.5 ft. thick clean at 5 ft.	2007
Test Pit	**Depth**	**Description**	**PID**
TP-8		Fill to Native	0
Test Pit	**Depth**	**Description**	**PID**
TP-9		Northwest corner, fill to Native	0
Test Pit	**Depth**	**Description**	**PID**
TP-10	2ft	Empire South of road, fill	0
Test Pit	**Depth**	**Description**	**PID**
TP-11	3ft	Empire North of road, native	0
Test Pit	**Depth**	**Description**	**PID**
TP-12	4ft	South of road, fill	0
Test Pit	**Depth**	**Description**	**PID**
TP-13	3ft	South of road, fill broken stone large concrete blocks	0
Test Pit	**Depth**	**Description**	**PID**
TP-14	2ft	North of road, Fill	0
Test Pit	**Depth**	**Description**	**PID**
TP-15	2ft	North of road, Native	0

Test Pit	Depth	Description	PID
TP-16	7ft	South of road, sinkhole with construction debris	0
Test Pit	**Depth**	**Description**	**PID**
TP-17	3ft	North of road, Native	0
Test Pit	**Depth**	**Description**	**PID**
TP-18	6ft	Empire Fill to Native at GP-12	0
Test Pit	**Depth**	**Description**	**PID**
TP-19	6ft	Empire Native at GP-14 to fill at GP13	0
Test Pit	**Depth**	**Description**	**PID**
TP-20		Fill	0
Test Pit	**Depth**	**Description**	**PID**
TP-21		Fill	0
Test Pit	**Depth**	**Description**	**PID**
TP-22		Near MW-5 Fill	0
Test Pit	**Depth**	**Description**	**PID**
TP-23		Fill	0

1.1 General Specifications

Table 1.1

Portable VOC Monitor Specification	
Size:	8.2"L x 3.0"W x 2.0"H
Weight:	19.5 oz with battery pack
Detector:	Photo-ionization sensor with 9.8, 10.6, or 11.7 eV UV lamp
Battery:	A 4.8V /1250 mAH Rechargeable Nickel Metal Hydride battery pack (snap in, field replaceable)
Battery Charging:	10 hours charge through built-in charger
Operating Hours:	Up to10 hours continuous operation
Display:	1 line by 8 characters 5x7 dot matrix LCD (0.4" character height) with LED back light automatically in dim light
Range, Resolution & Response time (t_{90}):	
Isobutylene (calibration gas)	
	0-99 ppm 0.1 ppm 2 sec
	100-1,999 ppm 1.0 ppm 2 sec
	2000-10,000 ppm 1.0 ppm 2 sec
Measurement Accuracy (Isobutylene):	
	0 – 2000 ppm: ± 2 ppm or 10% of reading.
	> 2000 ppm: ± 20% of reading
PID Detector:	Easy access to lamp and sensor for cleaning and replacement
Correction Factors:	Built-in 102 VOC gases
Calibration:	Two-point field calibration of zero and standard reference gas
Calibration Memory:	Store up to 8 separate calibration, alarm limits and span value
Inlet Probe:	Flexible 5" tubing
Keypad:	1 operation key and 2 programming keys

Direct Readout:	Instantaneous, average, STEL and peak value, battery voltage and elapsed time
Intrinsic Safety:	UL & cUL Class 1, Division I, Group A,B,C,D, Temperature Code T3C (US & Canada); CE 0575 Ex II 1G DEMKO 02 ATEX 0204759 Eex ia IIC T4 (Europe)
EM Interference:	No effect when exposed to 0.43 W/cm^2 RF interference (5 watt transmitter at 12 inches)
Alarm Setting:	Separate alarm limit settings for Low, High, STEL and TWA alarm
Operating Mode:	Survey or Hygiene mode
Alarm:	90 dB buzzer and flashing red LEDs to indicate exceeded preset limits, low battery voltage, or sensor failure.
External Alarm:	Optional plug-in pen-size vibration alarm or remote alarm
Alarm Mode:	Latching or automatic reset
Real-time Clock:	Automatic date and time stamps on data logged information
Datalogging:	15,000 points with time stamp, serial number, user ID, site ID, etc.
Communication:	Upload data to PC and download instrument setup from PC through RS-232 port
Sampling Pump:	Internally integrated. Flow rate: 450-550 cc/min.
Temperature:	0° to 45°C (32° to 113°F)
Humidity:	0 % to 95 % relative humidity (non-condensing)
Housing:	ABS + PC, conductive coating, splash and dust proof, will withstand 1 meter drop test with rubber boot
Attachment:	Wrist strap, rubber boot and belt clip

1440 Empire Blvd.
Penfield NY

Date: December 14, 2010 **P.N. 20229.16**

Background Air Monitoring

Comments	Time	PID
	9:00	0
	9:15	0
	9:30	0
	9:45	0
	10:00	0
	10:15	0
	10:30	0
	10:45	0
	11:00	0
	11:15	0
	11:30	0
	11:45	0
Break	12:00	
Break	12:15	
Break	12:30	
Break	12:45	
Break	1:00	
	1:15	0
	1:30	0
	1:45	0
	2:00	0
	2:15	0
	2:30	0

	2:45	0
	3:00	0
	3:15	0
	3:30	0
	3:45	0
	4:00	0
	4:15	0
	4:30	0
	4:45	0
	5:00	0

1440 Empire Blvd.
Penfield NY

Date: December 16, 2010 **P.N. 20229.16**

Background Air Monitoring

Comments	Time	PID
	9:00	0
	9:15	0
	9:30	0
	9:45	0
	10:00	0
	10:15	0
	10:30	0
	10:45	0
	11:00	0
	11:15	0
	11:30	0
	11:45	0
Break	12:00	
Break	12:15	
Break	12:30	
Break	12:45	
Break	1:00	
	1:15	0
	1:30	0
	1:45	0
	2:00	0
	2:15	0
	2:30	0

	2:45	0
	3:00	0
	3:15	0
	3:30	0
	3:45	0
	4:00	0
	4:15	0
	4:30	0
	4:45	0
	5:00	0

1440 Empire Blvd.
Penfield NY

Date: December 18, 2010 **P.N. 20229.16**

Background Air Monitoring

Comments	Time	PID
	9:00	0
	9:15	0
	9:30	0
	9:45	0
	10:00	0
	10:15	0
	10:30	0
	10:45	0
	11:00	0
	11:15	0
	11:30	0
	11:45	0
Break	12:00	
Break	12:15	
Break	12:30	
Break	12:45	
Break	1:00	
	1:15	0
	1:30	0
	1:45	0
	2:00	0
	2:15	0
	2:30	0

	2:45	0
	3:00	0
	3:15	0
	3:30	0
	3:45	0
	4:00	0
	4:15	0
	4:30	0
	4:45	0
	5:00	0

1440 Empire Blvd.
Penfield NY

Date: December 21, 2010 **P.N. 20229.16**

Background Air Monitoring

Comments	Time	PID
	9:00	0
	9:15	0
	9:30	0
	9:45	0
	10:00	0
	10:15	0
	10:30	0
	10:45	0
	11:00	0
	11:15	0
	11:30	0
	11:45	0
Break	12:00	
Break	12:15	
Break	12:30	
Break	12:45	
Break	1:00	
	1:15	0
	1:30	0
	1:45	0
	2:00	0
	2:15	0
	2:30	0

	2:45	0
	3:00	0
	3:15	0
	3:30	0
	3:45	0
	4:00	0
	4:15	0
	4:30	0
	4:45	0
	5:00	0

1440 Empire Blvd.
Penfield NY

Date: December 22, 2010 **P.N. 20229.16**

Background Air Monitoring

Comments	Time	PID
	9:00	0
	9:15	0
	9:30	0
	9:45	0
	10:00	0
	10:15	0
	10:30	0
	10:45	0
	11:00	0
	11:15	0
	11:30	0
	11:45	0
Break	12:00	
Break	12:15	
Break	12:30	
Break	12:45	
Break	1:00	
	1:15	0
	1:30	0
	1:45	0
	2:00	0
	2:15	0
	2:30	0

	2:45	0
	3:00	0
	3:15	0
	3:30	0
	3:45	0
	4:00	0
	4:15	0
	4:30	0
	4:45	0
	5:00	0

1440 Empire Blvd.
Penfield NY

Date: January 6, 2010 **P.N. 20229.16**

Background Air Monitoring

Comments	Time	PID
	9:00	0
	9:15	0
	9:30	0
	9:45	0
	10:00	0
	10:15	0
	10:30	0
	10:45	0
	11:00	0
	11:15	0
	11:30	0
	11:45	0
Break	12:00	
Break	12:15	
Break	12:30	
Break	12:45	
Break	1:00	
	1:15	0
	1:30	0
	1:45	0
	2:00	0
	2:15	0
	2:30	0

	2:45	0
	3:00	0
	3:15	0
	3:30	0
	3:45	0
	4:00	0
	4:15	0
	4:30	0
	4:45	0
	5:00	0

1440 Empire Blvd.
Penfield NY

Date: January 7, 2010 **P.N. 20229.16**

Background Air Monitoring

Comments	Time	PID
	9:00	0
	9:15	0
	9:30	0
	9:45	0
	10:00	0
	10:15	0
	10:30	0
	10:45	0
	11:00	0
	11:15	0
	11:30	0
	11:45	0
Break	12:00	
Break	12:15	
Break	12:30	
Break	12:45	
Break	1:00	
	1:15	0
	1:30	0
	1:45	0
	2:00	0
	2:15	0
	2:30	0

	2:45	0
	3:00	0
	3:15	0
	3:30	0
	3:45	0
	4:00	0
	4:15	0
	4:30	0
	4:45	0
	5:00	0

APPENDIX 3
Low Flow Field Forms, Survey Notes

LOW-FLOW SAMPLING FIELD FORM
O&M ENTERPRISES, Inc.

Monitoring Well I.D.: MW-1 | Date: 1/28/10 | Time Started: 1140 | Field Personnel: RCB

Weather Conditions: cold 29° windy light snow | Time Ended: 1322

Comments.

Initial Readings

Measured Well Bottom (TOR-ft) 76.85 | Riser Pipe Diameter (in.) 2

Measured Water Level (TOR-ft) 72.25 | One Well Volume (gal.)

Notes:

Well Condition

Well Riser Type		Stainless Steel	Carbon Steel	PVC
Casing Condition:	OK		Repair Required:	
Cap Condition:	OK		Repair Required:	
Paint Condition:	OK		Repair Required:	
Lock Condition:	OK		Repair Required:	
Inner Casing Condition:	OK		Repair Required:	
Surface Seal Condition:	OK		Repair Required:	
Other:	OK		Repair Required:	

Purge Information

Purging Method:	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
Place an X in one box	Polyethylene Bailer	Bladder Pump	Other	

Amount Purged: ~1.5 gal | Flow Rate (mL per minute: ~80 ml/min

Water Level after Purging (TOR ft.) 72.5

Comments:

Sampling Information

Date: 1/28/10 | Time Sampled. 1300 | Field Personnel: R C Becken

Measured Water Level (TOR ft) 72.5

Sampling Method	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
place an X in box	Polyethylene Bailer	Bladder Pump	Other:	

Time Elapsed min	Temperature	pH	Conductivity	Dissolved Oxygen	Redox	Water Level	Turbidity	Flow Rate
5	5.11	6.87	2.12	6.12	-106	72.26	1000+	120 ml/min
10	6.19	6.92	2.08	7.11	-110	72.5	1000+	100 ml/min
15	6.59	6.92	2.08	6.42	-110	72.5	800	86 ml/min
20	6.00	6.91	2.08	6.35	-110	72.5	400	
25	5.81	6.91	2.08	5.80	-109	72.5	230	
30	5.98	6.92	2.08	5.68	-109	72.5	170	
35	5.93	6.92	2.08	5.55	-109	72.5	140	
40	6.41	6.91	2.08	5.45	-110	72.5	135	
45	6.35	6.91	2.08	5.48	-110	72.5	136	

QA/QC Samples Taken:

Comments:

Signature

Sampler (Print)	Sampler (signature):	
Richard C. Becken	Richard C Becken	Date. 1/28/10

LOW-FLOW SAMPLING FIELD FORM
O&M ENTERPRISES, Inc.

Monitoring Well I.D.: MW-2 | Date: 1/29/10 | Time Started: 0830 | Field Personnel: RCB

Weather Conditions: light snow 11° | Time Ended: 1045

Comments.

Initial Readings

Measured Well Bottom (TOR-ft) 74.4 | Riser Pipe Diameter (in.) 2

Measured Water Level (TOR-ft) 66.31 | One Well Volume (gal.)

Notes:

Well Condition

Well Riser Type		Stainless Steel		Carbon Steel	PVC	
Casing Condition:		OK		Repair Required:		
Cap Condition:		OK		Repair Required.		
Paint Condition:		OK		Repair Required:		
Lock Condition:		OK		Repair Required:		
Inner Casing Condition:		OK		Repair Required:		
Surface Seal Condition:		OK		Repair Required:		
Other:		OK		Repair Required:		

Purge Information

Purging Method:	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
Place an X in one box	Polyethylene Bailer	Bladder Pump	Other	

Amount Purged: ~2 gal | Flow Rate (mL per minute: 60 ml/min

Water Level after Purging (TOR ft.) 68.0

Comments:

Sampling Information

Date: 1/29/10 | Time Sampled. 10:19 | Field Personnel: R C Becken

Measured Water Level (TOR ft) 68.0

Sampling Method	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
place an X in box	Polyethylene Bailer	Bladder Pump	Other:	

Time Elapsed min	Temperature	pH	Conductivity	Dissolved Oxygen	Redox	Water Level	Turbidity	Flow Rate
5	8.03	6.74	3.35	0.0	109	67.33	950	80 ml/min
10	7.4	6.8	3.41	0.0	103	67.59	1000+	80 ml/min
15	7.46	6.81	3.32	0.0	101	67.6	1000+	70 ml/min
20	6.76	6.83	3.4	0.0	100	68.0	1000+	60 ml/min
25	6.52	6.84	3.38	0.0	99	68.0	1000+	
30	6.49	6.87	3.38	0.0	98	68.0	1000+	
35	6.41	6.88	3.38	0.0	98	68.0	900	
40	7.15	6.87	3.18	0.0	97	68.0	750	
45	8.9	6.88	3.18	1.74	104	68.0	850	
50	8.96	6.89	3.18	1.59	97	68.0	805	
55	9.1	6.89	3.18	1.59	96	68.0	775	

QA/QC Samples Taken:

Comments:

Signature

Sampler (Print)	*Sampler (signature):*	
Richard C. Becken		Date.

LOW-FLOW SAMPLING FIELD FORM
O&M ENTERPRISES, Inc.

Monitoring Well I.D.: MW-3 | Date: 1/28/10 | Time Started: 1330 | Field Personnel: RCB

Weather Conditions: windy cold ~25° | Time Ended: 1450

Comments:

Initial Readings

Measured Well Bottom (TOR-ft) 75.02 | Riser Pipe Diameter (in.) 2

Measured Water Level (TOR-ft) 63.11 | One Well Volume (gal.)

Notes:

Well Condition

Well Riser Type		Stainless Steel		Carbon Steel	PVC
Casing Condition:	OK		Repair Required:		
Cap Condition:	OK		Repair Required:		
Paint Condition:	OK		Repair Required:		
Lock Condition:	OK		Repair Required:		
Inner Casing Condition:	OK		Repair Required:		
Surface Seal Condition:	OK		Repair Required:		
Other:	OK		Repair Required:		

Purge Information

Purging Method:	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
Place an X in one box	Polyethylene Bailer	Bladder Pump	Other:	

Amount Purged: ~2 gal | Flow Rate (mL per minute: ~100 ml/min

Water Level after Purging (TOR ft.) 63.85

Comments:

Sampling Information

Date: 1/28/10 | Time Sampled: 1430 | Field Personnel: R C Becken

Measured Water Level (TOR ft) 63.85

Sampling Method	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
place an X in box	Polyethylene Bailer	Bladder Pump	Other:	

Time Elapsed min.	Temperature	pH	Conductivity	Dissolved Oxygen	Redox	Water Level	Turbidity	Flow Rate
5	4.51	6.75	2.37	0.0	-101	63.67	1000+	~100 ml/min
10	5.15	6.73	2.35	0.0	-103	63.83	1000+	
15	5.01	6.71	2.35	0.0	-104	63.85	360	
20	5.17	6.71	2.35	0.0	-106	63.85	190	
25	5.04	6.7	2.35	0.0	-107	63.85	160	
30	4.57	6.71	2.35	0.0	-107	63.85	130	
35	4.55	6.71	2.35	0.0	-108	63.85	135	
40	4.57	6.71	2.35	0.0	-107	63.85	138	

QA/QC Samples Taken:

Comments:

Signature

Sampler (Print)	Sampler (signature):	
Richard C. Becken	Richard C. Becken	Date: 1/28/10

LOW-FLOW SAMPLING FIELD FORM
O&M ENTERPRISES, Inc.

Monitoring Well I.D.: MW-4 Date: 1/28/10 Time Started: 0900 Field Personnel: RCB

Weather Conditions: light snow windy 24° Time Ended: 1135

Comments:

Initial Readings

Measured Well Bottom (TOR-ft) 41.7 Riser Pipe Diameter (in.) 2

Measured Water Level (TOR-ft) 33.97 One Well Volume (gal.)

Notes:

Well Condition

Well Riser Type	Stainless Steel	Carbon Steel	PVC
Casing Condition:	OK	Repair Required:	
Cap Condition:	OK	Repair Required:	
Paint Condition:	OK	Repair Required:	
Lock Condition:	OK	Repair Required:	
Inner Casing Condition:	OK	Repair Required:	
Surface Seal Condition:	OK	Repair Required:	
Other:	OK	Repair Required:	

Purge Information

Purging Method:	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
Place an X in one box	Polyethylene Bailer	Bladder Pump	Other:	
Amount Purged:		Flow Rate (mL per minute: ~240 ml/min		

Water Level after Purging (TOR ft.)

Comments:

Sampling Information

Date: 1/28/10 Time Sampled: Field Personnel: R C Becken

Measured Water Level (TOR ft) 34.25

Sampling Method	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
place an X in box	Polyethylene Bailer	Bladder Pump	Other:	

Time Elapsed min.	Temperature	pH	Conductivity	Dissolved Oxygen	Redox	Water Level	Turbidity	Flow Rate
5	8.15	6.62	2.7	0.0	-121	34.25	1000+	~240 ml/min
10	9.36	6.63	2.92	0.0	-129	34.25	1000+	
15	9.76	6.64	2.9	0.0	-132	34.25	1000+	
20	9.77	6.66	2.93	2.45	-133	34.25	1000+	
25	9.72	6.67	2.94	5.37	-134	34.25	1000+	
30	9.77	6.68	2.93	5.0	-133	34.25	1100	
35	9.66	6.69	2.93	4.45	-134	34.25	650	
40	9.59	6.7	2.93	3.95	-133	34.25	500	
45	9.48	6.72	2.93	3.14	-132	34.25	380	
50	9.48	6.73	2.93	3.0	-132	34.25	250	
55	9.41	6.75	2.93	2.98	-131	34.25	200	
60	9.36	6.76	2.93	2.96	-131	34.25	190	

QA/QC Samples Taken: MS, MSD + Field Dup

Comments:

Signature

Sampler (Print)	Sampler (signature):	
Richard C. Becken		Date: 1/28/10

LOW-FLOW SAMPLING FIELD FORM
O&M ENTERPRISES, Inc.

Monitoring Well I.D.: MW-5 Date: 1/29/10 Time Started: 1100 Field Personnel: RCB

Weather Conditions: snow, cold 18° Time Ended:

Comments:

Initial Readings

Measured Well Bottom (TOR-ft) 41.15 Riser Pipe Diameter (in.) 2

Measured Water Level (TOR-ft) 30.37 One Well Volume (gal.)

Notes:

Well Condition

Well Riser Type		Stainless Steel	Carbon Steel	PVC
Casing Condition:	OK		Repair Required:	
Cap Condition:	OK		Repair Required:	
Paint Condition:	OK		Repair Required:	
Lock Condition:	OK		Repair Required:	
Inner Casing Condition:	OK		Repair Required:	
Surface Seal Condition:	OK		Repair Required:	
Other:	OK		Repair Required:	

Purge Information

Purging Method:	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
Place an X in one box	Polyethylene Bailer	Bladder Pump	Other:	

Amount Purged: ~1.25 gal Flow Rate (mL per minute: ~45 ml/min

Water Level after Purging (TOR ft.) 34.15

Comments:

Sampling Information

Date: 1/29/10 Time Sampled: Field Personnel: R C Becken

Measured Water Level (TOR ft) 34.15

Sampling Method	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
place an X in box	Polyethylene Bailer	Bladder Pump	Other:	

Time Elapsed min.	Temperature	pH	Conductivity	Dissolved Oxygen	Redox	Water Level	Turbidity	Flow Rate
5	5.34	7.99	1.81	0.0	-210	31.15	1000+	~45 ml/min
10	3.90	8.05	1.79	0.0	-215	31.2	1000+	
15	3.47	8.02	1.78	0.0	-216	31.3	977	
20	4.45	8.05	1.77	0.0	-210	31.5	844	
25	4.10	8.03	1.75	0.0	-211	32.3	560	
30	3.55	8.03	1.75	0.0	-208	32.95	415	
35	0.98	8.03	1.75	0.0	-201	33.3	261	
40	3.55	8.03	1.75	0.0	-199	33.95	237	
45	3.57	8.03	1.75	0.0	-198	34.15	239	

QA/QC Samples Taken:

Comments:

Signature

Sampler (Print)	Sampler (signature):	
Richard C. Becken	Richard C. Becken	Date: 1/29/10

LOW-FLOW SAMPLING FIELD FORM
O&M ENTERPRISES, Inc.
1440 Empire Blvd.

Monitoring Well I.D.: MW-1	Date: 9/23/10	Time Started: 0900	Field Personnel: RCB
Weather Conditions: clear cool		Time Ended: 1050	
Comments:			

Initial Readings

Measured Well Bottom (TOR-ft) 76.2	Riser Pipe Diameter (in.) 2
Measured Water Level (TOR-ft) 71.72	One Well Volume (gal.) 0.76
Notes:	

Well Condition

Well Riser Type		Stainless Steel	Carbon Steel	PVC
Casing Condition:	OK		Repair Required:	
Cap Condition:	OK		Repair Required:	
Paint Condition:	OK		Repair Required:	
Lock Condition:	OK		Repair Required:	
Inner Casing Condition:	OK		Repair Required:	
Surface Seal Condition:	OK		Repair Required:	
Other:	OK		Repair Required:	

Purge Information

Purging Method:	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
Place an X in one box	Polyethylene Bailer	Bladder Pump X	Other:	
Amount Purged: ~2 gal		Flow Rate (mL per minute:		
Water Level after Purging (TOR ft.) 71.93				
Comments:				

Sampling Information

Date: 9/23/10	Time Sampled:		Field Personnel:	R C Becken
Measured Water Level (TOR ft)				
Sampling Method	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
place an X in box	Polyethylene Bailer	Bladder Pump X	Other:	

Time Elapsed min.	Temperature	pH	Conductivity	Dissolved Oxygen	Redox	Water Level	Turbidity	Flow Rate
5	13.5	6.3	2.29	0.0	-120	71.9	>1000	~150 ml/min
10	13.4	6.38	2.30	0.0	-125	71.9	>1000	
15	12.8	6.4	2.36	0.0	-123	71.9	550	
20	12.6	6.39	2.30	0.0	-124	71.89	350	
25	12.5	6.39	2.29	0.0	-125	71.89	230	
30	12.5	6.39	2.29	0.0	-126	71.91	160	
35	12.6	6.41	2.29	0.0	-127	71.93	130	
40	12.7	6.42	2.29	0.0	-127	71.93	125	
45	12.8	6.43	2.29	0.0	-127	71.93	121	

QA/QC Samples Taken: MS + MSD taken
Comments:

Signature

Sampler (Print)	Sampler (signature):	
Richard C. Becken	Richard C Becken	Date: 9/23/10

LOW-FLOW SAMPLING FIELD FORM
O&M ENTERPRISES, Inc.
1440 Empire Blvd.

Monitoring Well I.D.: MW-2 Date: 9/22/10 Time Started: 1120 Field Personnel: RCB

Weather Conditions: overcast warm Time Ended:

Comments:

Initial Readings

Measured Well Bottom (TOR-ft) 74.21 Riser Pipe Diameter (in.) 2

Measured Water Level (TOR-ft) 65.73 One Well Volume (gal.) 1.44 gal

Notes:

Well Condition

Well Riser Type		Stainless Steel	Carbon Steel	PVC X
Casing Condition:	OK		Repair Required:	
Cap Condition:	OK		Repair Required:	
Paint Condition:	OK		Repair Required:	
Lock Condition:	OK		Repair Required:	
Inner Casing Condition:	OK		Repair Required:	
Surface Seal Condition:	OK		Repair Required:	
Other:	OK		Repair Required:	

Purge Information

Purging Method: Place an X in one box	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
	Polyethylene Bailer	Bladder Pump X	Other:	

Amount Purged: ~1.1 gal Flow Rate (mL per minute: ~40 ml/min

Water Level after Purging (TOR ft.) 66.5

Comments:

Sampling Information

Date: 9/22/10 Time Sampled: 12:35 Field Personnel: R C Becken

Measured Water Level (TOR ft) 66.7

Sampling Method place an X in box	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
	Polyethylene Bailer	Bladder Pump X	Other:	

Time Elapsed min.	Temperature	pH	Conductivity	Dissolved Oxygen	Redox	Water Level	Turbidity	Flow Rate
5	14.4	6.76	3.29	2.87	123	66.08	+1000	~70 ml/min
10	14.9	6.69	3.27	2.1	121	66.25	+1000	~60 ml/min
15	14.2	6.73	3.36	2.08	121	66.36	+1000	~45 ml/min
20	14.7	6.72	3.31	1.10	117	66.41	+1000	~40 ml/min
25	13.6	6.71	3.35	0.79	114	66.43	+1000	~40 ml/min
30	13.6	6.71	3.32	0.61	112	66.45	+1000	"
35	13.5	6.71	3.32	0.55	111	66.48	+1000	|
40	13.7	6.72	3.32	0.54	109	66.49	+1000	|
45	13.9	6.72	3.32	0.55	108	66.49	+1000	
50	13.8	6.73	3.32	0.56	109	66.50	+1000	|
55	13.8	6.73	3.32	0.57	109	66.5	+1000	|

QA/QC Samples Taken: Field Dup # 1

Comments:

Signature

Sampler (Print)	Sampler (signature):	
Richard C. Becken	Richard C Becken	Date: 9/22/10

LOW-FLOW SAMPLING FIELD FORM
O&M ENTERPRISES, Inc.
1440 Empire Blvd.

Monitoring Well I.D.: MW-3 Date: 9/22/10 Time Started: 1:50 Field Personnel: RCB

Weather Conditions: light rain Time Ended: 1550

Comments:

Initial Readings

Measured Well Bottom (TOR-ft) 75.11 Riser Pipe Diameter (in.) 2

Measured Water Level (TOR-ft) 64.10 One Well Volume (gal.) 1.87

Notes:

Well Condition

Well Riser Type		Stainless Steel		Carbon Steel	PVC
Casing Condition:		OK		Repair Required:	
Cap Condition:		OK		Repair Required:	
Paint Condition:		OK		Repair Required:	
Lock Condition:		OK		Repair Required:	
Inner Casing Condition:		OK		Repair Required:	
Surface Seal Condition:		OK		Repair Required:	
Other:		OK		Repair Required:	

Purge Information

Purging Method:	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
Place an X in one box	Polyethylene Bailer	Bladder Pump X	Other:	

Amount Purged: ~1.25 gal Flow Rate (mL per minute: ~80 ml/min

Water Level after Purging (TOR ft.) 65.3

Comments:

Sampling Information

Date: 9/22/10 Time Sampled: 1510 Field Personnel: R C Becken

Measured Water Level (TOR ft) 65.5

Sampling Method	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
place an X in box	Polyethylene Bailer	Bladder Pump X	Other:	

Time Elapsed min.	Temperature	pH	Conductivity	Dissolved Oxygen	Redox	Water Level	Turbidity	Flow Rate
5	17.4	7.08	2.79	0.61	-162	64.61	+1000	~80 ml/min
10	17.8	7.08	2.73	0.22	-176	64.8	+1000	~80 ml/min
15	17.7	7.08	2.69	0.17	-177	64.8	+1000	
20	17.1	7.08	2.59	0.17	-177	64.8	1000	
25	17.3	7.09	2.55	0.13	-177	64.8	400	
30	17.3	7.07	2.50	0.13	-175	65.1	260	
35	17.2	7.06	2.47	0.11	-175	65.1	170	
40	17.3	7.06	2.40	0.09	-175	65.2	130	
45	17.6	7.05	2.40	0.10	-174	65.2	120	
50	17.5	7.06	2.40	0.09	-173	65.2	110	
55	17.3	7.03	2.40	0.10	-170	65.3	100	

QA/QC Samples Taken:

Comments:

Signature

Sampler (Print)	Sampler (signature):	
Richard C. Becken	Richard C Becken	Date: 9/22/10

LOW-FLOW SAMPLING FIELD FORM
O&M ENTERPRISES, Inc.
1440 Empire Blvd.

Monitoring Well I.D.: MW-4 | Date: 9/23/10 | Time Started: 11:00 | Field Personnel: RCB

Weather Conditions: sunny warm | Time Ended:

Comments:

Initial Readings

Measured Well Bottom (TOR-ft) | Riser Pipe Diameter (in.) 2

Measured Water Level (TOR-ft) 35.2 | One Well Volume (gal.)

Notes:

Well Condition

Well Riser Type		Stainless Steel	Carbon Steel	PVC	
Casing Condition:	OK		Repair Required:		
Cap Condition:	OK		Repair Required:		
Paint Condition:	OK		Repair Required:		
Lock Condition:	OK		Repair Required: Lock missing		
Inner Casing Condition:	OK		Repair Required:		
Surface Seal Condition:	OK		Repair Required:		
Other:	OK		Repair Required:		

Purge Information

Purging Method:	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
Place an X in one box	Polyethylene Bailer	Bladder Pump X	Other:	

Amount Purged: ~4 gal | Flow Rate (mL per minute:

Water Level after Purging (TOR ft.) 35.36

Comments:

Sampling Information

Date: 9/23/10 | Time Sampled: 12:20 | Field Personnel: R C Becken

Measured Water Level (TOR ft) 35.36

Sampling Method	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
place an X in box	Polyethylene Bailer	Bladder Pump X	Other:	

Time Elapsed min.	Temperature	pH	Conductivity	Dissolved Oxygen	Redox	Water Level	Turbidity	Flow Rate
5	11.9	6.4	3.48	0.19	-121	35.31	+1000	~180 ml/min
10	11.5	6.39	3.48	0.85	-116	35.36	+1000	
15	11.6	6.36	3.49	0.0	-118	35.36	+1000	
20	11.3	6.37	3.50	0.0	-121	35.36	+1000	
25	11.0	6.39	3.52	0.0	-124	35.36	+1000	
30	11.1	6.44	3.55	0.0	-127	35.36	550	
35	11.1	6.46	3.58	0.0	-129	35.36	198	
40	11.1	6.47	3.57	0.0	-129	35.36	119	
45	11.1	6.48	3.57	0.0	-130	35.36	64	
50	11.2	6.49	3.57	0.0	-131	35.36	53	
55	11.3	6.49	3.57	0.0	-131	35.36	57	

QA/QC Samples Taken:

Comments:

Signature

Sampler (Print)	Sampler (signature):	
Richard C. Becken	Richard C Becken	Date: 9/23/10

LOW-FLOW SAMPLING FIELD FORM
O&M ENTERPRISES, Inc.
1440 Empire Blvd.

Monitoring Well I.D.: MW-8 Date: 9/22/10 Time Started: 0915 Field Personnel: RCB

Weather Conditions: light rain Time Ended: 1115

Comments:

Initial Readings

Measured Well Bottom (TOR-ft) 41.1 Riser Pipe Diameter (in.) 2

Measured Water Level (TOR-ft) ~~41.1~~ 31.06 One Well Volume (gal.) 1.7

Notes:

Well Condition

Well Riser Type		Stainless Steel	Carbon Steel	PVC X
Casing Condition:	OK		Repair Required:	
Cap Condition:	OK		Repair Required:	
Paint Condition:	OK		Repair Required:	
Lock Condition:	OK		Repair Required:	
Inner Casing Condition:	OK		Repair Required:	
Surface Seal Condition:	OK		Repair Required:	
Other:	OK		Repair Required:	

Purge Information

Purging Method:	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
Place an X in one box	Polyethylene Bailer	Bladder Pump X	Other:	

Amount Purged: ~1 gal Flow Rate (mL per minute: ~30 ml/min

Water Level after Purging (TOR ft.) 35.2

Comments:

Sampling Information

Date: 9/22/10 Time Sampled: 1040 Field Personnel: R C Becken

Measured Water Level (TOR ft) 38.17

Sampling Method	Stainless Steel Bailer	Peristaltic Pump	Grundfos Pump	Teflon Bailer
place an X in box	Polyethylene Bailer	Bladder Pump X	Other:	

Time Elapsed min.	Temperature	pH	Conductivity	Dissolved Oxygen	Redox	Water Level	Turbidity	Flow Rate
5	13.2	6.98	1.84	0.40	-194	31.66	281.0	~45 ml/min
10	13.7	6.98	1.78	0.08	-199	32.45	250.0	~30 ml/min
15	14.9	7.12	1.77	0.01	-202	32.9	75	
20	14.9	7.24	1.77	0.04	-208	33.4	60	
25	15.4	7.3	1.78	0.03	-212	33.85	45	
30	15.7	7.34	1.78	0.03	-215	34.3	38	
35	15.7	7.36	1.78	0.02	-216	34.8	36	
40	16.0	7.38	1.78	0.02	-218	35.2	34	

QA/QC Samples Taken:

Comments:

Signature

Sampler (Print)	Sampler (signature):	
Richard C. Becken	Richard C Becken	Date: 9/22/10

01/26/10 1440 EMPIRE BLVD
TH, AS TORO

DC FILE "1440 EMPIRE BLVD"

⊼ @ DC 9 PUNCH N. RIM 1158509.0402
SMH 785364.7850 340.197
BS DC 1 MON 1158286.3469
159 784275.1867 277.20
HI = 4.72 TARGET = 5.96'
TO BS = HD = 0.0111 VD = -0.0153
BS Az = 258°-26-56 HD = 1112.1226

FS	DESCRIPTION		
DC 20	LOCATE MON 4-2-78		
	N-1158432.8163 (.82)		
	E-785196.7481 (.7156)		
	EL= 324.975 (325.2)		
21 -	℄ ROAD PROFILE & GROUND SHOTS ALONG ROW		
144	℄ SMH (NW COR #1407 EMPIRE)		
	E-5.6	8" PVC	
	W-5.6	8" PVC	
145	SMH (RIM) (AT #1411 EMPIRE)		
314.25	E-5.3	8" PVC	308.95
	W-5.35	"	308.90

(CONT'D)

1

MON 4-2-78 = DC 2

01/26/10 | 1440 EMPIRE BLVD
TH. AS | TOPO

DC FILE "1440 EMPIRE BLVD"

FS	DESCRIPTION
DC 146	SHOT ON MH BARREL
147	℄ SMH (NE COR # 1419 EMPIRE)
(148)	REBAR SET ON TOP OF EAST END OF BERM (SOUTHWEST OF JUNKPILES)

N- 1159010.9908
E- 784991.7962
EL= 329.956

⊼@ DC (148) REBAR
BS DC (9) CROSS ON SMH (AT # 1421 NE COR)
HI= 4.78' Ref 31°56'53"
To BS = HD = -0.0138 VD = -0.0275
BS AZ = 143°23'05" HD = 625.36

FS	DESCRIPTION
DC 149	℄ SMH See PG 8
150	TP2 (FIELD #) BOUNDARY
151	TP3 - BOUNDARY
152	GP1

(CONT'D)

→ NE CORNER BLDG # 1411 (BLUE AT WHITE EDGE)

01/26/10 1440 EMPIRE BLVD
TH, AS TOPO

DC FILE "1440EMPIREBLVD"

FS	DESCRIPTION		
DC 153	MW2 (GROUND)		
154	" TOP OF WELL CAP	(334.64)	
155	TP1 - (NO STAKE)		
156	TP4 FILL BOUNDARY		
157	GP7		
158	TP23		
159	TP22		
160	MW5 (GROUND) + 2.85 TOP OF CAP		
161	MW5 (GROUND) + 3.50 TOP OF CAP		331.56 CAP = 335.06 - 0.21 (334.85 PVC)
162	MW3 (GROUND) -	~~329.62~~	
163	" TOP OF WELL CAP	329.62	- 0.19 PVC = (329.43)
~~164~~	~~MW5 (GROUND) 2" DIA PVC~~	~~326.46~~	
~~165~~	~~" TOP OF PVC~~	~~328.20~~	
166	TP6 FILL BOUNDARY		
167	GP2		
168	TP5 FILL BOUNDARY		
169	2" DIA PVC (GROUND)		
170	TOP OF PVC		
171	GP6		
172	GP3		
173	MW1 (GROUND)		
174	" TOP OF WELL CAP MW1	329.58	- 0.21 = 329.37 PVC

01/26/10 1440 EMPIRE BLVD
TH, AS TOPO

PC FILE "1440EMPIRE BLVD"

FS	DESCRIPTION
175	TP7 FILL BOUNDARY
176	TP8
177	TP9
178	TP11 - NATIVE
179	TP10 - FILL BOUNDARY
180	2" DIA PVC (GROUND)
181	TOP OF PVC

01/27/10 1440 EMPIRE BLVD
TH, MC TOPO

DC FILE "1440 EMPIRE BLVD"

△ @ DC 148 REBAR BERM
BS DC 9 CROSS ON SMH
HI = 4.90
TO BS = HD = -0.01 / VD = -0.02

FS	DESCRIPTION
DC 182	GP4 (GROUND) WITH PULLED
183	GP5 (GROUND) WITH PULLED
* 184	MW (GROUND) TOP IS BROKEN 2" DIA PVC
* 185	GP9 (GROUND) PVC REMOVED
186	GP8 (GROUND)
187	GP10 (GROUND) WITH REMOVED

188 = THEORETICAL BACK SITE
ON BUILDING CORNER
(SEE REFERENCE & PG 2)

01/28/10 1440 EMPIRE BLVD
TH.MC

TOPO

DC FILE "1440 EMPIRE BLVD"

⊼ @ DC (148) RBR CROSS
BS DC (9) SMH
HI = 4.97
TO BS = HD = -0.01 / VD = -0.02
BS AZ = 143°-23-05 HD = 625.36

FS	DESCRIPTION
189	MW (GROUND)
190	TOP 2" DIA PVC.
191-210	GROUND SHOTS
211	H/T FOUND AT TB. SE END OF GULLY
214	H/T FOUND AT TB SW END OF GULLY
215	H/T FOUND AT TB EAST SIDE OF BAY
216	H/T FOUND AT TB EAST SIDE OF BAY "2012"
264	REBAR CP?
293	MAG HUB SET AT TOP OF BANK ALONG EMPIRE BLVD -

6

MONITORING WELL DIPS

TOP OF COVER TO TOP OF 2" PVC PIPE

		PVC
WELL #2	-0.15	334.49
#1	-0.21	328.37
#4	-0.16 HP	316.20
~~#5 (W)~~	~~-0.31~~	
#5 (S)	-0.21 HP	334.85
#3	-0.19	329.43

164? 161?

01/28/10 1440 EMPIRE BLVD
TH, TC TOPO

DC FILE "1440 EMPIRE BLVD"

⊼ @ PC (293) MAG HUB
B > PC (148) REBAR
HI = 5.26 TARGET = 4.75
TO BS = HD = 0.02 VD = -0.06
BS AZ = 279°34-10 HD = 663.09'

FS	DESCRIPTION
294	TP 21 (GROUND)
295	GP 13 (GROUND)
296	TP 20 (GROUND)
297	TP 18 (GROUND)
298	GP 12 (GROUND)
~~299~~ 300	MW 4 (GROUND)
299	TP 17 (GROUND)
301	TOP METAL MONITORING WELL CAP MW4 MW4
302	TP 16 (GROUND)
303	GP 11 (GROUND)
304	RGE 210 / WIRES E-W
322	RGE 208 / WIRES E-W
330	RGE ? / WIRES E-W
331	RGE ? / WIRES E-W
342	TP 14 (GROUND)
343	TP 13 (GROUND)
344	TP 12 (GROUND)
346	LAST SHOT

7

316.36 - 0.16 = 316.20 PVC

02/01/10 | 1440 EMPIRE BLVD
TH, AS | TOPO

DC FILE "1440EMPIREBLVD"

⊼ e DC (293) MAG HUB
BS DC (148) REBAR
HI = 5.65
TOBS = HD - 0.007 / VD = -0.0164

FS	DESCRIPTION
DC347 -	MULTI STEM 12" MAPLE
348 -	EDGE OF 6" TO 12" AVG DIA TREES
369	INV. N. END 18" DIA OPENING IN HEADWALL / 5 LONG E-W X 1.0 WIDE N-S
370	℄ HEADWALL (EAST END)
371	" " (WEST END)
380	INV. SOUTH END 18" DIA OPENING AT 5 X 1 HEADWALL
381	℄ E. END HEADWALL
382	℄ W. END HEADWALL

SANITARY MANHOLE DIPS (8)

MH #	FLOWS WEST
149	- 12.80 E. INV 8" PVC
	- (13.0± W. INV 8" PVC UNDER LADDER)
146/7	- 9.1± E INV 8" PVC
	- 9.1± W INV 8" PVC
145	- 5.30 E. INV 8" PVC
	- 5.35 W. INV 8" PVC
144	- 5.6± E. INV 8" PVC
	- 5.6± W INV 8" PVC

APPENDIX 4
Well Development, Slug Test Logs

Well Development Log

Subject Site: 1440 Empire Blvd., Site #C828135

Date:1/18-22/2010

Well #	Static Depth to Groundwater	Water Volume	Volume Evacuated	Turbidity	Comments
MW-1	72.3	6.2	10 gallons	Stayed turbid	Fine silts appeared to enter well effecting the turbidity
MW-2	66.5	7.5	5 gallons	Stayed turbid	Fine silts appeared to enter well effecting the turbidity
MW-3	63.3	9.2	10 gallons	Stayed turbid	Fine silts appeared to enter well effecting the turbidity
MW-4	34.3	9.7	10 gallons	Stayed turbid	Fine silts appeared to enter well effecting the turbidity
MW-5 D	31.1	8.4	5 gallons	Stayed turbid	Fine silts appeared to enter well effecting the turbidity
MW-5 S	Empty	0	0		

PREPARED BY: D. Gramza CLIENT:

CHECKED BY: PROJECT NO.:

DATE: REV: SHEET: 1 OF 1

SUBJECT: Calculation of (K) - Horizontal Hydraulic Conductivity

NATURE'S WAY ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.

WELL # MW11

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

$$K = \frac{(2.5)^2 \ln(350/20.32)}{2(350)(260)}$$

$$K = \frac{6.25 \ln(17.22)}{182000}$$

$$K \;\; \frac{6.25 \times 2.846}{182000}$$

$$K = 9.8 \times 10^{-5} \text{ cm/sec}$$

$$3.22 \times 10^{-6} \text{ ft/sec}$$

HEAD TEST

2.54 cm = 1"

r = Radius of Standpipe (cm)

L = Saturated Length of Sand pack (cm)

R = Radius of Borehole (cm)

T_0 = Time at 0.37 Head Ratio (sec)

SLUGTEST DATA SHEET

Project Name: 1440 Empire Blvd, T of Penfield NY

Well #: MW-1

Date: 5/13/10

Personnel: DMG/PM

Weather: sunny 45°F

Permission for Property Entry: ______

Decontaminate Equip. Time: ______

Surface Elevation: ______

Height of Protective Casing: ______

Well Depth Below PC: 82.0

Depth of Static Water Level From Top of PC: 70.5

Start of Bailing: ______

End of Bailing: ______

Gallons Recovered: ______

Flow Rate Gal./Min.: ______

Water Color: ______

Water Odor: ______

Water Turbidity: ______

Riser OD: ______

Borehole Diameter: 2"

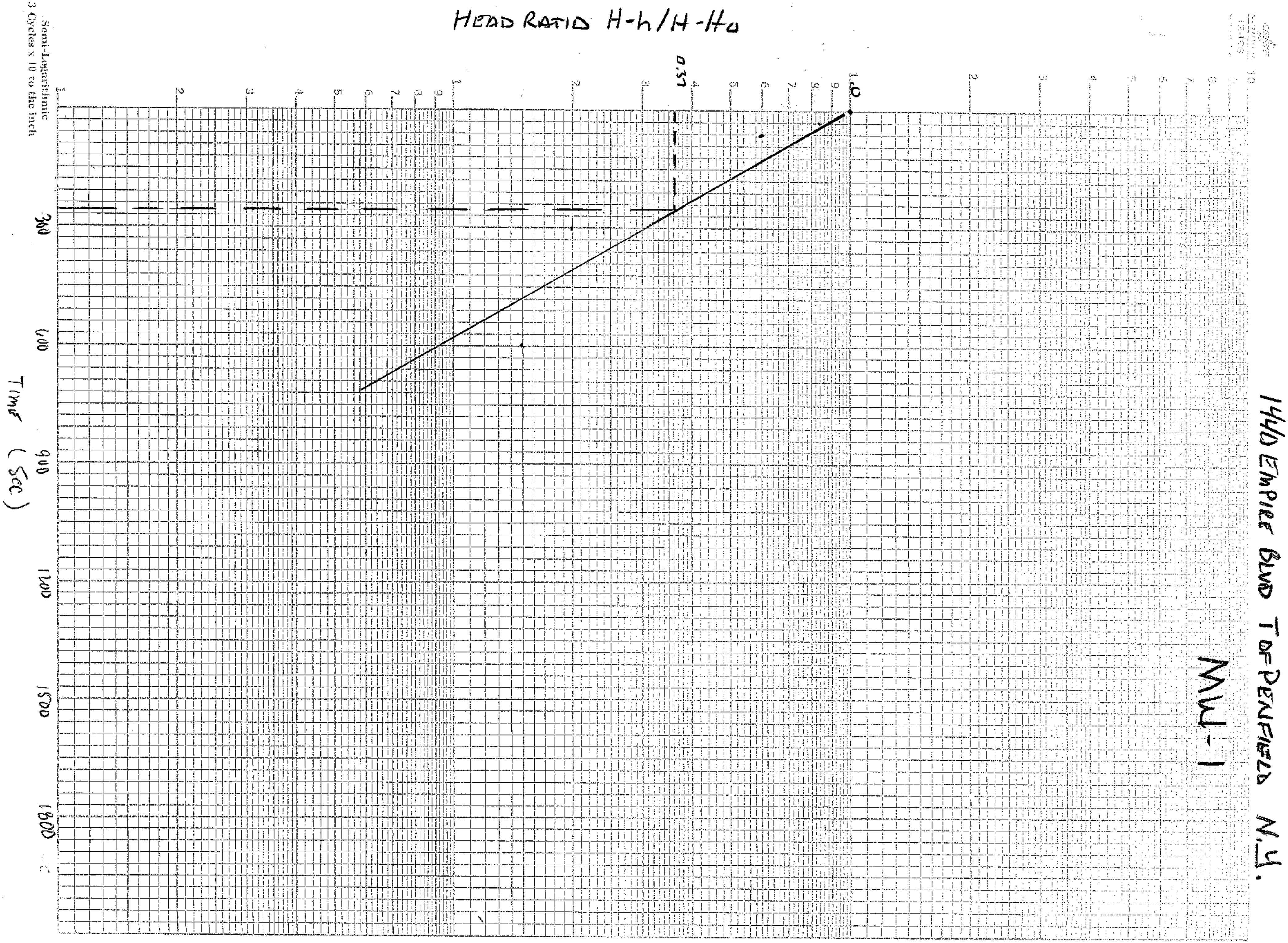
Pick up Equipment: ______

Lock Caps: ______

Turn Off Water Recorders: ______

Falling Head

CLOCK TIME	DEPTH	HEAD RATIO $\frac{H-h}{H-H_0}$	CLOCK TIME	DEPTH	HEAD RATIO $\frac{H-h}{H-H_0}$
0	~~[illegible]~~ 70.5	1			
:10	70.2	.1			
:20	70.22	.93			
:30	70.25	.83			
:40	70.28	.73			
:50	70.3	.66			
1:00	70.32	.60			
1:30	70.37	.43			
2:00	70.4	.33			
2:30	70.41	.30			
3:00	70.42	.27			
4:00	70.43	.23			
5:00	70.44	.20			
6:00	70.445				
7:00	70.445				
8:00	70.45	.16			
9:00	~~[illegible]~~				
10:00	70.455				
11:00	~~[illegible]~~				
12:00	70.465	.12			
13:00					
14:00					
15:00					
20:00					
30:00					


HEAD RATIO H-h/H-Ho
0.37
1.0
300
600
900
1200
1500
1800
TIME (SEC)
1440 EMPIRE BLVD T OF PENFIELD N.Y.
MW-1
Semi-Logarithmic
3 Cycles x 10 to the inch

PREPARED BY: D. Gramza CLIENT: ______
CHECKED BY: ______ PROJECT NO.: ______
DATE: __ , __ , __ REV: ______ SHEET: 1 OF 1
SUBJECT: Calculation of (K) - Horizontal Hydraulic Conductivity

NATURE'S WAY ENVIRONMENTAL CONSULTANTS & CONTRACTORS, INC.

WELL # MW 5 DEEP

$$K = \frac{r^2 \ln(L/R)}{2 L T_0}$$

$$K = \frac{(2.5)^2 \ln(348/20.32)}{2 (348)(6500)}$$

$$K = \frac{6.25 \ln(17.13)}{2\ 262\ 002}$$

$$K = \frac{6.25 (2.846)}{2\ 262\ 002}$$

$K = 7.8 \times 10^{-6}$ cm/sec

2.56×10^{-7} Ft/sec

HEAD TEST

2.54 cm = 1"

r = Radius of Standpipe (cm)

L = Saturated Length of Sand pack (cm)

R = Radius of Borehole (cm)

T_0 = Time at 0.37 Head Ratio (sec)

SLUGTEST DATA SHEET

Project Name 1440 Empire Blvd T of Penfield NY

Well # MW-5D

Date 5/13/10

Personnel DMG / PM

Weather Sunny 45° F

Permission for Property Entry

Decontaminate Equip. Time

Surface Elevation

Height of Protective Casing

Well Depth Below PC 41.5'

Depth of Static Water Level From Top of PC 30.08

Start of Bailing

End of Bailing

Gallons Recovered

Flow Rate Gal./Min.

Water Color

Water Odor

Water Turbidity

Riser OD

Borehole Diameter 2"

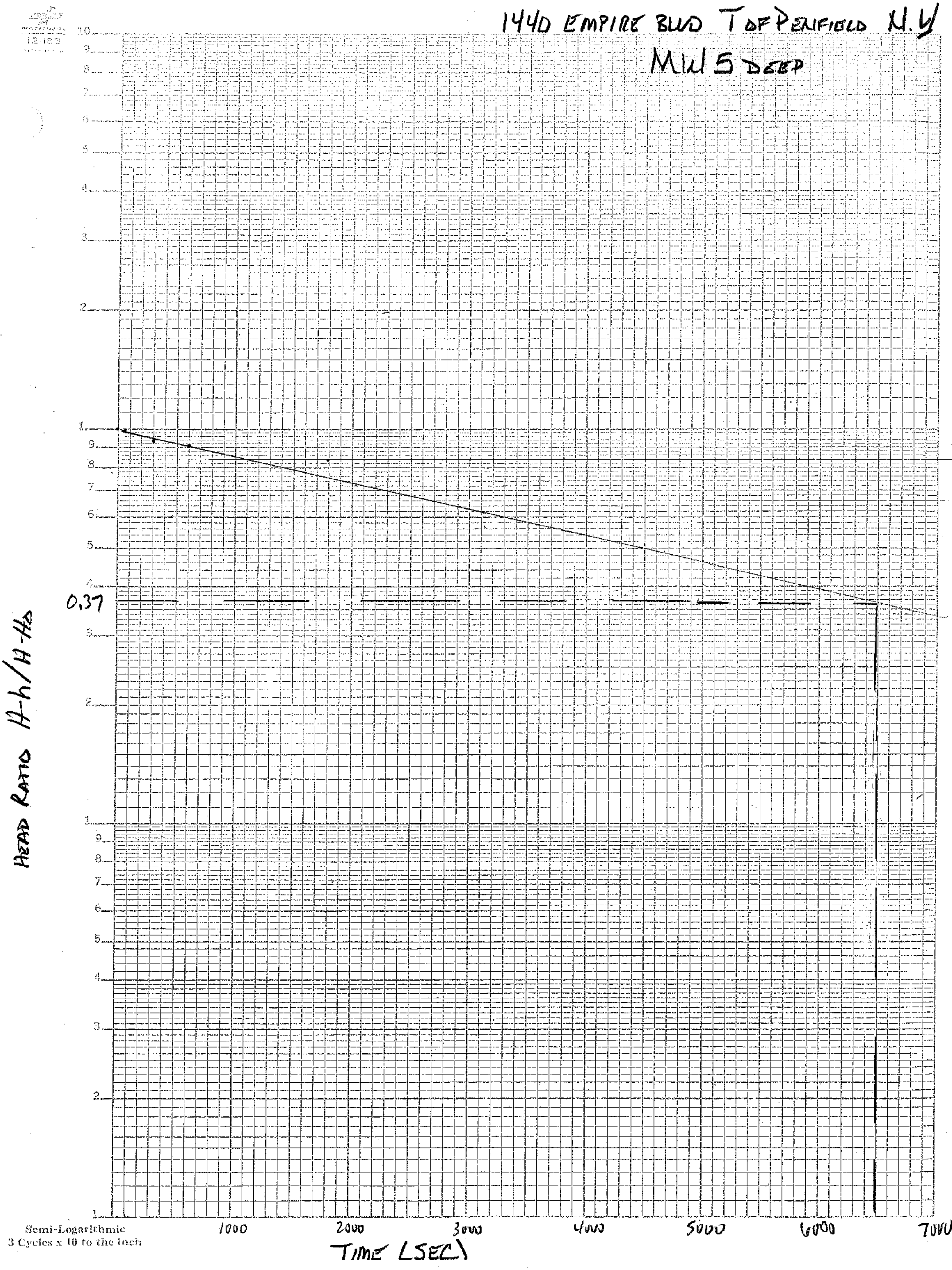
Pick up Equipment

Lock Caps

Turn Off Water Recorders

Falling Head

CLOCK TIME	DEPTH	HEAD RATIO $\frac{H-h}{H-H_0}$	CLOCK TIME	DEPTH	HEAD RATIO $\frac{H-h}{H-H_0}$
0	28.2 ~~30.08~~	~~1.00~~			
:10	28.2	1.0			
:20	28.22	.98			
:30	"	.99			
:40	28.23	.98			
:50	28.24	.97			
:60	"	.97			
1:30	28.25	.96			
2:00	28.26	.95			
2:30	28.26	.95			
3:00	28.27	.95			
4:00	28.29	.95			
5:00	28.30	.94			
6:00	28.31	.94			
7:00	28.32	.94			
8:00	28.33	.93			
9:00	28.34	.93			
10:00	28.35	.92			
11:00	28.36	.92			
12:00	28.36	.91			
13:00	28.37	.90			
14:00	28.38	.89			
15:00	28.38	.89			
20:00	28.42	.87			
30:00	28.48	.85			


1440 EMPIRE BLVD T OF PENFIELD N.Y
MW 5 DEEP
HEAD RATIO H-h/H-Ho
0.37
1000
2000
3000
4000
5000
6000
7000
TIME (SEC)
Semi-Logarithmic
3 Cycles x 10 to the inch

APPENDIX 5

Fish and Wildlife Resources Impact Analysis

Report

Fish and Wildlife Impact Assessment

For

New York State Department of Environmental Conservation Site #C828135
1440 Empire Boulevard
Penfield, New York

Prepared for

Passero Associates, PC
100 Liberty Pole Way
Rochester, New York

By

Leader Professional Services, Inc
271 Marsh Road
Suite 2
Pittsford, New York

October 2010

719.00

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FIGURES

TABLES

APPENDIX A

1. Introduction

Leader Professional Services, Inc. ("Leader") completed this Fish and Wildlife Assessment ("assessment") for Passero Associates, PC ("Passero") for the property located at 1440 Empire Boulevard in Penfield. Leader teamed with Environmental Resources to complete this assessment for Passero. The scope of work for the Assessment was agreed to by contract in Leader's proposal dated June 14, 2010, and followed the general format and content described in New York State Department of Environmental Conservation's DER-10, "Technical Guidance for Site Investigation and Remediation," dated May 3, 2010 and the New York State Department of Environmental Conservation's Fish and Wildlife Analysis for Inactive Hazardous Waste Sites, October 1994. All soil and water chemical sample data was provided to Leader by Passero and was used for the completion of the Brownfield Cleanup Program, Remedial Investigation Report for the site.

2. Site Description

The site is located on the west side of Empire Boulevard in the Town of Penfield approximately 0.5 miles south of the boulevard's intersection with Plank Road in an area designated by the Town as the LaSalle Landing District, see Figure 1. The property is identified in the Town of Penfield's 2010 Draft Comprehensive Plan as being designated for mixed use purposes. Along Empire Boulevard, the properties currently developed are used for commercial, retail, and residential purposes. Within this general area, there is also land set aside for recreational purposes, and these properties border on Irondequoit Bay or on the tributaries and marshes which enter the bay. The recreational properties include Abraham Lincoln Park, which is located north of the site, and LaSalle Park, Ellison Park, and Tyron Park, which are located to the south and west of the site. Some of these parklands have near pristine, mature hardwood forest located on the steep slopes and headlands above the Irondequoit Bay. Wetlands are also common, located at the base and adjacent to, the highlands and emerging from the shallow water portions of the bay or Irondequoit Creek.

The Remedial Investigation Report, July 27, 2010, ("RI") identifies the site's history as once being used for sand and gravel mining and as an unpermitted construction and demolition debris disposal area. As a result of its past uses, the majority of the site's ground surface and sub-surface has been greatly modified, leaving the site with a bowl-shaped topography. The site's slope drops steeply from its eastern boundary to a much more gradual slope which runs across the center of the site. Steep slopes and small gullies are also found along the north and northwest site boundary. The southwest part of the site has a gentle northward slope. Passing southeast to northwest through the center of the site there is a shallow, narrow, intermittent, fully vegetated stream or storm water drainage, see Figure 2.

The entire study area is vegetated by advanced, successional field vegetation with some pronounced pockets of sapling to pole stand tree species. The general herbaceous layer of vegetation is exceptionally dense and profuse in its extent, and offers little habitat value. Wetland vegetation was found in some parts of the storm water drainage. The ground surface is also littered with potholes caused by the subsidence of the debris fill and possibly the random nature of the debris placement. The potholes provide a conduit for storm water to infiltrate the ground surface.

The lowest part of the site is located along a dirt path on the north side of the property and this receives storm water drainage from surrounding area, but especially Empire Boulevard and areas east of the roadway. This storm water drainage system from Empire Boulevard carries the only surface water on the site. The storm water resides briefly on the ground surface, but eventually permeates the ground surface and into the more porous debris fill beneath. Consequently, there is no runoff from the site which enters Irondequoit Bay.

The water table beneath the site was found at a depth ranging from 30.37-feet to 72.25-feet below the ground surface. Passero reports the direction of the groundwater flow to be west toward Irondequoit Bay and range in elevation from +316.20-feet to +334.85-feet above datum. The RI reports an observation of a perched groundwater layer in a test pit excavation (Passero Phase II Report, December 2002) at a depth of approximately 10-feet, but this layer could not be confirm after a monitoring well was installed for purposes of sampling the perched groundwater layer.

3. Description of Fish and Wildlife Resources

A comprehensive survey and inventory of the study area's resources was conducted on September 16, 2010, by wetlands ecologist Gene Pellett and wildlife biologist John Hauber.

3.1 Habitats

The principle habitat of the study area is an old, successional field. The vegetative growth is 5 to 8 feet tall and very thick, and is representative of pioneer species typical of disturbed sites. Dominant plant species include Canada goldenrod (*Solidago canadensis*) and common mugwort (*Artemisia vulgaris*). Incidental subdominant species include black raspberry (*Rubus occidentalis*), lance-leaved golden rod (*Euthamia graminifolia*), common reed (*Phragmites australis*), Japanese knotweed (*Polygonum cuspidatum*), and purple loosestrife (*Lythrum salicaria.*) Small pockets of sapling to pole stand woods are occasionally found on the site: these consist of eastern cottonwood (*Populus deltoides*) and black locust (*Robinia pseudoacacia).* Figure 2 shows the relationship of the different habitats on the site.

Small steep gullies are found along the north and northwest boundary of the site that are vegetated by more advanced cottonwoods, black locust, and green ash (*Fraxinus pennsylvanica*). An understory found here consists of black raspberry, white avens (*Geum canadense*), staghorn sumac (*Rhus typhina*), Japanese knotweed, and summer grape (*Vitis aestivalis.*) Along the eastern boundary is a narrow, very steep, rocky, forested slope. Common vegetation here includes oak (*Quercus sps.*), maple (*Acer sps.*) and ash species. A small stand of mature eastern cottonwood forms a narrow hedgerow near a portion of the southwest boundary.

The last significant habitat on the site is the narrow seasonal stream or storm water drainage that flows through the center of the site from the southeast to the northwest. This is about six feet wide, very shallow (one inch), and has a minor grade. Common vegetation in the drainage includes narrow-leaf cattail (*Typha angustifolia*), common reed, purple loosestrife, watercress (*Nasturtium officinale*), bugle weed (*Lycopus sps.*), and willow herb (*Epilobium sps.*) The thick successional field vegetation is immediate to the edges of this drainage.

3.2 Wildlife Communities

Wildlife use of the site is expected to be varied but minor. A site like this is not considered to be significant for many species. Song birds (passerines) would find the most uses of the site. Nesting, loafing, and limited feeding by these species are provided by the area habitats, principally the aerial qualities of the habitats. Ground feeding species are discouraged due to the lack of surface forbs and the thickness of the vegetation. The latter also would prevent significant use by larger species such as waterfowl (nesting or feeding), wild turkey, ring-necked pheasant, or raptors. Some perch sites are present but species sought by raptors would be generally absent. Small mammals (skunk, woodchuck, raccoon, opossum, rabbits, squirrels, weasels etc.) may prowl the edges (interface of other habitats) of the site, however, the dense vegetation, lack of forbs, and lack of prey species would discourage their use.

Overall, the use of the site by area wildlife would be very incidental and not preferred. Aerial nesting and feeding by song birds would be the most prevalent use of the area. More beneficial and preferred habitats are common in the surrounding areas.

3.3 Endanger and Protected Species

Habitat on the site is not conducive to the use by endangered or protected plants or wildlife species. Various tree species are found on and off-site; however, there is no significant presence of forest on the site. Pristine, mature, hardwood forests are found adjacent to the site and along much of the steep slopes around Irondequoit Bay. Grassland or grassy field species are found incidentally on site, but no grasslands are present. The old field vegetation shades out any conditions for grasslands. No grassland acreage was found in the nearby environs of the surrounding area. Small pockets of young woodland are found in the small gullied areas along the north and northwest boundaries of the site. These are not considered significant for this category. Public parklands are found off-site approximately 0.5-miles to the north and on the south and west sides of the bay. Shrubby areas were found only occasionally as small pockets of young black locust, staghorn sumac, and briars. The site area does not support any significant shrub areas, however, it would not be unusual to find pockets of such habitats in the off-site areas.

The occurrence or other than incidental use by any endangered, threatened, or special concern wildlife species is not expected. Habitat---food, water, shelter--- are sorely lacking. Adjacent off-site areas, especially the mature forested slopes of Irondequoit Bay and the bay itself are appropriate habitats for such wildlife species. Bald eagle nesting has been confirmed within 1,000 feet of the site, and Irondequoit Bay is an appropriate feeding area for this specie. Numerous waterfowl species use Irondequoit Bay year round and the bay is a significant wintering area for waterfowl, as well. By happenstance of location, the site is in the Significant Coastal Wildlife Site associated with Irondequoit Bay

3.4 *Observations of Stress*

No evidence of stress was observed on the site which could be attributed to the soil characteristics. The growth of herbaceous plants was thick and dense.

4. Description of Fish and Wildlife Resource Value

4.1 *Value of Habitat*

The habitat as described previously is a successional field dominated by plant species that are typical of disturbed soil site like former sand or gravel pit areas. With the exception of a small isolated area of wetland vegetation, the site's habitat has little value. The wetland, because of its limited size, its proximity to other wetland areas, and the lack of water flow through it, contributions little to the overall habitat value.

Immediately north of the site there are forested areas which provide a better habitat value to animal species when compared to the site. Due to the nature of the on-site plant species present, bird habitat is limited to those song birds which might use the thick brush for nesting, loafing and feeding. Larger bird species have limited habitat opportunities on-site because of the thick brush interferers with nesting and feeding. The same is true for the terrestrial animals; as a result, small mammals would likely be limited to the roam the edges of brush thickets. Overall, the use of the site by wildlife would be incidental and not preferred, because there are better habitat opportunities in the adjacent areas.

4.2 *Value of Resources to Humans*

The value of the resources on the site to humans is similar to that of wildlife. Not only because there is parkland nearby with open water, wetlands and hardwood forest, but also for the nature of the ground surface of the site, which is pocketed with depressions and voids created by the subsidence of the debris fill.

5. Identification of Applicable Fish and Wildlife Regulatory Criteria

Applicable or relevant and appropriate requirements ("ARAR") for fish and wildlife can be found in the following Federal and state references:

- Federal Clean Water Act.
- Title 6 New York State Codes Rules and Regulations ("6 NYCRR"), Part 375 "Environmental Remediation Program."
- New York State Department of Environmental Conservation Policy - CP/Soil Cleanup Policy
- Division of Environmental Remediation (DER-10) "Technical Guidance for Site Investigation and Remediation."

- Brownfield Cleanup Program, "Development of Soil Cleanup Objectives, Technical Support Document."
- 6 NYCRR Part 608, "Use and Protection of Water."
- 6 NYCRR Part 663, "Freshwater Wetlands Permit Requirements."
- 6 NYCRR Part 664, "Freshwater Wetland Maps and Classification."
- 6 NYCRR Part 701, "Classification of Surface Waters and Ground waters."
- 6 NYCRR Part 703, "Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations."
- Division of Water Technical and Operational Guidance Series ("TOGS") No. 1.1.1 – "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations."

In general, the only ARARs are those of the Clean Water Act ("CWA"), the New York laws, and NYSDEC's policies and guidance documents addressing wetlands and water and soil quality for the protection of fish and wildlife.

6. Pathway Analysis

A pathway analysis evaluates three factors: the resources which can be impacted, what and where potentially contaminated media (soil, water, etc.) are located, and the routes of possible exposure for fish and wildlife (inhalation, consumption, and direct contact). This is a qualitative exercise, since direct measurement of contaminant concentrations in fish and wildlife have not been done.

6.1 Resources

Wildlife resources on the site are limited because of the limited habitat which is dominated by poor soil quality and a thick growth of pioneer plant species familiar to disturbed sites. The thickness and type of the plant growth excludes many larger bird species such as waterfowl, turkey and pheasant. The lack of these prey species also limits the site to small mammals (skunk, woodchuck, raccoon, opossum, rabbit, squirrel and weasel, etc.), which are restricted to the edges of the dense vegetation. Although wetland vegetation was observed, this resource has little value due to its location, lack of water, and the lack of wildlife associated with it.

6.2 Potentially Contaminated Media

As a part of the RI, samples of surface water, soil, and groundwater were collected and analyzed, and the site's areas of contamination have been identified. Figures 6 through 15 found in the RI report, summarize the results and delineate the limits of the soil contamination as defined by 6 NYCRR Part 375 – 6.8(a) for Restricted Use – Restricted Residential and Unrestricted Use Soil Cleanup Objectives. Along with the characterization of the site soils, the groundwater and surface water were characterized in terms of the direction of flow, the flow's gradient, and quality using TOGS 1.1.1 "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations."

The site's soils are a combination of naturally deposited fine sand and silt, and fill consisting of sand, silt, and construction and demolition debris. Contaminated soil and fill material was found on and below the ground surface consisting of organic compounds, PCBs, pesticides, and inorganic contaminants.

Groundwater is present beneath the site as a perched groundwater zone and a deeper zone. The perch groundwater was found in one test pit excavation at approximately 10-feet below the ground surface, but absent in a monitoring well installed for the intended purpose of monitoring the groundwater quality. As a result, the perched groundwater may be seasonal phenomena and is not considered for this assessment.

The deeper groundwater zones can be found at depths ranging from approximately 30.37-feet to 72.25-feet below the ground surface. The direction of groundwater flow is towards Irondequoit Bay and flows at a rate of approximately 0.001 feet per day. Groundwater samples collected from the site only identified 4,4'-DDT and Chlorobenzene as contaminants of concern to fish and wildlife because of the concentrations found. 4,4'-DDT is a concern to both fish and wildlife, but the concentrations detected on site were below the laboratory's detection limit for the analysis, but this value is still greater than calculated guidance value for fish and wildlife protection. Chlorobenzene was found at a concentration of 5.06 micrograms per liter or parts per billion ("ppb"), which exceeded the guidance value for fish propagation of 5 ppb. Metal concentrations were also elevated when compared to TOGS groundwater standards and guidance levels, but these concentrations appear to be a natural occurrence, since elevated metals were found in both upgradient and downgradient monitoring wells. The groundwater may initially be suspected as being a concern because it is most likely discharging into Irondequoit Bay, but the concentration at the assumed point of discharge is probably much lower than what was found on site due to natural attenuation or dilution with the many millions of gallons of groundwater coming from the surrounding area. The low contaminant concentrations found in the groundwater are inconsequential as a fish and wildlife exposure pathway.

Surface water found on the site appears to be the result of storm water runoff from the site, the nearby road surface, and the surrounding properties. The ephemeral nature of the runoff it is not considered to be a media from which wildlife would be exposed to contaminants. Samples collected from the runoff were found to contain no contaminants in excess of standards that are protective of wildlife.

6.3 Routes of Exposure

Routes of exposure for fish and wildlife are somewhat restricted to those plants and animals that either live on-site, those animals that feed on the site's plants and animals, or those animals which might use the site as a transportation corridor. Fish have no exposure since the storm water runoff is not a habitat for fish nor does it leave the site to affect Irondequoit Bay.

Because plants and wildlife are always in contact with the soil, animal ingestion of soil (directly or through consuming plants or animals), or exposure to vapors originating from the soil, the contaminants of concern will be found in the soil in a zone between the surface and a depth of four feet. Larger plants and trees could also be exposed to deeper soils and some animals could potentially burrow further than four feet, but the deeper sampling intervals (four to eight feet) for example, are less accessible to the majority of species found on the site. Based on this route of exposure scenario, the data was sorted to include only surface soil samples and samples collected between zero and four feet, see Tables 1, 2, 3, 4, and 5.

7. Impact Assessment

The impact assessment evaluates the completed routes of exposure and evaluates the contaminant concentrations present in each completed pathway by comparing the contaminant concentrations to ARAR. ARARs found for the completed pathways include the following:

- Title 6 New York State Codes Rules and Regulations, Part 375 "Environmental Remediation Program."
- New York State Department of Environmental Conservation Policy - CP/Soil Cleanup Policy
- Division of Environmental Remediation (DER-10) "Technical Guidance for Site Investigation and Remediation."
- Brownfield Cleanup Program, "Development of Soil Cleanup Objectives, Technical Support Document."

Exceedences of the ARAR's would indicate that there is a potential for the plants and wildlife to experience a negative toxicological impact.

7.1 Contaminants of Concern

Tables 1, 2, 3, 4 and 5 present the results of the surface soil (zero to four feet) data for the following parameters: metals, volatile organic compounds, semivolatile organic compounds, pesticides, and PCBs. Only those compounds found above their respective detection levels are shown and compared to ARARs. Chemical and inorganic compounds exceeding ARAR are shown in bold-face print.

7.2 Samples Exceeding ARAR

Table 6 presents the sampling locations that exceed ARAR for at least one of the compounds measured. Of the parameter groups analyzed and found, metals were more frequently found at concentration which exceeded ARAR than the others, followed by pesticides. In general, the sample locations are within the Areas of Concern identified in the Investigation Report, but there are some outlier locations which include: test pit sample TP-3, test pit sample TP-9, surficial sample #3, surficial sample #4, geoprobe sample location GP-14 and geoprobe location GP-15.

8. Impact Analysis

To further evaluate the impact to fish and wildlife, Appendix 3C the "Fish and Wildlife Resources Impact Analysis Decision Key" was completed and this is presented in Appendix A. After completing Appendix 3C, for the existing site conditions, it can be concluded that although there is surface contamination, there is no potential for migration based on the ground surface topography and the ground surface being covered with vegetation. There is also a lack of fish and wildlife resources that can be impacted, because the site offers no valued habitat. The site's storm water drainage does have wetland vegetation growing, but its value is low because of its size, the absence of runoff from the site and through the wetland, and the availability of off-site wetlands. There are also substantial habitat and natural resources north, south, and west of the site where there are woodlands, wetlands and Irondequoit Bay. Separating the site from these resources to the west and south are developed properties and road surfaces.

9. Remediation Assessment

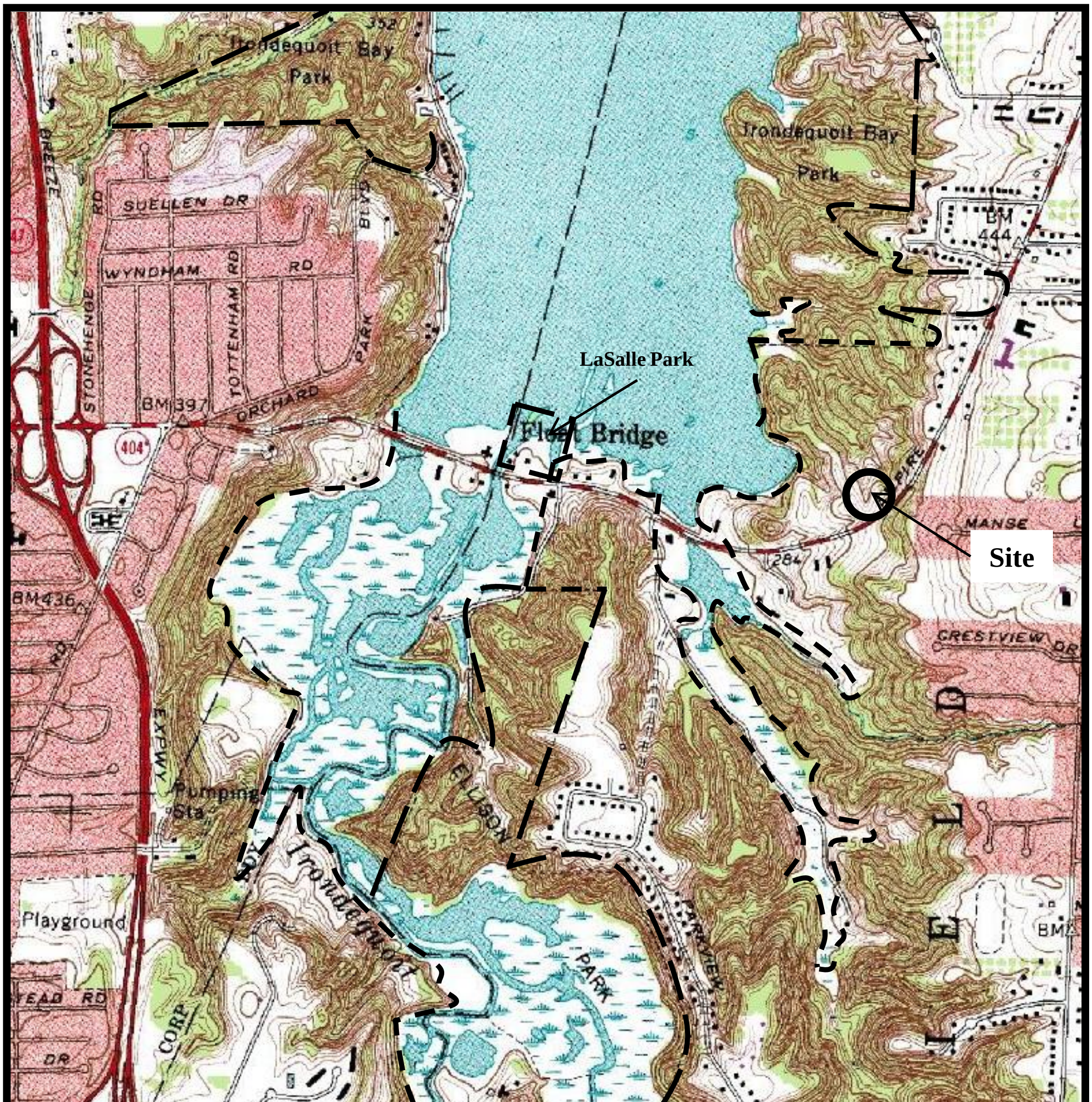
The future use of the site will be for a mix of commercial business and residential housing, which is consistent with the Town's Comprehensive Plan for the area. To remove the human risks of direct contact, inhalation and ingestion of the contaminated soil, a plan which will cover the contaminated soil is being proposed. This plan of remediation will also effectively address the risks to fish and wildlife.

During development of the site, there will be short term risks associated with the increased exposure of the soil that comes with land clearing and grading. However, many of these risks will be mitigated by implementing a storm water pollution plan to control sediment erosion and a site specific health and safety plan which will monitor vapor emissions and airborne dust levels.

Estimated Wetland Area

Approx. Park Boundary

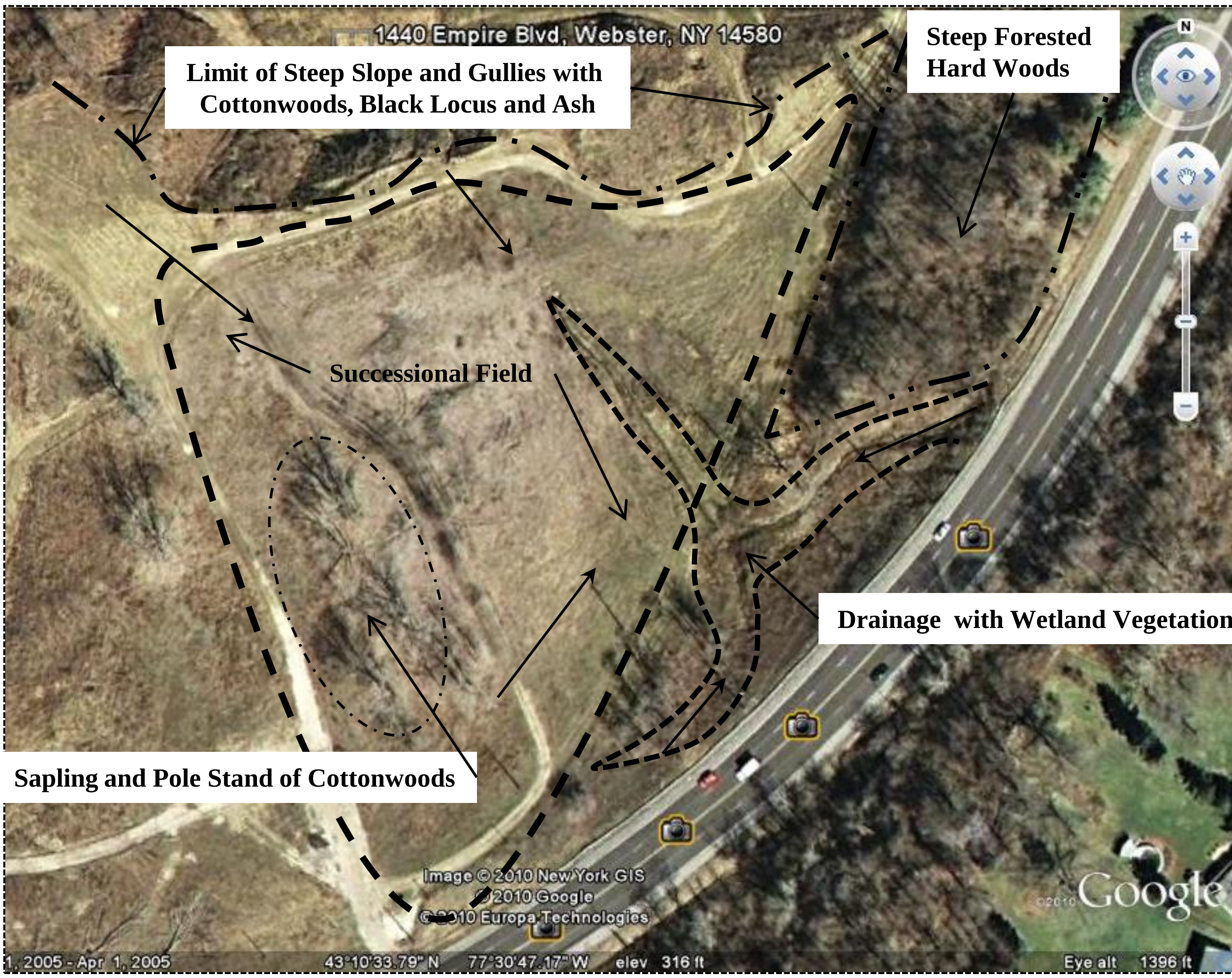
NORTH



Title: Site and Significant Land Use Map 1440 Empire Boulevard Penfield, NY	LEADER Leader Professional Services, Inc 271 Marsh Road-Suite 2 Pittsford, New York 14534 (585) 248-2413 FAX (585) 248-2834	Project 719.001	Drawn PVS	Figure 1
Prepared For: Passero Associates, PC Rochester, New York		Date 10/2010	Checked MPR	
		Scale NTS	File Name Site Map	

Direction of drainage

N O R T H



Title:	Site Photograph with Significant Habitats 1440 Empire Boulevard Penfield, NY
Prepared For:	Passero Associates, PC Rochester, NY

LEADER

Leader Professional Services, Inc
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Pittsford, New York 14534
(585) 248-2413
FAX (585) 248-2834

Project	719.001	Drawn	PVS
Date	10/2010	Checked	MPR
Scale	NTS	File Name	Site Map

Figure

2

TABLE 1
Summary of Soil Results for Metals Compared to Values Protective of Ecological Resources
1440 Empire Boulevard, Penfield, NY

ID	**Protection of Ecological Resources from Part 375**	**Footnote**	**Protection of Ecological Resources from CP/Soil Cleanup Policy**	**Surficial 1**	**Surficial 2**	**Surficial 3**	**Surficial 4**	**Surficial 5**	**Surficial 6**	**Surficial 7**	**Surficial 8**	**Surficial 9**	**Surifical 10**	**GP-2**	**GP-7**	**GP-8**
Date				**12/21/2009**	**12/18/2009**	**12/16/2009**	**1/5/2010**	**1/5/2010**	**12/16/2009**	**12/21/2009**	**12/21/2009**	**12/14/2009**	**1/4/2010**	12/18/2009	12/18/2009	12/21/2009
Units				**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**
Aluminum	NS		50	**7860**	**9510**	**4220**	**4610**	**7860**	**7650**	**6820**	**6650**	**8920**	**7560**	**14600**	**6680**	**5970**
Arsenic	13	f	NL	5.36	5.53	3.27	1.49	5.18	6.92	5.5	7.37	5.86	2.34	6.72	8.59	4.42
Barium	433		NL	42.1	50.8	25.6	29.1	54.5	54.5	43.9	46.7	46	43.7	502	55.4	51.9
Beryllium	10		NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND
Cadmium	4		NL	0.81	ND	ND	0.632	1.5	0.874	ND	ND	0.824	0.504	**72.4**	**4.69**	ND
Calcium	NS		4	**35700**	**22400**	**44800**	**60400**	**10700**	**28300**	**19700**	**17800**	**17600**	**17500**	**26000**	**25300**	**32300**
Hex. Chromium	1	e	NL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	41		NL	15	16.4	8.85	11	63.3	22.1	13.3	15.5	12.9	11.4	**66.2**	**302**	10.7
Cobalt	NS		20	5.3	6.9	5.51	3.71	6.92	6.19	5.15	5.05	6.1	5.92	17.7	8.11	4.17
Copper	50		NL	**90.9**	16.5	8.88	14	48.2	26.7	23.9	37.5	24.2	17.1	**8870**	**87.7**	13.3
Iron	NS		NS	13600	16000	11000	10800	18700	14000	12600	15400	14500	13700	45700	50200	11600
Lead	63	f	NL	22.2	22	2.25	42.1	**137**	**118**	**67.5**	**288**	40.8	34.9	**2140**	**84.7**	62.4
Magnesium	NS		NL	17500	7790	11000	9770	4890	12100	7340	7180	7650	8070	6830	7550	9840
Manganese	1600	f	500	376	451	409	290	322	425	324	307	361	387	**713**	**649**	364
Mercury	0.18	f	NL	0.056	0.0413	ND	0.0237	**0.576**	0.0609	0.0871	0.112	0.0445	**0.24**	0.0316	0.0702	0.0597
Nickel	30		NL	11.3	12.8	7.56	8.65	**38.2**	15.5	11.2	11.3	10.7	12	**208**	**130**	7.73
Potassium	NS		NL	1850	1440	803	1050	1070	1600	1290	978	1270	1390	1390	1030	1210
Selenium	3.9	f	NL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	2		NL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12.5**	ND	ND
Sodium	NS		NL	167	ND	232	138	92.9	141	133	ND	115	105	798	149	176
Vanadium	NS		2	**20.5**	**23.8**	**18.4**	**16.9**	**28.4**	**20.9**	**18.1**	**20.3**	**21.3**	**18.5**	**29**	**22.1**	**17.5**
Zinc	109	f	NL	66.1	51.3	21.7	46.6	94	**124**	78.6	**111**	103	62.3	**5060**	**118**	53.3

Footnotes

a = Value capped at maximum of 100 ppm.
e = Calculated cleanup value is lower than Contract Required Quantitation Limit (CRQL). Cleanup value is CRQL.
f = Calculated cleanup value is lower than rural soil background level.
g = Concentration derived from data on mixed isomers.

Notes

ND= Not Detected
NS = No Stardard or Not Sampled
NL = Not Listed
NA = Not Analyzed

TABLE 1
Summary of Soil Results for Metals Compared to Values Protective of Ecological Resources
1440 Empire Boulevard, Penfield, NY

ID	Protection of Ecological Resources from Part 375	Footnote	Protection of Ecological Resources from CP/Soil Cleanup Policy	GP-12	GP-14	GP-15	TP-7
Date				12/21/2009	12/21/2009	12/21/2009	1/6/2010
Units				**PPM**	**PPM**	**PPM**	**PPM**
Aluminum	NS		50	**3180**	**8010**	**4550**	**15100**
Arsenic	13	f	NL	2.55	3.21	3.28	1.2
Barium	433		NL	14	21.6	18.5	51.7
Beryllium	10		NL	ND	ND	ND	NS
Cadmium	4		NL	ND	ND	ND	2.13
Calcium	NS		4	**30400**	**1750**	**42400**	**25700**
Hex. Chromium	1	e	NL	NA	NA	NA	NA
Chromium	41		NL	8.11	12.5	10.7	**62.2**
Cobalt	NS		20	3.5	4.29	4.23	5.9
Copper	50		NL	6.18	6.46	9.99	33.9
Iron	NS		NS	9190	12000	12200	34500
Lead	63	f	NL	1.36	2.96	2.29	46.7
Magnesium	NS		NL	8510	1570	10700	7570
Manganese	1600	f	500	230	184	330	**553**
Mercury	0.18	f	NL	ND	0.0152	ND	0.0364
Nickel	30		NL	4.9	7.8	7.12	20.8
Potassium	NS		NL	607	680	729	1130
Selenium	3.9	f	NL	ND	ND	ND	NS
Silver	2		NL	ND	ND	ND	NS
Sodium	NS		NL	171	ND	209	207
Vanadium	NS		2	**17.2**	**21.9**	**19.7**	**20.5**
Zinc	109	f	NL	11.3	15.7	17.2	**293**

Footnotes

a = Value capped at maximum of 100 ppm.
e = Calculated cleanup value is lower than Contract Required Quantitation Li
f = Calculated cleanup value is lower than rural soil background level.
g = Concentration derived from data on mixed isomers.

Notes
ND= Not Detected
NS = No Stardard or Not Sampled
NL = Not Listed
NA = Not Analyzed

TABLE 2
Summary of Soil Results for Volatile Organic Compounds Compared to Values Protective of Ecological Resoureces
1440 Empire Boulevard, Penfield, NY

ID	Protection of Ecological Resources from Part 375	Footnote	Protection of Ecological Resources from CP/Soil Cleanup Policy	GP-2	GP-8	GP-12	GP-14	GP-15	TP-7
Date				12/18/2009	12/21/2009	12/21/2009	12/21/2009	12/21/2009	1/6/2010
Units	**PPM**		**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**
cis 1,2-dichloroethene	NS		NL	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2		NL	ND	ND	ND	ND	ND	ND
Trichloroethene	2		NL	0.022	ND	ND	ND	ND	ND
Vinyl Chloride	NS		NL	ND	ND	ND	ND	ND	ND
Methylene Chloride	12		NL	ND	ND	ND	ND	ND	0.000177
Benzene	70		NL	ND	ND	ND	ND	ND	ND
Chlorobenzene	40		NL	ND	ND	ND	ND	ND	ND
Ethylbenzene	NS		NL	ND	ND	ND	ND	ND	0.00324
Toluene	36		NL	ND	ND	ND	ND	ND	0.000112
m,p Xylene (mixed)	0.26		NL	ND	ND	ND	ND	ND	0.00837
o-Xylene (mixed)	0.26		NL	ND	ND	ND	ND	ND	0.00662
1,4-dichlorobenzene	20		NL	ND	ND	ND	ND	ND	ND
n-Butylbenzene	NS		NL	ND	ND	ND	ND	ND	ND
Sec-Butylbenzene	NS		NL	ND	ND	ND	ND	ND	ND
n-Propylbenzene	NS		NL	ND	ND	ND	ND	ND	0.000367
Naphthalene	NL		NL	ND	0.021	ND	ND	ND	0.000539
1,2,4-Trimethylbenzene	NS		NL	ND	ND	ND	ND	ND	0.00309
1,3,5-Trimethylbenzene	NS		NL	ND	ND	ND	ND	ND	0.00127
Acetone	2.2		NL	0.0813	0.0209	0.0316	0.036	0.0303	ND
2-Butanone	100	a	NL	ND	ND	ND	ND	ND	ND
Carbon disulfide	NS		NS	ND	ND	ND	ND	ND	ND

Footnotes
a = Capped at maximum of 100 ppm

Notes
ND = Not Detected
NS = No Standard or Not Sampled
NL = Not Listed
NA = Not Analyzed

TABLE 3
Summary of Soil Results for Semivolatile Organic Compounds Compared to Values Protective of Ecological Resources
1440 Empire Boulevard, Penfield, NY

ID	Protection of Ecological Resources from Part 375	Footnote	Protection of Ecological Resources from CP/Soil Cleanup Policy	Surficial 4	Surficial 5	Surficial 6	Surficial 7	Surficial 8	Surficial 10	GP-2	GP-7
Date				**1/5/2010**	**1/5/2010**	**12/16/2009**	**12/21/2009**	**12/21/2009**	**1/4/2010**	12/18/2009	12/18/2009
Units				**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**
Acenaphthene	20		NL	ND	ND	ND	ND	0.5	ND	ND	ND
Anthracene	NS		NL	ND	ND	ND	ND	1.04	ND	ND	ND
Benzo(a) anthracene	NS		NL	0.378	9.06	0.802	0.478	2.61	0.281	ND	ND
Benzo (a)pyrene	2.6		NL	0.424	**15.4**	1.26	0.379	2.34	0.239	ND	ND
Benzo (b) fluoranthene	NS		NL	0.45	18.2	1.33	0.352	2.29	0.232	ND	ND
Benzo(ghi) perylene	NS		NL	0.376	14.2	1.14	0.225	1.4	ND	ND	ND
Benzo (k) fluoranthene	NS		NL	0.356	12.1	1.01	0.351	1.81	0.183	ND	ND
Bis (2-ethylhexyl) phthalate	NL		239	ND	ND	ND	ND	ND	ND	0.237	ND
Butylbenzylphthalate	NL		NS	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	NS		NL	0.425	12.6	1.05	0.475	2.58	0.262	ND	ND
Dibenzofuran	NS		NL	ND	ND	ND	ND	0.278	ND	ND	ND
Dibenz(a,h) anthracene	NS		NL	ND	5.09	ND	ND	0.471	ND	ND	ND
Fluoranthene	NS		NL	ND	8.37	0.954	0.981	6.33	0.548	ND	ND
Fluorene	30		NL	ND	ND	ND	ND	0.459	ND	ND	ND
Indeno (1,2,3-cd) pyrene	NS		NL	0.265	10.2	0.78	0.223	1.48	ND	ND	ND
2-Methylnapthalene	NL		NL	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	NS		NL	ND	ND	ND	ND	0.299	ND	ND	ND
Phenanthrene	NS		NL	0.2	ND	0.317	0.616	5.25	0.248	ND	ND
Pyrene	NS		NL	0.552	8.31	0.879	0.84	5.55	0.44	ND	0.174

Notes
ND = Not Detected
NS = No Standard or Not Sampled
NL = Not Listed
NA = Not Analyzed

TABLE 3
Summary of Soil Results for Semivolatile Organic Compounds Compared to Values Protective of Ecological Resources
1440 Empire Boulevard, Penfield, NY

ID	Protection of Ecological Resources from Part 375	Footnote	Protection of Ecological Resources from CP/Soil Cleanup Policy	TP-2A	TP-3A	TP-3B	TP-4A	TP-4B	TP-5A	TP-6B	TP-7
Date				11/21/2002	11/21/2002	12/20/2002	11/21/2002	12/20/2002	11/21/2002	12/20/2002	1/6/2010
Units				**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**
Acenaphthene	20		NL	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	NS		NL	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a) anthracene	NS		NL	0.367	19.6	1.9	33.7	111	18.8	ND	0.425
Benzo (a)pyrene	2.6		NL	0.352	**19.3**	**2.92**	**44.6**	**85.3**	**27.4**	**32.3**	0.584
Benzo (b) fluoranthene	NS		NL	ND	26.3	3.48	63.4	103	39.8	48.6	1.02
Benzo(ghi) perylene	NS		NL	ND	21.5	2.16	48.3	ND	28.5	29.5	0.786
Benzo (k) fluoranthene	NS		NL	ND	19.3	1.46	37.9	46.3	20.8	ND	0.466
Bis (2-ethylhexyl) phthalate	NL		239	ND	ND	ND	ND	ND	ND	ND	0.322
Butylbenzylphthalate	NL		NS	ND	ND	ND	ND	ND	ND	ND	0.322
Chrysene	NS		NL	0.409	18.6	2.3	37.5	111	28.4	29.5	0.677
Dibenzofuran	NS		NL	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h) anthracene	NS		NL	ND	6.74	5.15	ND	ND	8.94	ND	0.275
Fluoranthene	NS		NL	0.876	22.4	3.13	41.1	265	19.9	ND	0.416
Fluorene	30		NL	ND	ND	ND	ND	ND	ND	ND	ND
Indeno (1,2,3-cd) pyrene	NS		NL	ND	ND	2.25	ND	41.8	28.8	29.4	0.474
2-Methylnapthalene	NL		NL	ND	ND	ND	ND	ND	ND	ND	1.08
Naphthalene	NS		NL	0.932	ND	ND	ND	ND	ND	ND	0.802
Phenanthrene	NS		NL	0.852	11.1	1.42	23.5	125	6.62	ND	ND
Pyrene	NS		NL	0.765	21	3.49	46.8	239	21.9	21.9	0.417
Notes											
ND = Not Detected											
NS = No Standard or Not Sampled											
NL = Not Listed											
NA = Not Analyzed											

TABLE 3
Summary of Soil Results for Semivolatile Organic Compounds Compared to Values Protective of Ecological Resources
1440 Empire Boulevard, Penfield, NY

ID	**Protection of Ecological Resources from Part 375**	**Footnote**	**Protection of Ecological Resources from CP/Soil Cleanup Policy**	**TP-8B**	**TP-9B**	**TP-10B**
Date				12/20/2002	12/20/2002	12/20/2002
Units				**PPM**	**PPM**	**PPM**
Acenaphthene	20		NL	ND	ND	ND
Anthracene	NS		NL	ND	ND	2.21
Benzo(a) anthracene	NS		NL	1.48	1.13	6.73
Benzo (a)pyrene	2.6		NL	**2.66**	1.84	**6.67**
Benzo (b) fluoranthene	NS		NL	3.84	2.57	8
Benzo(ghi) perylene	NS		NL	2.41	1.97	3.96
Benzo (k) fluoranthene	NS		NL	1.37	0.896	3.1
Bis (2-ethylhexyl) phthalate	NL		239	ND	ND	ND
Butylbenzylphthalate	NL		NS	ND	ND	ND
Chrysene	NS		NL	2.17	1.48	6.94
Dibenzofuran	NS		NL	ND	ND	ND
Dibenz(a,h) anthracene	NS		NL	0.584	0.477	ND
Fluoranthene	NS		NL	1.17	1.45	1.41
Fluorene	30		NL	ND	ND	ND
Indeno (1,2,3-cd) pyrene	NS		NL	2.37	1.86	4.15
2-Methylnapthalene	NL		NL	ND	ND	ND
Naphthalene	NS		NL	ND	ND	ND
Phenanthrene	NS		NL	ND	0.723	7.1
Pyrene	NS		NL	1.46	1.52	14.1
Notes						
ND = Not Detected						
NS = No Standard or Not Sampled						
NL = Not Listed						
NA = Not Analyzed						

TABLE 4
Summary of Soil Results for Pesticides Compared to Values Protective of Ecological Resources
1440 Empire Boulevard, Penfield, NY

ID	Protection of Ecological Resources from Part 375	Footnote	Protection of Ecological Resources from CP/Soil Cleanup Policy	Surficial 1	Surficial 2	Surficial 4	Surficial 5	Surficial 6	Surficial 7	Surficial 8	Surficial 9	Surficial 10	GP-2	GP-7	GP-8	TP-7
Date				**12/21/2009**	**12/18/2009**	**1/5/2010**	**1/5/2010**	**12/16/2009**	**12/21/2009**	**12/21/2009**	**12/14/2009**	**1/4/2010**	12/18/2009	12/18/2009	12/21/2009	1/6/2010
Units				**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**
Aldrin				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0457
delta BHC	0.04	g	NL	ND	ND	ND	0.00344	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha Chlordane	1.3		NL	ND	ND	0.00619	0.0228	ND	0.0351	0.00824	0.00462	0.00302	ND	ND	ND	0.172
gamma Chlordane	NL		NS	0.0105	ND	0.0125	ND	ND	ND	0.00614	ND	0.00327	ND	ND	ND	0.862
4,4' DDD	0.0033	e	NL	**0.00395**	ND	**0.0116**	**0.0237**	**0.0169**	**0.00555**	ND	**0.00461**	0.0031	ND	**0.405**	ND	**0.367**
4,4' DDE	0.0033	e	NL	ND	ND	0.00228	**0.00774**	**0.0865**	ND	ND	ND	ND	**0.0164**	**0.151**	ND	**0.282**
4,4' DDT	0.0033	e	NL	**0.01**	**0.0044**	**0.0238**	**0.0794**	ND	**0.0116**	**0.0049**	**0.00673**	**0.00477**	**0.0669**	**1.11**	ND	**0.75**
Dieldrin	0.006		NL	ND	ND	**0.0152**	**0.0407**	**0.0243**	ND	ND	ND	0.00423	**0.0486**	**0.869**	ND	**0.574**
Endosulfan II	NS		NL	ND	ND	0.0102	<0.00375	ND	ND	ND	ND	0.00206	ND	ND	ND	0.0353
Endosulfan Sulfate	NS		NL	0.00552	ND	0.0299	0.11	ND	0.0813	0.0248	ND	ND	ND	ND	ND	ND
Endrin	0.014		NL	ND	ND	ND	ND	0.00753	**0.0185**	ND	ND	ND	**0.0349**	**0.12**	ND	ND
Endrin Aldehyde	NS		NL	ND	ND	0.00479	0.015	ND	0.00742	ND	ND	ND	0.0122	0.168	ND	0.155
Heptachlor Epoxide (as Heptachlor)	0.14		NS	ND	ND	0.00481	0.0215	0.0129	ND	ND	ND	ND	0.0251	**0.462**	ND	**0.421**
Methoxychlor	NL		1.2	0.00374	ND	ND	ND	ND	0.00484	ND	ND	0.00554	0.00349	0.388	0.0196	0.618

Footnotes

e= Cleanup value calculated at a value lower than contract required quantitation limits (CRQL). Cleanup value is CRQL.

g = Concentration derived from data on mixed isomers

Notes

ND = Not Detected

NS = No Standard or Not Sampled

NL = Not Listed

NA = Not Analyzed

TABLE 5
Summary Soil Results for PCB Results Compared to Values Protective of Ecological Resources
1440 Empire Boulevard, Penfield, NY

ID	**Protection of Ecological Resources from Part 375**	**Footnote**	**Protection of Ecological Resources from CP/Soil Cleanup Policy**	**Surficial 1**	**Surficial 2**	**Surficial 4**	**Surficial 5**	**Surficial 6**	**Surficial 9**	**GP-2**	**GP-7**	**TP-2A**	**TP-3A**	**TP-4A**
Date				**12/21/2009**	**12/18/2009**	**1/5/2010**	**1/5/2010**	**12/16/2009**	**12/14/2009**	12/18/2009	12/18/2009	11/21/2002	11/21/2002	11/21/2002
Units				**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**
PCB	1		NL	0.0476	0.0368	0.222	0.846	0.255	0.064	0.664	**18.1**	**28**	**3.45**	**2.15**
Notes														
ND = Not Detected														
NS = No Standard or Not Sampled														
NL = Not Listed														
NA = Not Analyzed														

TABLE 5
Summary Soil Results for PCB Results Compared to Values Protective of Ecological Resources
1440 Empire Boulevard, Penfield, NY

ID	Protection of Ecological Resources from Part 375	Footnote	Protection of Ecological Resources from CP/Soil Cleanup Policy	TP-4B	TP-5A	TP-6B	TP-7	TP-9B	TP-10B
Date				12/20/2002	11/21/2002	12/20/2002	1/6/2010	12/20/2002	12/20/2002
Units				**PPM**	**PPM**	**PPM**	**PPM**	**PPM**	**PPM**
PCB	1		NL	**7.87**	**83.9**	**5.89**	**13**	**1.07**	0.581

Notes
ND = Not Detected
NS = No Standard or Not Sampled
NL = Not Listed
NA = Not Analyzed

TABLE 6
Sample Locations Where Sample Results Exceed ARAR
1440 Empire Boulevard, Penfield, NY

Exceedences/Sample Locations	Surifical 1	Surficial 2	Surficial 3	Surficial 4	Surficial 5	Surficial 6	Surficial 7	Surficial 8	Surficial 9	Surficial 10	GP-2	GP-7	GP-8	GP-12	GP-14
Metals	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
SVOCs					√										
PCBs													√		
Pesticides	√	√		√	√	√	√	√	√	√	√	√			

TABLE 6
Sample Locations Where Sample Results Exceed ARAR
1440 Empire Boulevard, Penfield, NY

Exceedences/Sample Locations	GP-15	TP-2A	TP-3A	TP-3B	TP-4A	TP-4B	TP-5A	TP-6B	TP-7	TP-8B	TP-9B	TP-10B
Metals	√											
SVOCs			√	√	√		√	√	√	√		√
PCBs		√	√		√	√	√	√	√		√	√
Pesticides									√			

Appendix A

Appendix 3C Fish and Wildlife Resources Impact Analysis Decision Key	If YES Go to:	If NO Go to:
1. Is the site or area of concern a discharge or spill event?	13	2
2. Is the site or area of concern a point source of contamination to the groundwater which will be prevented from discharging to surface water? Soil contamination is not widespread, or if widespread, is confined under buildings and paved areas.	13	3
3. Is the site and all adjacent property a developed area with buildings, paved surfaces and little or no vegetation?	4	9
4. Does the site contain habitat of an endangered, threatened or special concern species?	Section 3.10.1	5
5. Has the contamination gone off-site?	6	14
6. Is there any discharge or erosion of contamination to surface water or the potential for discharge or erosion of contamination?	7	14
7. Are the site contaminants PCBs, pesticides or other persistent, bioaccumulable substances?	Section 3.10.1	8
8. Does contamination exist at concentrations that could exceed ecological impact SCGs or be toxic to aquatic life if discharged to surface water?	Section 3.10.1	14
9. Does the site or any adjacent or downgradient property contain any of the following resources? i. Any endangered, threatened or special concern species or rare plants or their habitat ii. Any DEC designated significant habitats or rare NYS Ecological Communities iii. Tidal or freshwater wetlands iv. Stream, creek or river v. Pond, lake, lagoon vi. Drainage ditch or channel vii. Other surface water feature viii. Other marine or freshwater habitat ix. Forest x. Grassland or grassy field xi. Parkland or woodland xii. Shrubby area xiii. Urban wildlife habitat xiv. Other terrestrial habitat	11	10
10. Is the lack of resources due to the contamination?	3.10.1	14
11. Is the contamination a localized source which has not migrated and will not migrate from the source to impact any on-site or off-site resources?	14	12
12. Does the site have widespread surface soil contamination that is not confined under and around buildings or paved areas?	Section 3.10.1	12
13. Does the contamination at the site or area of concern have the potential to migrate to, erode into or otherwise impact any on-site or off-site habitat of endangered, threatened or special concern species or other fish and wildlife resource? (See #9 for list of potential resources. Contact DEC for information regarding endangered species.)	Section 3.10.1	14
14. No Fish and Wildlife Resources Impact Analysis needed.		

APPENDIX 6
Site Personnel Qualifications

Remedial Party Contact Information

Gary W. Passero, PE, F. ASCE, REM-CEO
Passero Associates
100 Liberty Pole Way
Rochester, NY 14604

Phone: 585-325-1000
Fax: 585-7608580
Email: gpassero@passero.com

Alan J. Knauf
Environmental Lawyer
975 Crossroads Building
Rochester, NY 14614

Phone: 585-546-8430
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Dale M. Gramza
Nature's Way Environmental Consultants & Contractors. INC
3553 Crittenden Rd.
Crittenden, NY
14038

Phone: 716-937-6527
Fax: 716-937-9360
Email: dgramza@natureswayenvironmental.com

GARY W. PASSERO, PE, F. ASCE, REM

CEO

Representative Project Experience

Mr. Passero is the founder and Chief Executive Officer of Passero Associates. The firm was founded in 1972 and has grown to over 80 engineers, architects, planners, surveyors, and support personnel.

Throughout his professional career, Mr. Passero obtained design and management experience in a wide variety of environmental, civil and forensic engineering projects. His experience includes soil/groundwater investigation and remediation; indoor air quality sampling, evaluation and abatement (mold, asbestos, lead); civil/site engineering for residential, commercial, and industrial projects; municipal engineering/architecture; wastewater treatment/pollution control; sanitary landfills; highway/street design and reconstruction projects; and preparation of engineering reports for accident and failure cases.

Mr. Passero has provided expert testimony for plaintiffs and defendants, has participated in technical panels, and has been an Adjunct Professor at Rochester Institute of Technology.

Gary is honored to have been selected as a 2003 & 2010 Finalist for Small Business Person of the Year by the Small Business Council, and as a 2010 Finalist and 1998 "Civil Engineer of the Year" by the Rochester Section, American Society of Civil Engineers. Gary is a Past President/Delegate for the New York State and District 1 Councils of the American Society of Civil Engineers.

A partial list of projects Mr. Passero has managed:

Environmental Projects

- Comfort Inn Brownfield Cleanup Agreement; Gates, New York
- 37 Bittner Street Brownfield Cleanup Program; Rochester, New York
- Speedy's Cleaner Brownfield Cleanup Program; Pittsford, New York
- 2,000 Phase I Environmental Site Assessments since 1990
- Wireless Telecommunications Towers: Phase I & Phase II; Multiple Sites, Northeast US
- Soils Management Plan, Phase I & Phase II Investigations, 200 Clifford Ave; Rochester, New York
- Blue Cross/Blue Shield Remediation Site Plan; Rochester, New York
- Rochester General Hospital Industrial Hygiene Services; Rochester, New York
- Town of Poughkeepsie, New York Police & Court Building Indoor Air Quality Investigation
- Speedy's Cleaner Soil/Groundwater Remediation
- Fischback & Moore Electric Voluntary Cleanup Agreement; Brighton, New York
- Town of Irondequoit, New York Underground Storage Tank Removal and Site Remediation
- Town of Macedon, New York Indoor Air Quality Investigation
- NYSDEC Brownfield Investigation at the Geneva Foundry and Market Basket Sites in Geneva, New York
- Environmental Assessment Impact Statements for General Aviation Airports in the Northeast United States

Education

BS, Civil Engineering, Iowa State

Post Graduate Work

- American Water Works Assoc., Improving Water Treatment Operations
- University of Wisconsin, Industrial Waste Institute Seminar
- State University of Buffalo, Chemical Principal of Water Pollution Control
- Cornell University, Land Application of Waste
- RCRA: Hazardous Waste Rules and Regulations

Certifications/Registrations

- NCEES Registration #12550
- Licensed Professional Engineer in the States of New York, Florida, Ohio, Illinois, and Pennsylvania
- Registered Environmental Manager, (REM #5342)

Civic/Professional Affiliations

- Fellow, Past President and Past Delegate, New York State and District 1 Councils of the ASCE Rochester Section
- Rochester Engineering Society
- New York State Society of Professional Engineers
- National Director, Business Men's Fellowship USA and President, Rochester Regional Chapter
- Member of the Construction Committee, Flower City Habitat for

PETER S. MORTON, CPG

Senior Environmental Consultant and Hydrogeologist

Representative Project Experience

Site Assessment — Peter has greater than 20 years of experience conducting Phase I Environmental Site Assessments (ESAs), supervising Phase II work and Brownfield Cleanup Program (BCP) remedial investigations. Examples of Phase II work include underground storage tank removal, tank testing, drywell closure, and asbestos abatement.

Cell Towers — Peter has performed approximately 300 Phase I and Phase II ESAs for a national cellular telecommunications provider.

NYSDEC Voluntary Cleanup Agreement (VCA) and Brownfield Cleanup Program (BCP) Projects —

- VCA at former Fischbach & Moore Electric, 235 Metro Park in the Town of Brighton
- BCP at former Speedy's Cleaners on Monroe Avenue in the Town of Pittsford
- BCP at 37 Bittner Street in the City of Rochester
- BCP at Comfort Inn on Buell Road in the Town of Gates

Peter is the Project Manager for the VCA and BCPs that Passero Associates is currently conducting. All of these projects have involved soil vapor surveys, electromagnetic investigations, and soil/groundwater sampling programs. Remedial measures designed and installed during these NYSDEC-supervised projects include sub-slab vapor mitigation systems, and bioremedial methods of in-situ groundwater treatment.

Petroleum Remediation — Peter has designed air sparge, soil venting, and bioremedial systems obtaining spill closure at petroleum-contaminated sites and hazardous waste sites including an historic dry cleaning operation with perchloroethylene contamination.

Soils Management — Peter worked with the USEPA, and has hands-on experience with the management and handling of contaminated soils and hazardous wastes, including the implementation of health & safety plans. Mr. Morton has prepared and implemented several Soil Management Plans (SMP) for approval by the Monroe County Department of Health (MCDOH). These projects have included fugitive dust monitoring in conformance with New York State Department of Health (NYSDOH) protocols. Peter has managed several projects in which contaminated surficial soils have been managed in conformance with an MCDOH-approved SMP, allowing for residential development. We have experience in material characterization and handling, disposal of contaminated materials, and fugitive dust monitoring and suppression when disturbing contaminated soils.

Blue Cross/Blue Shield Remedial Site Plan — Peter was the Project Manager for the environmental cleanup in March 1997 of urban lands developed as the new Blue Cross/Blue Shield building in Rochester. Environmental conditions included 22 underground storage tanks, 6 in-ground hydraulic lifts and greater than 4,400 tons of petroleum-contaminated soil. A geo-synthetic barrier/passive venting system was designed to prevent residual contamination beneath South Avenue from migrating into the Blue Cross/Blue Shield building.

Kentucky Groundwater Investigation — Peter worked with Kentucky DEP investigating groundwater plume originating at a coal mining equipment tooling facility in Harlan, Kentucky. Interim remedial measure included pumping and treating groundwater by air-stripping.

EPA Groundwater Study — Peter was the hydrogeologist for a USEPA investigation around a hazardous waste landfill in Niagara Falls, including installation and sampling of overburden and bedrock monitoring wells.

Oil Storage Facility – Peter conducted permeability testing at a major oil-storage facility in New York's southern tier, including design of all aspects of investigation and remediation.

Peter has over 25 years of environmental services experience. He is a Certified Professional Geologist, a NYS Licensed Asbestos Inspector and a USEPA Certified Lead Inspector. He has experience in planning and managing subsurface and surficial environmental investigation. His experience includes Phase I Environmental Site Assessments, Phase II investigations and remedial plans, soil gas surveys, underground storage tank closures, remedial investigations/feasibility studies (RI/FS), Brownfield Cleanup Investigations, and design of bioremedial and soil vapor extraction systems. Peter was also a member of the USEPA Superfund Field Investigation Team, Region 2. He was responsible for investigations of inactive hazardous waste sites including all field activities and technical reports.

Education

- MS, Geology, University of Massachusetts, Amherst, Massachusetts
- BA, Geology, Amherst College Amherst, Massachusetts

Certifications/Registrations

- Certified Professional Geologist
- NYS Licensed Asbestos Inspector
- USEPA Certified Lead Inspector
- RCRA/OSHA 40 hour Hazardous Waste Training

Professional Affiliations

- American Institute of Professional Geologists, Certificate #7932

Dale M. Gramza
11749 Manitou Drive
Alden, NY 14004
(716) 937-6985
dgramza@natureswayenvironmental.com

Education:

1980	**State University of New York at Buffalo – Buffalo, NY** B.S. Geology
1976	**Genesee Community College – Batavia, NY** A.S. Biology

Work Experience:

1998 – present	Hydrogeologist & Manager of Geologic Services *Nature's Way Environmental Consultants & Contractors, Inc.* *3553 Crittenden Rd., Crittenden, NY 14038* Project management, incl. hydrogeologic/environmental investigations Report writing Management of subsurface investigation projects and drilling activities
1985 – 1998	Project Manager/Senior Geologist *Earth Dimensions, Inc.* *1091 Jamison Road, Elma, NY 14059* Project management, incl. design/implementation of hydrogeologic investigation Operations management of drill activities Geologic and hydrogeologic report writing Field investigations, incl. accurate classification of soils and determination of bedrock formations encountered while drilling, sampling and rock coring
1984 – 1985	Well Site Geologist *Technical Drilling Services* *Oklahoma City, Oklahoma* Served as link between drilling operations in the field and the geology departments of major oil companies Setting up correlations with existing wells in the area to predict the encounter of particular producing zones and formations
1983 – 1984	Surveying Assistant *PMI Surveying Company* *Midwest City, Oklahoma* Surveying of oil well locations, properties and subdivisions
1981 – 1983	Well Site Geologist *Core Laboratories, Inc.* *Bethany, Oklahoma* Continuous logging of rock formations encountered while drilling Monitoring gas Checking drilling properties and drilling rig activities to assess the formations encountered and the probability of producing zones

Dale M. Gramza
11749 Manitou Drive
Alden, NY 14004
(716) 937-6985
dgramza@natureswayenvironmental.com

Work Experience, continued:

1980 – 1981

Ice Core Sampler
State University of New York at Buffalo
Ice Core Laboratories
Buffalo, NY
Organization and computerization of core library
Chemical and physical sampling and classification of ice cores
Distribution of ice core samples to various universities throughout the U.S. and abroad

Professional Affiliations:

Buffalo Association of Professional Geologists

Special Training/Certifications:

OSHA 40 hour training with 8 hour annual refresher courses
OSHA 10 hour Construction Operations training
American Red Cross safety training/CPR/First Responder
Confined space entry
Employee medical monitoring program

Gregory J. Weber
6860 Minnick Road
Lockport, NY 14094
(716) 572-3665
gweber@natureswayenvironmental.com

Education:

1982 – 1987 — **State University of New York at Buffalo – Buffalo, NY**
Completed in excess of 120 hours of study in Bachelor of Science program in Physical Geography/Geomorphology with specialization in Soil Science and Environmental Studies

Work Experience:

Dec. 2007 – present — President/Contract Manager/Project Manager
Nature's Way Environmental Consultants & Contractors, Inc.
3553 Crittenden Rd., Crittenden, NY 14038
Responsible for all aspects of business operation including bids/proposals, project management, regulatory contact and compliance, field operations (including emergency spill response), reporting, billing and associated administrative functions. Conduct Phase I and Phase II site investigations and all waste disposal . (Hazardous/Non-Hazardous).

1995 – 2007 — Operations Manager
Nature's Way Environmental Consultants & Contractors, Inc.
3553 Crittenden Rd., Crittenden, NY 14038
Same responsibilities as above.

1993 – 1995 — Operations/Project Manager
Nature's Way, Inc.
11796 Genesee Street, Alden, NY 14004
Market, design, specify and manage a wide range of environmental remediation projects from inception to completion. Conduct Phase I and Phase II assessments in addition to field investigations. Responsible for business development and majority of administrative duties.

1990 – 1993 — Investigator/Supervisor
Phillip D. Smith & Associates, Inc.
Amherst, NY
Conducted and directed others in the performance of numerous insurance (accident/injury), criminal and PRP (potentially responsible party) investigations. Included testimony at civil trials, grand jury and other legal proceedings.

1989 – 1991 — Principal
Nature's Way, Inc.
11796 Genesee Street, Alden, NY 14004
Co-founded corporation focused on biological remediation of petroleum hydrocarbon contaminated soils. Successfully completed in excess of twenty projects. Responsible for business development, field operations and administration.

Gregory J. Weber
6860 Minnick Road
Lockport, NY 14094
(716) 572-3665
gweber@natureswayenvironmental.com

Work Experience, continued:

1988 – 1989

Technician/Site Supervisor
Waste Stream Technology, Inc.
Buffalo, NY
Supervised corporation's largest remediation project. Outfitted soils testing laboratory. Conducted field and lab analysis of samples. As site supervisor, coordinated sub-contractors, regulatory compliance, health and safety.

Special Training/Certifications:

40-Hour OSHA Trained with annual 8-Hour Refresher Courses
10-Hour OSHA Construction training
American Red Cross Safety training/CPR/First Responder
NYS certified asbestos supervisor trained
ASTM Risk Based Corrective Action standard training course
Employee medical monitoring program
Confined space entry

Steven D. Gingrich
13433 Bear Street
Cowlesville, NY 14037
(716) 655-3236

Education:

1981	**Macomb County Community College** Warren, Michigan
1980	**Mott High School** Warren, Michigan

Work Experience:

2000 – present	Driller *Nature's Way Environmental Consultants & Contractors, Inc.* *3553 Crittenden Road Crittenden, NY 14038* Operation of drilling rigs and earth probes; installation of geotechnical & environmental monitoring wells, inclinometers; secure soil & rock samples; ORC injection; coordination of field activities
1986 – 2000	Master Driller *Earth Dimensions, Inc.* *1091 Jamison Road, Elma, New York:* Operation of Mobile B-61 and Diedrich D-50 drilling rigs; secure soil and bedrock samples; installation and abandonment of monitoring wells
1982 – 1986	Production Supervisor *Armadillo, Ella Contractors, Inc.* *Road Bore, Houston, Texas* Manager – crew of twelve men; operation of bore rig; blueprint reading,; Supervisor – service connections and job completion; driver – 3 ton flat bed; maintenance – service vehicles

Special Training/Certifications:

40-Hour OSHA Trained with annual 8-Hour Refresher Courses
10-Hour OSHA Construction Operations training
American Red Cross Safety Training
CSX Roadway Worker Protection Training
Radiological Worker II Certificate
Confined space entry
Employee medical monitoring program

APPENDIX 7

Data Usability Summary Reports (DUSRs)

On CD

APPENDIX 8

Laboratory Analytical Data
On CD