SITE INVESTIGATION REPORT

Former Syracuse Rigging Property

NYSDEC Brownfields Project No. B-00146-7

341 Peat Street
Syracuse, New York

December 2008

Prepared For:

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1.0 INTRODUCTION

1.1 Site Location and Description

The former Syracuse Rigging site, also known as City Crossroads Park, is a 7.61-acre lot located at 341 Peat Street and 100 Greenway Avenue in the City of Syracuse (see Figure 1). The subject site is bordered to the north by Interstate 690; to the south by the former SPECTRUM MedSystems Corporation (Spectrum) site and a vacant CSX Transportation Inc. parcel; to the east by Spectrum and J.C. Smith, Inc.; and to the west by the abandoned D.W. Winkelman Company warehouse (see Figure 2).

The western and southern portions of the subject site are currently utilized by the City of Syracuse Department of Public Works (DPW) for mulching and composting vegetative debris, while the eastern portion of the property is vacant. The parcel is generally flat and covered with overgrown brush and vegetation, wood chip and compost piles, concrete slabs, stone, and asphalt. A chain-link fence is located along the northern and northeastern property boundaries.

1.2 Site Background and History

From the 1890s until approximately 1956, the subject property supported heavy industrial operations. From the 1960s to the present, operations at the site primarily consisted of light industrial and commercial operations (see Figure 3). Table 1 summarizes the operations of the various historical occupants of the subject property.

HISTORICAL OPERATIONS AT SUBJECT PROPERTY

Occupant	Approximate Years of Operation	Operations
Archibold Brady Company	1890s-1930s	Structural steel works
Globe Forge and Manufacturing Company (Globe)	1900s-1950s	Drop forge plant producing metal articles in steel, nickel, chromium, and molybdenum alloys utilizing 50 oil-burning furnaces
Finger Lakes Equipment Corporation (Finger Lakes)	1910s-1960s	Equipment repair and sales
General Materials and Wrecking Company (GMW)	1930s-1940s	Building materials contractor
Boland Trucking Inc.	1950s-1960s	Trucking and distribution
Ontario Freight Lines	1960s	Trucking and distribution
Syracuse Paint and Varnish Company (SPV)	1960s-1970s	Paint supplier (assumed)
Syracuse Rigging	1970s-1990s	Rigging contractor
Greenway Transportation	1990s	Trucking and distribution
Legnetto Construction	1990s	General contractor
Syracuse DPW	2000s	Mulching and composting

An Abstract of Title was not provided to Beardsley Design Associates (BDA) or C&H Engineers, P.C. (C&H) during prior historical investigations. The ownership history of the property, therefore, is limited to recent years. According to Scott A. Lickstein, Esq., Greenleafe Development, LLC acquired ownership of the subject property from High Associates, Ltd. in April 1997. Ownership was subsequently conveyed to the Syracuse Industrial Development Agency (SIDA) in 1999.

In 2000, SIDA sectioned-off the access way from Peat Street, an 80-foot wide section of property extending along the northern border of the former SPECTRUM MedSystems Corporation site, and a 0.52 acre parcel (Parcel D) from the original property boundary. The former two sections were apportioned for a site roadway, while the latter section was apportioned for a pending property transfer with J.C. Smith, Inc. located at 345 Peat Street. However, this property transfer did not occur, and SIDA re-apportioned the 0.52-acre Parcel D back into the subject property.

Summary of Environmental History

Previous Environmental Site Assessments, investigations, and remedial activities were performed on the former Syracuse Rigging property as part of a due diligence process related to the transfer of real property. These activities are summarized in the following reports, which were prepared by C&H and BDA on behalf of several parties:

- December 16, 1988 Environmental Assessment Report
- October 23, 1989 Phase II Letter-Report
- July 21, 1993 Phase I Environmental Assessment Report
- January 27, 1994 Pipe Tracing Excavation Letter-Report
- August 8, 1994 Phase II Environmental Assessment Summary Report
- March 6, 1995 Soil Vapor Survey Letter-Report
- February 12, 1999 Phase I Environmental Site Assessment Update Report
- June 3, 1999 Building Demolition Asbestos Survey Report - Former Syracuse Rigging Company Warehouse
- June 3, 1999 Building Demolition Asbestos Survey Report - Former Syracuse Paint & Varnish Building
- June 3, 1999 Lead-Based Paint Survey Report - Former Syracuse Paint & Varnish Building
- September 2, 1999 Limited Subsurface Screening Report
- November 8, 2000 Post-Demolition Limited Subsurface Screening Letter-Report
- October 2000 Limited Subsurface Investigation Report – Parcel D
- January 2001 Soil Excavation – Parcel D
- June 13, 2001 Subsurface Soil Conditions, Utility Installation Project Letter-Report
- January 15, 2002 Soil Pile Sampling Results Memorandum

The assessment and investigation activities summarized in the prior reports included site reconnaissance, radon screening, review of historic and environmental regulatory records, the advancement of exploratory excavations and GeoProbe® (GeoProbe) soil borings, the installation of groundwater monitoring wells, a soil vapor survey, soil and groundwater sample collection and analysis, and asbestos and lead based paint sample collection and analysis (see Figures 4 and 5). Historic remedial activities described in the prior reports included asbestos abatement, underground storage tank (UST) removals, removal of waste materials, and excavation and staging of petroleum contaminated soils. It should be noted that the above-listed reports, except for the

November 8, 2000 Post-Demolition Limited Subsurface Screening Letter-Report, were submitted to NYSDEC and NYSDOH as attachments to SIDA's September 3, 1999 State Financial Assistance application.

The initial investigations at the former Syracuse Rigging property documented potential point sources for contamination at the subject property. Subsequent sampling and analysis identified metals, solvent, and petroleum related compounds that exceeded applicable regulatory standards, and resulted in the assignment of NYSDEC Spill File No. 94-13575 to the site. This file was closed on January 12, 1995 by NYSDEC with an "inactive" status based on the industrial nature of the site and the concentration of petroleum compounds detected in the soils. It was suspected, based on information collected during these investigations, that the release of petroleum products and solvents to the ground was from point sources (i.e., tanks and stored drums). The metal constituents were suspected to be more widespread and are not related to specific point sources. In addition, documented releases of polychlorinated biphenyls (PCBs) occurred on the adjoining Winkelman property. Consequently, PCBs were suspected of having potentially impacted the western portion of the subject property. Laboratory analysis of a soil sample collected from a test pit advanced along the western property border as part of a 1994 Phase II environmental assessment, however, did not indicate the presence of PCBs on the subject property.

The preliminary investigation activities at the site were conducted for SIDA in April 1999 and are summarized in the September 2, 1999 Limited Subsurface Screening Report. The April 1999 Limited Subsurface Screening activities included the advancement of 40 GeoProbe soil borings, the installation of four groundwater monitoring wells, and field and laboratory analysis of soil and groundwater samples for target compound list (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), target analyte list (TAL) metals, and PCBs (see Figure 4). As part of the investigation, four soil samples were collected from discrete locations and were analyzed for VOCs, SVOCs, and metals using the toxicity characteristic leaching procedure (TCLP). The analytical results indicate that the four soil samples did not exhibit corrosivity (pH), ignitability (flash point), or reactivity characteristics (sulfide/cyanide concentrations) of hazardous waste and that no VOCs or SVOCs were detected above method detection limits in the TCLP extracts of these soil samples.

Four metals (barium, cadmium, lead, and silver), however, were detected in the TCLP extracts at slightly elevated concentrations. Additionally, the laboratory analytical results of six surficial soil samples did not identify the presence of PCBs, but TCL VOCs, TCL SVOCs, and TAL metals were detected in soil samples at concentrations that exceeded applicable regulatory levels.

As part of an April 1999 monitoring event, site-wide groundwater flow was calculated to be in a southwest direction. Laboratory analytical results of groundwater samples collected from the four monitoring wells did not identify detectable concentrations of SVOCs or PCBs, or VOC concentrations which exceeded NYSDEC groundwater quality standards. The laboratory analytical results, however, did identify concentrations of metals that exceed NYSDEC groundwater quality standards.

The following conditions were discovered following demolition of the former Syracuse Rigging Warehouse and former Syracuse Paint and Varnish buildings:

1. One underground storage tank, one rectangular open-top steel storage vessel, potentially contaminated soil and groundwater, and numerous sub-slab concrete structures beneath a portion of the former Syracuse Rigging Warehouse building concrete slab;

2. Two 4" ± diameter steel pipes protruding from the ground east of the former Syracuse Paint & Varnish Building near the east property line shared with the J.C. Smith Company; and

3. Potentially contaminated soil and groundwater associated with the sump pit in the southeast corner of the former Syracuse Paint & Varnish Building.

Upon the discovery of these areas of concern, C&H Engineers notified the NYSDEC of the above-listed conditions. As a result, Spill No. 0005223 was assigned to the property on August 1, 2000.

Under the direction of C&H Engineers, USA Remediation, Inc. conducted exploratory excavations and conducted limited remedial activities to address the above areas of concern on the subject property from October 11-20, 2000 (see Figure 5). Remedial activities conducted by USA Remediation included the removal of the underground storage tank and two subsurface open-top steel storage vessels, and the excavation of approximately 800 cubic yards of petroleum impacted soil from within the western third of the former Syracuse Rigging building footprint. Based on field screening results, it appeared that the significantly contaminated soil terminated approximately 110' east of the former building's western foundation wall.

In addition to the aforementioned remedial activities, exploratory excavations were advanced within and exterior to the former Syracuse Rigging building footprint. Field volatile organic vapor screening results of these excavations identified the presence of petroleum and possibly solvent impacted soil and groundwater within and exterior to the former Syracuse Rigging building footprint. Subsurface soil impacts exterior to the former building footprint were generally encountered at and slightly above the soil/groundwater interface, while impacted soil within the former building footprint was generally encountered at depths ranging from beneath the former building's concrete slab to the water table.

During further evaluation of the two 4" pipes protruding from the ground surface east of the former Syracuse Paint & Varnish building, a third 4" diameter pipe was discovered. Residual material observed in these pipes appeared to be indicative of no. 6 fuel oil. These three pipes were located within a subsurface concrete trench that was covered with steel plates. The western end of these pipes appears to have terminated on the subject property between two former buildings, while the pipes were traced back to the east and appear to continue onto the J.C. Smith property. Field volatile organic vapor screening results of exploratory excavations conducted on soil samples collected in the vicinity of the former pipe trench identified subsurface impacts at and slightly above the soil/groundwater interface.

USA Remediation removed and containerized the contents of the sump pit located in the former Syracuse Paint and Varnish building. The sump pit was cleaned and was determined to be located within a concrete vault that appeared to be structurally intact. It, therefore, did not appear that the subsurface has been significantly impacted by the former use of this sump pit.

Exploratory excavations conducted adjacent to the south of the former Syracuse Paint and Varnish building, however, identified the presence of a subsurface manhole that appeared to be filled with hardened paint-like material and a pipe that is insulated with material suspected of containing asbestos. The subsurface manhole and hardened paint-like material were excavated and staged at the site on the former Syracuse Paint and Varnish building concrete slab separate from the petroleum impacted soil.

Based on the initial results of the exploratory and limited remedial activities, NYSDEC required the preparation of a more formal site investigation work plan to address the subsurface impacts in the vicinity of the former Syracuse Rigging building. In summary, elevated PID readings were observed from test pits located exterior to the northern wall of the former Syracuse Rigging building. Significantly elevated PID readings were noted exterior to the northeastern and southwestern corners of the former Syracuse Rigging building.

From January 15-18, 2001, Action Technical Services, Inc., under the direction of C&H Engineers, excavated approximately 425 cubic yards of impacted soils from the southwestern portion of Parcel D. During the excavation activities, a total of four pipes (two sets of two) were discovered. Residual material observed in the pipes appeared to be indicative of fuel oil. The western end of these pipes appeared to terminate on the subject property at the former Syracuse Rigging company, while the eastern end of the pipes appear to continue in the direction of the J.C. Smith property. Laboratory analyses of a composite soil sample collected from the western wall of the excavation (eastern wall of the subject property) revealed concentrations of SVOCs that significantly exceeded regulatory levels.

Based on the limited subsurface investigation activities, C&H Engineers concluded the following:

1. The release of petroleum products and solvents to the ground appeared to have occurred from point sources (i.e., tanks, pipes, and stored drums);
2. The metal constituents at the site are more widespread than the volatile or semi-volatile constituents and are not suspected to be related to site specific point sources. The metal concentrations are most likely related to the non-native soils (fill material) at the site and the industrial history of the subject property; and
3. The documented release of PCBs on the adjacent Winkelman property does not appear to have migrated onto the subject property.

In 1999, C&H Engineers performed asbestos and lead-based paint surveys of the existing buildings at the site, after which the buildings were demolished in accordance with local, State, and Federal standards.

1.3 Topography and Drainage

A United States Geologic Survey (USGS) map prepared for the subject site and surrounding area (Syracuse East, NY, Photo revised 1978) indicates that the site is at an elevation of approximately 445 feet. Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps indicate the site is not located within or adjacent to a 100-year or 500-year flood plain. Based on the groundwater contours calculated by C&H Engineers during the April 1999 monitoring event and assuming a continuous gradient of the groundwater surface through subsurface soils of uniform hydraulic conductivity, the calculated groundwater flow direction is in a southwest direction with an average gradient of 0.7 percent. Review of regional USGS maps suggests that groundwater flows towards Onondaga Creek which is located ±1.8 miles west-southwest from the site.

1.4 Geology and Hydrogeology

1.4.1 Regional Geologic Setting

The site is located near the border of two physiographic provinces within New York State known as the Erie-Ontario Plain to the north and the Allegheny Plateau to the south. The Erie-Ontario Plain slopes toward the north and represents the southern extension of the Lake Ontario drainage basin, while the northern margin of the Allegheny Plateau includes the Finger Lakes troughs. The geology of the area in which the site is located consists of bedrock and overburden deposits. Bedrock in Central New York is dominated by flat-lying Sulurian-age and Devonian-age sedimentary strata, which exhibit a regional southward dip of approximately 20' to 30' per mile.

The Onondaga Lake Valley is underlain by a soft shale known as the Vermon Formation. The Vermon Formation is overlain by the Syracuse and Camillus Formations. The Syracuse Formation consists of shales, dolostones, gypsum, and rock salt. The Camillus Formation consists of soft, dolomitic shales and thin, gypsiferous shales. Bedrock at the site consists of the Syracuse Formation.

The pre-glacial bedrock beneath the site was modified by overriding Pleistocene glaciers. Deepening of the Onondaga Valley by glacial ice, in a manner similar to that which formed the Finger Lakes and surrounding valleys, produced a bedrock basin extending below sea level. Glacial sculpting of the area has produced a pronounced north-northwest to south-southeast orientation of hills and valleys. This orientation is partly the result of erosion of the underlying bedrock by glacial ice and the deposition of glacial till into elliptical hills known as drumlins.

Glacial till is typically a compact, unsorted, and poorly stratified mixture of sands, silt, clay, gravel, and boulders deposited by glacial ice. A layer of till generally 10 to 15 feet thick overlies bedrock in this area. During glacial retreat in the Onondaga Valley, pre-glacial drainage to the north was blocked by an ice front producing a proglacial lake in which significant quantities of glaciolacustrine sediments were deposited. Drainage in adjacent north-south valleys, to the east and west of the Onondaga Valley, were also blocked by the ice front producing a series of lakes standing against the ice. As the level of the lakes rose, surface water flow was predominantly to the south, over relatively high spillways or to the east or west over inter-valley divides. The large volumes of melt-water from the ice, spilling from one basin to another, cut numerous east-west trending channels into the valley divides. With the decay of the ice, lower spillways opened resulting in drainage of the proglacial lakes and the establishment of the existing system of lakes and surface drainage in the area.

During the time the proglacial lakes existed, they accumulated large volumes of sediment washed out from the ice and from the channels crossing the valley divides. These sediments consist primarily of fine sand and silt. Gravel, sand, and clay, however, are also present in some locations. Surficial soil near the site, however, has been mapped as urban land, which consists of built-up areas that have been so altered or obscured by urban works and structures that specific identification of the soils is not feasible. Based on observations of soils encountered during previous investigations, subsurface soils at the site generally consist of non-native material, including fine to coarse sand, gravel, silt with some concrete brick, coal, and bottom ash to depths ranging from approximately 2' to 7.5' below grade. Moist dark brown peat was encountered beneath these non-native materials to depths ranging from 2.5' to 10.5' below grade. Combinations of organic silt, fine sand, marl, peat, and trace clay were encountered beneath the peat to depths of up to 14' below grade.

1.4.2 Regional Hydrogeologic Setting

The site is situated within the 230 square mile Onondaga Lake drainage basin and within the larger Eastern Oswego River drainage basin, which covers approximately 2,500 square miles. Surface water drains north from the Onondaga Lake drainage basin into the Seneca River, into the Oswego River, and finally into Lake Ontario. Surface water in the area of the site is influenced by Onondaga Lake and its tributaries. The tributary nearest to the site is Onondaga Creek, which is located approximately 1.8 miles west-southwest from the site.

Onondaga Creek, which flows from south to north through the Onondaga Valley and the City of Syracuse into Onondaga Lake, drains a watershed of approximately 100 square miles and has an average annual flow rate of approximately 190 cubic feet per second, before it discharges into the south end of Onondaga Lake. Onondaga Creek has been relocated from its former discharge point, which was once located at the southeast corner of Onondaga Lake.

The geology of the Onondaga Valley has a significant impact on the movement of groundwater in the valley and its tributaries. The pre-development groundwater flow patterns and water quality have been changed by construction projects, waste disposal, and groundwater pumping. Groundwater flow in Onondaga Valley and its tributaries is primarily driven by topography. Water flows from the valley divides into the surface and groundwater systems within each tributary valley. Surface and groundwater then flow towards Onondaga Lake. The flow patterns, velocities, and the groundwater/surface water ratio in each tributary valley are dependent on the local geologic conditions within each valley.

The site does not appear to directly overlie any aquifers and does not appear to be located near any primary or principal water supply aquifers as classified by NYSDEC. A surficial (unconfined) aquifer is located approximately six miles south of the site.

According to Mr. Richard March at the Onondaga County Health Department, Bureau of Public Water Supply Protection, there are no private or municipal groundwater wells used to supply potable water within a three-mile radius of the site. The residents within a three-mile radius of the site receive their domestic water from municipal service connections supplied by the City of Syracuse Water System, the Onondaga County Water Authority, or the Metropolitan Water Board. These agencies receive their water from surface water intakes on Lakes Otisco, Skaneateles, and/or Ontario.

1.5 Review of Existing Data

1.5.1 Asbestos and Lead-Based Paint Surveys

June 1999 ACM Syracuse Rigging Warehouse

Based on the results of the bulk sampling and asbestos analyses conducted, four (4) types of ACM were identified at the Former Syracuse Rigging Company Warehouse. The types, locations, and approximate quantities of ACM are summarized in the table below.

SUMMARY OF ACM		
ACM Type	**Location**	**Approximate Quantity**
Pipe Insulation	Interior	200 LF
Smooth "Transite" Wall Panels	Interior	4,032 SF
Corrugated "Transite" Siding Panels	Exterior	3,640 SF
Corrugated "Transite" Roof Panels	Exterior	21,500 SF

June 1999 ACM Syracuse Paint and Varnish

Based on the results of the bulk sampling and asbestos analyses conducted, seven (7) types of ACM were identified at the Former Syracuse Paint & Varnish Building. The types, locations, and approximate quantities of ACM are summarized in the table below.

SUMMARY OF ACM		
ACM Type	**Location**	**Approximate Quantity**
Window Caulk (Gray)	Second Floor (Interior Window Units)	15 SF
Window Caulk (White)	Second Floor (Exterior Window Units)	20 SF
Insulation Packing Between Fin Tubes	Second Floor (Boiler)	3 SF
Rope Gasket at Base of Fin Tubes	Second Floor (Boiler)	2 SF
Wall Flashings/Flashing Cement	Lower Roofs (East & West)	800 SF
Perimeter Flashings/Flashing Cement	Lower Roof (East)	165 SF
Perimeter Flashings/Flashing Cement	Lower Roof (West)	130 SF

June 1999 LBP Syracuse Paint and Varnish

Based on the results of the paint chip sampling and lead analyses conducted, all of the paints at the Former Syracuse Paint & Varnish Building contained lead and were classified as LBP pursuant to the OSHA standard.

1.5.2 Historic Soil and Groundwater Sampling Conducted by C&H / BDA

October 1989 Phase II Environmental Site Assessment

During an October 1989 Phase II Environmental Site Assessment which included a portion of the subject site (Syracuse Paint and Varnish Building) as well as the adjacent property to the east, soil and groundwater samples were collected in the vicinity of the Syracuse Paint and Varnish Building. A total of three soil samples were collected and analyzed for PCBs, petroleum products and the RCRA metals. PCBs and petroleum products were not identified within the soil samples. Elevated levels of cadmium, chromium, and mercury were identified within the site soils. Site groundwater was analyzed using EPA Methods 601 and 602, and did not show detectable concentrations VOCs or SVOCs within site groundwater.

January 1994 Exploratory Excavation

C&H conducted an exploratory excavation to determine if two vent pipes observed on the northwest corner of the storage and service shop building were attached to underground tanks. The pipes were uncovered and it was observed that the ends had been cut. It was determined that the associated underground tanks had been removed. During the advancement of the test pit, a petroleum odor was observed. Two soil samples were collected for headspace screening utilizing petroleum hydrocarbon Drager tubes. The headspace screening did not reveal petroleum vapor concentrations exceeding 100 ppm.

August 1994 Phase II Environmental Site Assessment

C&H identified five general areas of the subject property where historic use of the lot may have created subsurface conditions of environmental concern. Test Pit Excavations were conducted in each of these areas. The targeted areas are as follows:

- Area 1 – An area adjacent to five former underground storage tanks identified on historic Sanborn fire insurance maps.
- Area 2 – An area along the southern border of the property where miscellaneous debris and fill materials were observed.
- Area 3 – An area along the western property border, adjacent to a former transformer installation where a release of PCBs had occurred.
- Area 4 – An area located adjacent to a stockpile of 55-gallon drums of unknown content.
- Area 5 – A former underground storage tank pit located to the southeast of the Storage and Service Shop building.

Based upon soil characteristics or VOC screening utilizing a PID, soil and groundwater samples were collected from test pits 1-1, 1-2, 4-1, and 5-1.

AUGUST 1994 SAMPLING PARAMETERS AND MEDIA		
Location	**Media**	**Analysis**
TP 1-1	Groundwater	EPA Method 8021 (VOCs)
	Soil	EPA 8021 EPA Method 200 (metals)
TP 1-2	Groundwater	EPA Method 8021 EPA Method 8270 (SVOCs)
	Soil	EPA 8270 EPA Method 8080 (PCBs)
TP 4-1	Soil	EPA 8021 EPA 8270 EPA 200 EPA 8080
TP 5-1	Soil	EPA 8021 EPA 8270

The following exceedences of applicable DEC Technical and Administrative Guidance Memorandum, January 1994 soil recommended soil cleanup objectives (TAGM 4046 RSCOs) and metals concentrations in exceedence of the Eastern USA Background soil metal concentrations. PCBs were not detected within soil samples collected from TP 1-2, and TP 4-1. VOCs and SVOCs were not detected within groundwater samples collected from TP 1-1 and TP 1-2.

VOCS, SVOCS, AND METALS DETECTED ABOVE TAGM 4046 RSCO			
Location	**Parameter**	**Concentration (ppb)**	**TAGM 4046 RSCO (ppb)**
TP 1-1 (white Marl)	Chromium	13,200	10,000
	Iron	5,850,000	2,000,000
	Mercury	543	100
TP 1-1 (stained soil)	Chromium	13,200	10,000
	Copper	65,000	25,000
	Iron	20,900,000	2,000,000
	Mercury	989	100
	Nickel	114,000	13,000
	Zinc	83,400	20,000
TP 1-2 (stained soil)	Benzo (a) pyrene	440	61
	Chrysene	750	400
TP 4-1 (stained soil)	Cadmium	35,300	1,000
	Chromium	40,500	10,000
	Copper	54,500	25,000
	Iron	119,000,000	2,000,000
	Mercury	545	100
	Nickel	706,000	13,000
	Zinc	70,600	20,000
TP 5-1	Benzo (a) anthrecene	1,000	224
	Chrysene	1,100	400
	Dibenzo (a,h) anthrecene	190	14

March 1995 Soil Vapor Survey

A soil boring and vapor survey was conducted in December of 1994 at four locations on the subject property. Soils in these areas were determined to contain petroleum compounds or metals at concentrations that exceed DEC clean-up criteria. The targeted areas are as follows:

Location 1 – (August 1994 Area 1) An area on the southwest side of the lot, adjacent to a 90-degree interior bend in the property border. This portion lies adjacent to the historic location of five petroleum storage tanks, which were located on the neighboring lot.

Location 2 – (August 1994 Area 5) A former underground storage tank site located in the north central portion of the lot. This site is adjacent to the southeast side of the former Service and Storage Shop building.

Location 3 – (August 1994 Area 4) A former drum storage site located to the southwest of the two-story brick building situated on the northeast side of the lot.

Location 4 – A former underground storage tank site located on the northwest corner of the property (location of November 1994 exploratory excavation). This site is adjacent to the west side of the former Service and Storage Shop building.

SOIL BORING ORGANIC VAPOR CONCENTRATION		
Location	**Number and Depth of Borings**	**Maximum VOC Concentration (ppm)**
Location 1	7 Borings, 1'-5'	150
Location 2	12 Borings, 1'-5'	240
Location 3	19 Borings, 1'-4'	290
Location 4	15 Borings, 2'-5'	166

September 1999 Limited Subsurface Screening Report

Soil Samples

In September of 1999, a total of 40 Geoprobe soil borings were advanced in a grid pattern throughout the subject property (see Figure 4). Based on field screening results, ten soil samples were selected for laboratory analysis for VOCs using EPA Method 8260, and SVOCs using EPA Method 8270.

Concentrations of eight VOCs, including acetone, 2-butanone, and methylene chloride, were detected above regulatory standards. Upstate Laboratories, Inc. indicated in a June 3, 1999 letter that acetone, 2-butanone, and methylene chloride are commonly used laboratory solvents and that it is not uncommon to detect these compounds during laboratory analyses. These three VOCs, therefore, are suspected laboratory contaminants and may not be present in the soils at the site. The remaining VOCs identified above regulatory standards were detected in the soil sample collected from GP-24 [0-4'], which was advanced through the bottom of a catch basin located at the base of a former loading dock in the northwest corner of the property. The concentration of the VOC constituents in this sample and their respective TAGM 4046 RSCOs are as follows:

SUBSURFACE SOIL SAMPLE ANALYTICAL DATA SUMMARY FOR VOCS		
Parameter	**Detected Range (ppm)**	**TAGM 4046 RSCO (ppm)**
Chlorobenzene	5.4	1.7
Ethylbenzene	6.7	5.5
Toluene	0.260	1.5
M-xylene and p-xylene	16.0	1.2 total
O-xylene	4.8	

Laboratory analytical results indicate that no SVOCs were detected above regulatory standards in samples collected from GP-9 [4-8'] and GP-10 [4-8']. Sixteen SVOCs were detected above regulatory standards in the other eight samples (see Table S-2). The concentration of these SVOCs and their respective TAGM 4046 RSCOs are as follows:

SUBSURFACE SOIL SAMPLE ANALYTICAL DATA SUMMARY FOR SVOCS		
Parameter	**Detected Range (ppm)**	**TAGM 4046 RSCO (ppm)**
Anthracene	9.4	50
Benzo(a)anthracene	0.52 to 0.74	0.224
Benzo(a)pyrene	0.44 to 1.0	0.061
Benzo(b)fluoranthene	0.79 to 1.7	1.1
Benzo(g,h,i) perylene	0.23 to 0.83	50
Benzo(k)fluoranthene	0.28 to 0.46	1.1
Chrysene	0.48 and 0.56	0.4
Dibenzo(a,h)anthracene	3.0	0.014
2,4-dinitrophenol	2.1	0.2
Fluorene	5.2	50
Naphthalene	2.8	13
2-nitroaniline	2.1	0.430
4-nitrophenol	2.1	0.1
Phenanthrene	0.51 to 1.5	50
Pyrene	0.82 to 2.5	50
2,4,5-trichlorophenol	2.1 and 51.0	0.1

A total of six surficial shallow soil samples were collected and analyzed for PCBs by EPA Method 8082. One surficial soil sample was collected from each of two GeoProbe borings located along the western property boundary (GP-19 and GP-20) and one surficial soil sample was collected from the monitoring well MW-2 location to determine whether the release of PCBs from the adjacent Winkelman property had impacted the subject site. At the recommendation of NYSDEC, C&H Engineers also collected one surficial soil boring sample from each of three GeoProbe borings (GP-31, GP-2, and GP-9) for screening of PCBs in the northern, eastern, and southern portions of the site, respectively. PCBs were not detected within any of the soil samples collected from the site.

The 40 borings were divided into 10 groups of four. Surficial soil samples from each group of four individual borings was composited into a single sample for laboratory analysis, resulting in a total of 10 composite samples. The composite samples (CS-1 through CS-10) were submitted for laboratory analysis for TAL Metals in order to identify the presence of metals in upper layers of the soil.

Laboratory analytical results detected TAL Metals above RSCOs in each of the ten samples (CS-1 through CS-10). The concentration of these metal constituents and their respective TAGM 4046 RSCOs or respective Eastern US Background concentrations are as follows:

SUBSURFACE SOIL SAMPLE ANALYTICAL DATA SUMMARY FOR METALS		
Parameter	**Detected Range (ppm)**	**RSCO or Eastern US Background (ppm)**
Cadmium	2.15 to 18.1	1
Calcium	84,900 to 131,000	35,000
Chromium	41.8 and 232	40
Copper	59.3 to 114	50
Lead	1,090	500
Magnesium	5,070 to 32,600	5,000
Mercury	0.3	0.2
Nickel	38 to 2,120	25
Zinc	68.3 to 880	50

A total of four samples were also collected from borings advanced in the vicinity of each of the four areas of soil concern identified in the 1995 Soil Vapor Survey. These samples were analyzed for VOCs, SVOCs, and metals using the TCLP procedure. An additional six shallow surficial soil samples were collected at the site for PCB analysis using EPA Method 8082.

TCLP laboratory analytical results for the soil samples collected from the GeoProbe borings GP-16 [4-8'], GP-22 [0-4'], GP-25 [0-4'], and GP-34 [4-8'] indicate that the pH for the four samples ranged from 6.7 to 8.0 SU and the flash point for each sample was greater than 60°C. These results indicate the samples do not exhibit the characteristic of corrosivity. Laboratory results did not detect concentrations of sulfide or cyanide above method detection limits, which indicate the samples do not exhibit the characteristic of reactivity. In addition, no VOCs or SVOCs were detected above method detection limits, and laboratory analytical results indicate that four metals (barium, cadmium, lead, and silver) were detected at concentrations below hazardous waste regulatory levels. These soil samples, therefore, do not exhibit characteristics of hazardous waste.

Analytical results from the TCLP extracts, however, indicate concentrations of four metals above NYSDEC groundwater quality standards. The concentration of these metal constituents and their respective groundwater quality standards are as follows:

DATA SUMMARY FOR METALS EXCEEDENCES VIA TCLP ANALYTICAL METHOD			
Analyte	**Boring**	**Detected Concentration (mg/l)**	**Groundwater Quality Standard (mg/l)**
Barium	GP-25 [0-4']	1.4	1.0
Cadmium	GP-22 [0-4']	0.013	0.005
Lead	GP-25 [0-4']	1.6	0.025
Silver	GP-16 [4-8']	0.06	0.05

It should be noted that PCBs were not detected within any of the soil samples collected from the site.

C&H Engineers collected one groundwater sample from each of the four groundwater monitoring wells on April 16, 1999. Samples collected from each of the four monitoring wells were analyzed for TCL VOCs and SVOCs by EPA Methods 8260 and 8270, respectively, and TAL Metals by EPA Method 200.7, while the samples collected from MW-2 and MW-3 were also analyzed for PCBs by EPA Method 608.

The laboratory analytical report indicated that no SVOCs or PCBs were detected at or above the method detection limit in the groundwater samples (see Tables GW-2 and GW-4). VOCs were detected at or above the method detection limits in the groundwater sample collected from MW-2 (see Table GW-1). Two VOCs, carbon disulfide and methylene chloride, were detected below NYSDEC groundwater quality standards in the groundwater samples collected from MW-1 and MW-4, and MW-3, respectively. As discussed in Section 3.2, Upstate indicated in a June 3, 1999 letter that methylene chloride is a commonly used laboratory solvent and that it is not uncommon to detect this parameter during laboratory analysis. Methylene chloride, therefore, is a suspected laboratory contaminant and may not be present in the groundwater at the site. According to Upstate, carbon disulfide detected at low levels in groundwater samples that have been preserved may be the result of a chemical reaction between sulfur in the groundwater with the sample preservative (hydrochloric acid). However, carbon disulfide is also a solvent and, therefore, may be present in the groundwater as a result of historic operations conducted at the property.

Concentrations of eight TAL metals were detected above NYSDEC groundwater quality standards in the samples collected from the four monitoring wells. The concentration of these metal constituents and their respective groundwater quality standards are as follows:

SUBSURFACE SOIL SAMPLE ANALYTICAL DATA SUMMARY FOR METALS

Parameter	Detected Range (µg/l)	Groundwater Quality Standard (µg/l)
Aluminum	1,380 to 23,800	100
Antimony	14.9 to 24.5	3
Cadmium	9.6	5
Iron	1,980 to 36,300	300
Magnesium	83,300	35,000
Manganese	394 to 1060	300
Sodium	59,100 to 435,000	20,000
Vanadium	53.9	14

<u>October 2000 Limited Subsurface Investigation in Parcel D</u>

In December 2000, C&H Engineers advanced 18 test pits throughout Parcel D to determine the horizontal extent of impacted soil. Excavated soils were periodically field-screened for volatile organic compounds (VOCs) with a portable PID to provide an indication of subsurface quality. Samples for field screening activities were collected at 2-foot intervals until groundwater was encountered, approximately 4 feet below grade. The results of the field screening activities follow:

PARCEL D PID READINGS					
Test Pit	Highest PID Reading (ppm)	Test Pit	Highest PID Reading (ppm)	Test Pit	Highest PID Reading (ppm)
1	1.8	7	0.4	13	1.5
2	0.9	8	0.8	14	7.3
3	0.3	9	0.9	15	0.4
4	0.2	10	2.0	16	9.5
5	0.2	11	11.3	17	0.9
6	0.6	12	0.6	18	0.2

In addition to field screening activities, eight soil samples were analyzed for VOCs and semi-volatile organic compounds (SVOCs) after collection from selected test pits based upon:

- PID readings
- Visual and olfactory observations
- Location (test pits at the corners of the sampling area were analyzed to confirm that impacts did not extend past the sampling area)

Analytical results of soil samples collected on Parcel D during the Limited Subsurface Investigation are summarized in the following table:

SUMMARY OF ANALYTICAL RESULTS OF SOIL SAMPLES COLLECTED ON PARCEL D DURING THE LIMITED SUBSURFACE INVESTIGATION									
Compound	**TP-2 0-2'**	**TP-3 0-2'**	**TP-8 2-3'**	**TP-10 2-4'**	**TP-11 0-2'**	**TP-15 0-2'**	**TP-16 0-2'**	**TP-18 0-2'**	**NYSDEC Guidance Value**
VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260 (µg/kg)									
Trichlorofluoromethane	6	ND	4	11	ND	ND	ND	4	Not Listed
Methylene Chloride	21	12	***120***	22	ND	***390***	ND	18	100
Chloroform	1	2	7	2	ND	ND	ND	2	300
Ethylbenzene	ND	ND	ND	ND	***170***	ND	ND	ND	100
m&p-Xylene	ND	ND	ND	ND	***280***	ND	ND	ND	100
n-Propylbenzene	ND	ND	ND	ND	***220***	ND	***170***	ND	100
1,3,5-Trimethylbenzene	ND	ND	ND	ND	***720***	ND	***230***	ND	100
Tert-Butylbenzene	ND	ND	ND	ND	***150***	ND	***430***	ND	100
Sec-Butylbenzene	ND	ND	ND	ND	***400***	ND	***620***	ND	100
n-Butylbenzene	ND	ND	ND	ND	***380***	84	***410***	ND	100
Naphthalene	ND	ND	ND	ND	***1100***	ND	***280***	ND	200
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	***270***	ND	100
SEMI-VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8270 (µg/kg)									
Phenanthrene	ND	ND	ND	***3600***	***9200***	ND	ND	ND	1000
Fluoranthene	ND	ND	ND	***4000***	ND	ND	410	560	1000
Pyrene	ND	ND	ND	ND	***9200***	ND	640	340	1000

Result in bold indicates concentration above the guidance value.
ND = Parameter not detected within method limits
1 Parameter identified as possible laboratory contaminant by Upstate Laboratories, Inc.

January-March 2001 Soil Excavation in Parcel D

In January 2001, C&H Engineers oversaw the removal of approximately 515 cubic yards of soil located in the southwest corner of Parcel D. The purpose of this excavation was to remove potentially impacted soils in the vicinity of Test Pits 10, 11, and 16. Soil samples were collected from each wall of the excavation, and submitted for laboratory analysis of VOCs and SVOCs. Since laboratory analysis revealed that the northern wall of the excavation contained concentrations of contaminants (fluoranthene, phenanthrene, and pyrene) above NYSDEC guidance values, the excavation was extended to the north in March 2001. Excavated soils were stockpiled within poly-covered soil piles located on the former building slab to the west of the excavation.

SUMMARY OF ANALYTICAL RESULTS OF SOIL SAMPLES COLLECTED FROM A SOIL EXCAVATION LOCATED IN THE SOUTHWEST CORNER OF PARCEL D

Compounds	North Wall	North Wall Phase II	East Wall	South Wall	West Wall	Bottom	NYSDEC Guidance Value1
SEMI-VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8270 (µg/kg)							
Acenaphthene	<8,000	<3,000	<4,000	<8,000	<8,000	<8,000	400
Anthracene	<8,000	<3,000	<4,000	<8,000	<8,000	<8,000	1,000
Benzo(a)anthracene	<8,000	<3,000	<4,000	<8,000	<8,000	<8,000	330
Benzo(b)fluoranthene	<8,000	***3,500***	<4,000	<8,000	<8,000	<8,000	330
Benzo(k)fluoranthene	<8,000	<3,000	<4,000	<8,000	<8,000	<8,000	330
Benzo(g,h,i)perylene	<8,000	<3,000	<4,000	<8,000	<8,000	<8,000	330
Benzo(a)pyrene	<8,000	<3,000	<4,000	<8,000	<8,000	<8,000	330
Chrysene	<8,000	***3,100***	<4,000	<8,000	<8,000	<8,000	330
Dibenz(a,h)anthracene	<8,000	<3,000	<4,000	<8,000	<8,000	<8,000	1,000
Fluoranthene	***9,500***	***5,500***	<4,000	<8,000	<8,000	<8,000	1,000
Fluorene	<8,000	<3,000	<4,000	<8,000	<8,000	<8,000	1,000
Indeno(1,2,3-c,d)pyrene	<8,000	<3,000	<4,000	<8,000	<8,000	<8,000	330
Naphthalene	<6	Not Analyzed	6.6	<6	<6	<6	200
Phenanthrene	***13,000***	***4,900***	<4,000	<8,000	***33,000***	<8,000	1,000
Pyrene	***9,300***	***6,500***	<4,000	<8,000	***38,000***	<8,000	1,000
Lubricating Oil2	Not Analyzed	Not Analyzed	320,000	220,000	17,000,000	2,400,000	----

Notes: 1. TCLP Alternative Guidance Value (NYSDEC STARS Memo #1) reported in units of micrograms per kilogram dry (µg/kg Dry) = parts per billion (ppb).
2. A pattern resembling lubricating oil is present at the estimated concentrations provided.
3. ***Bold*** indicates exceedence of referenced Soil Quality Standard.

June 2001 Subsurface Soil Conditions, Utility Installation Project

Prior to utility installation efforts at the site, a series of test pit excavations were completed along the access road corridor during the week of May 8, 2001. A total of nine test pits were advanced, and soil samples from each were collected and analyzed for VOCs and SVOCs. VOCs were not detected within any of the soil samples.

Although the detectable presence of base-neutral SVOCs were not detected within the soil sample collected from test pits TP-1, TP-2, TP-3, and TP-4, the presence of specific semi-volatile organic compounds was identified within the remaining soil samples. In addition, analysis of TP-8 revealed the presence of lubricating oil at an estimated concentration of 1,000 ppm.

SVOCS DETECTED ABOVE TAGM 4046 RSCOS – UTILITY INSTALLATION PROJECT					
Parameter	**TP-5**	**TP-6**	**TP-7**	**TP-9**	**TAGM 4046 RSCO**
SEMI-VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8270 (µg/kg)					
Benzo (a) anthrecene	**4,000**	**2,100**	**560**	**560**	222
Benzo (b) fluoranthene	**4,800**	**4,300**	610	540	1,100
Benzo (k) fluoranthene	**1,900**	**1,600**	ND	ND	1,100
Benzo (a) pyrene	**3,600**	**2,800**	**630**	ND	61
Chrysene	**4,600**	**3,800**	**680**	**690**	400
Dibenzo (a, h) anthrecene	**1,100**	**1,100**	ND	ND	14

Notes: 1. ***Bold*** indicates exceedence of referenced Soil Quality Standard.

January 2002 Soil Berm Sampling Results

In December of 2001, BDA personnel collected soil samples from the bermed soil piles located at the subject site, under the direction of the NYSDEC Spills Program. Soil samples were collected from the soil berm every 30-43 linear feet (1 sample every 70 cubic yards) for a total of 28 locations.

These samples were analyzed for VOCs using EPA 8260 and SVOCs using EPA 8270 base neutrals to quantify potential petroleum related contamination within the soil berms.

Although the presence of VOCs and the majority of SVOCs was not detected within the collected samples, 4 to 5 specific polynuclear aromatic hydrocarbons (PAHs) were consistently identified within each of the 28 soil samples at concentrations which exceed applicable TAGM 4046 RSCOs (see Exhibit 1). The PAHs consistently identified consisted of:

- benzo (a) anthracene
- benzo (b) fluoranthene
- benzo (k) fluoranthene
- benzo (a) pyrene
- chrysene

In general, the majority of soil samples exhibited PAH concentrations lower than the soil samples collected during the October 2000 Limited Subsurface Investigation.

1.6 SI/RA Approach

Site Investigations

Site investigation efforts included the completion of nine test trenches, 20 test pits, and 40 surface soil scrapings (see Figures 6 and 7).

To assess potential shallow soil and groundwater quality impacts within the property five additional groundwater monitoring wells were installed at the site (see Figure 8).

To assess potential impacts to adjacent properties, three geoprobe borings were advanced on adjacent properties, and one boring was advanced along the southern property border (see Figures 6 and 8).

Three test trenches and eight test pits were advanced in the vicinity of monitoring well MW-5-03 in attempts to identify potential sources of petroleum product observed within the well (see Figure 6).

To assess the LNAPL product recharge rate within MW-5-03, baildown tests were completed on May 24-25, and June 24-July 1, 2005.

After receipt of laboratory data reports, a final data usability review was performed to confirm the validity of the data. The laboratory data results were compared to applicable NYSDEC standards and recommended soil cleanup objectives and were also utilized to prepare a site-specific qualitative human health risk assessment. The results of site reconnaissance, field investigations, media sampling, laboratory analysis, and data usability review were compiled and interpreted within this Site Investigation Report.

Development of Remedial Alternatives

As SI laboratory data reports were received, and areas of environmental concern for the site were identified, remedial alternative development efforts were initiated. As the first effort for this task, remedial action objectives, which specify remediation goals in terms of contaminants identified, media of concern, and potential exposure pathways, were identified, after which potential general remedial response actions, such as treatment, containment, excavation, extraction, disposal, and institutional actions, were identified. After listing applicable general response actions, suitable response action technologies for the remediation of contaminated media were identified.

The respective response action technologies were then assembled into remedial alternatives that were evaluated and screened based upon criteria including effectiveness (long term and short term), reliability, implementability, and cost. Upon completion of remedial alternative screening task, a detailed remedial alternative evaluation was conducted. In general, the alternatives were evaluated in accordance with specific criteria to determine a cost-effective and protective remedy.

The NYSDEC will subsequently evaluate the remedial alternatives based on community acceptance. The results of the remedial alternative development and evaluation previously mentioned have been compiled within the Remedial Alternative Report section of this SI/RAR.

2.0 SITE INVESTIGATION ACTIVITIES AND METHODOLOGIES

The primary task of the Site Investigation involved site characterization, which included activities to determine the nature and extent of contamination at the site. For this project, site characterization included: 1) the collection and assessment of existing data; 2) subcontractor procurement; 3) the completion of field investigations; 4) the completion of a qualitative human health exposure assessment, and 5) SI Report Preparation.

2.1 Field Investigations

The following field investigations were completed as part of the Site Investigation to determine the nature and extent of contamination at the site.

2.1.1 Preliminary Site Reconnaissance

Several preliminary site reconnaissance events were completed in an effort to identify obvious areas of environmental concern, areas of concern identified in previous investigations, and general site conditions. An effort was also made to locate groundwater monitoring wells installed during past investigation efforts at the subject property. It was determined that only well MW-2-99 was still intact, and a significant amount of standing water was located in the central and southern portions (±1 acre) of the subject property.

On January 10, 2003, BDA personnel, Bruce Ellsworth of the City of Syracuse Department of Public Works (DPW), and Dick Oliver of Marcor Remediation Inc. (Marcor) met at the subject property and coordinated efforts to clear composting debris from the work area.

A metes and bounds/test trench location survey of the subject site was completed by Bryant Associates.

2.1.2 Subsurface Soil Investigations

In an effort to further characterize the extent of impacted soil and groundwater in specific areas both on and off the subject property, and to assess the potential for off-site migration of constituents from the subject property, a series of phased subsurface investigations were completed at the site.

On May 12-21, 2003 Marcor conducted subsurface investigations at the subject property. Prior to conducting the field activities, Marcor contacted Dig Safely New York to identify existing buried utilities at the site. During operations on May 12, Marcor excavated a temporary drainage swale to divert standing water from the work area. The advancement of trenches C, H, and I also required the movement of soil berms located at the subject site.

Marcor excavated nine test trenches utilizing a tracked excavator and a rubber tired backhoe with a hydraulic jackhammer attachment. Trenches were advanced horizontally in lengths ranging from 110'-230' and to a depth of 8' below grade except in areas where concrete slabs and footers could not be penetrated. Soil conditions, odors, and soil vapor screening using a photo-ionization detector (PID) were noted for each excavation. Areas displaying stained soil conditions, odors, or high PID readings were marked using survey flags. Ten soil samples were then collected from these areas and placed within laboratory prepared containers and sealed with aluminum foil. The soil samples were then allowed to heat to approximately 70° F. The container headspace was then screened using a PID. Three samples from each trench (27 Total) were then selected for laboratory analysis based upon headspace screening, soil discoloration, and odor (see Figure 9). Soil samples were analyzed for TCL VOCs, TCL SVOCs, and TAL Metals. After each sampling event occurred, the trenches were backfilled using the excavated soils.

Marcor excavated 20 test pits using a tracked excavator. The pits were advanced to depths ranging from 4 to 8 feet below grade. Soil conditions, odors, and soil vapor screening using a photo-ionization detector (PID) were carefully noted for each excavation (see Figure 10). One sample was then collected from each test pit, placed within a laboratory prepared container, and sealed with aluminum foil. The soil samples were allowed to heat to approximately 70° F. The container headspace was then screened using a PID. A total of 8 samples were then selected for laboratory analysis based upon headspace screening, soil discoloration, and odor. Soil samples were analyzed for TCL VOCs, TCL SVOCs, and TAL Metals. A total of five subsurface soil samples were also selected for PCB analysis. After each sampling event occurred, the test pits were backfilled using the excavated soils. The locations of the nine test trenches and 20 test pits completed as part of the Phase I SI are shown in Figure 6.

On April 5 and 6, 2005, Marcor advanced a total of three test trenches and eight test pits using a tracked excavator in the vicinity of monitoring well MW-5 due to the presence of petroleum product within the monitoring well (Phase III SI). Test excavations were advanced to depths ranging from 10 to 12 feet below ground surface. Soil conditions, odors, and soil vapor screening using a photo-ionization detector (PID) were carefully noted for each excavation (see Figures 11 and 12). A total of five soil samples were then selected for laboratory analysis from within the grossly contaminated area, the perceived limit of the grossly contaminated soil conditions (a black stained peat with petroleum odor), and at locations were excavations could not continue offsite (southern property border). Soil samples were analyzed for TCL VOCs, TCL SVOCs, and petroleum products via NYSDOH analytical method 310.13. After each sampling event occurred, the test pits/trenches were backfilled using the excavated soils.

2.1.3 Groundwater Investigations

On July 23-28, 2003, personnel from BDA and CME Associates mobilized at the site to complete five shallow groundwater monitoring well installations (MW-1-03, MW-2-03, MW-3-03, MW-4-03, and MW-5-03) within the subject property in order to assess the presence of potential shallow groundwater quality impacts at the site. In addition, on May 20, 2004 personnel from BDA and CME Associates mobilized at the site to install two additional wells (MW-3-04 and MW-6-04) to replace wells (MW-2-99 and MW-3-03) that had been destroyed during mulching and emergency vehicle operations at the subject property. The locations of the monitoring wells are shown in Figure 8, while the well boring logs are presented in Figure 13. Each of the subsurface monitoring well borings was completed using continuous split spoon sampling at each monitoring well location, consistent with ASTM D-1586-84, and advanced using a 4¼“ inside diameter hollow stem auger without the use of air or drilling fluids. Continuous sampling was completed as a means to define the unconsolidated geology prior to boring advancement.

During the completion of shallow monitoring well borings, retrieved soil samples were field screened for the presence of volatile organic compounds using a PID. Each of the monitoring well installations was constructed of two-inch diameter PVC tri-lock jointed screen and riser, with locking caps. Consistent with the gravel, sand, and silt conditions identified at the site, each monitoring well was constructed using 10-slot (0.01-inch) well screens and "0-grade" sandpack. Screens, risers and fittings were steam cleaned prior to installation. Split spoons and downhole apparatus/tools were decontaminated (steam cleaned) between samples. Details regarding the location and well screen interval of each monitoring well installed at the site are listed in the following report table.

MONITORING WELL INSTALLATION LOCATION DETAILS		
Well	**Location**	**Well Screen Interval**
MW-1-03	Northeast Corner of Site	7.8 to 18 feet below grade
MW-2-03	North of end of City Crossroads Drive	7.8 to 18 feet below grade
MW-3-03	Northwest Corner of Site	7.8 to 18 feet below grade
MW-4-03	Western Portion of Site	7.8 to 18 feet below grade
MW-5-03	Southwest Portion of Site	7.8 to 18 feet below grade
MW-3-04	Northwest Corner of Site	8.0 to 18 feet below grade
MW-6-04	Southwest Corner of Site	8.0 to 18 feet below grade

A bentonite seal, at least two feet in thickness, was placed following the installation of the sand pack to minimize the potential downward communication (or short-circuiting) of infiltrating surface waters to the local shallow groundwater regime. The balance of the hole was backfilled with a cement/bentonite grout. The placement of annular material was coordinated with the withdrawal of augers or casing to minimize caving around the well screen and riser pipe. Annular material was placed with a tremie to avoid bridging between riser and borehole. For each of the shallow wells, the screen was installed so as to "straddle" the perceived groundwater surface. A vented flush-mount casing with a locking steel cap was installed to surround each PVC well location to maintain well integrity. Each of the monitoring wells was finished by installing a concrete cap, sloped away from the respective well casing, to prevent runoff water infiltration. The void between each steel casing and PVC riser was filled with heavy grade sand to prevent invasion by rodents and insects. During the completion of subsurface drilling tasks, drill cuttings were visually inspected and screened with a PID. Cuttings did not exhibit PID readings in excess of 5 ppm during the well installation process.

Monitoring wells MW-1-03 through MW-5-03 were developed and purged using an electric peristaltic pump on July 28-29, 2003. During well development, turbidity readings were found to improve to values between 111-641 NTUs over the duration of well development. Further well development did not have a significant effect on turbidity.

The top of each monitoring well casing was surveyed to establish the horizontal location and elevation of the measuring point, so that depth to water measurements could be utilized to calculate site specific groundwater elevations, groundwater contours, and groundwater flow directions (see Figure 8).

On August 4, 2003, groundwater samples were collected from each monitoring well means of disposable polyethylene bailers and analyzed for TCL VOCs, SVOCs, TAL metals, PCBs, and pesticides in accordance with NYSDEC Analytical Services Protocol (ASP). During the sampling activities, it was observed that MW-2-99 had been destroyed during mulching operations at the subject site. Thus, BDA was unable to collect groundwater samples from MW-2-99 during the

August 2003 groundwater monitoring event. Site reconnaissance during the spring of 2004 revealed that MW-3-04 had been destroyed during the winter months by either onsite mulching operations, or was struck by emergency vehicles responding to a fire at the adjacent Winkelman building. Two additional wells (MW-3-04, and MW-6-04) were installed on April 20, 2004. Groundwater samples were collected from all of the onsite wells on April 27, 2004.

During the April 2004 groundwater monitoring event, a Light Non-Aqueous Phase Liquid (LNAPL) petroleum product was observed within MW-5-03. Petroleum product from the well was the bailed and stored onsite within a sealed 5-gallon plastic bucket. On October 28, 2004, BDA under the supervision of Karen Cahill of the NYSDEC, collected a sample of the petroleum product for analysis. The sample was analyzed using EPA analytical Method 1664 (Oil and Grease), and NYSDOH 310.13 (Total Petroleum Hydrocarbon). Oil and grease concentration of the product was measured at 790,000 ppm (79%) of the sample, and diesel concentration of 1,000,000 ppm (100%) respectively. These analytical results are unqualified and were collected for informational purposes only. On December 13, 2004 BDA returned to the subject site with a multi-phase groundwater probe and determined the thickness of the LNAPL product layer to be 0.74 feet.

During the April 5 and 6, 2005 subsurface investigation conducted in the vicinity of MW-5-03, soil samples were collected from the black peat/fill layer exhibiting a petroleum odor in the vicinity of the groundwater well. These soil samples, along with a sample of the LNAPL product observed within MW-5-03 were analyzed using NYSDOH 310.14 (Petroleum Fingerprint). These analytical results are unqualified and were collected for informational purposes only. Comparison of the chromatographic analysis from the LNAPL product within MW-5-03 and the surrounding stained soils indicate that they contain the same material (unidentified hydrocarbons in the diesel fuel range).

On May 24 and 25, 2005 BDA conducted a baildown slug test of MW-5-03. The baildown test was conducted using a disposable polyethylene bailer on the afternoon of May 24, 2005. Prior to bailing the well, an LNAPL product thickness of 0.93 feet was recorded using a multi-phase groundwater probe. The well was then bailed until 10 well volumes were removed and allowed to recharge overnight (15 hours). On the morning of May 25, 2005, the LNAPL product thickness was measured to be 0.49 feet.

On June 24 through July 1, 2005 BDA conducted a limited investigation of LNAPL recharge rates at MW-5-03. A baildown test was conducted using a disposable polyethylene bailer on the afternoon of June 24, 2005. Prior to bailing the well, an LNAPL product thickness of 0.60 feet was recorded using a multi-phase groundwater probe. The well was bailed until 10 well volumes were removed and allowed to recharge over the weekend. The following week, BDA returned to the site on three occasions to measure the LNAPL product thickness and remove the LNAPL layer using an oil-absorbent bailer (see table below).

LNAPL PRODUCT THICKNESS JUNE 24 – JULY 1, 2005			
Date	**Top of LNAPL (ft)**	**Bottom of LNAPL (ft)**	**LNAPL Thickness (ft)**
6/24/05	14.76	15.36	0.60
6/27/05	14.82	15.42	0.60
6/29/05	14.86	15.14	0.28
7/1/05	14.90	15.04	0.14

2.1.4 Surface Soil Investigations

On June 26-28, 2003, personnel from BDA sampled surficial soils at the site in order to understand the nature and extent of the metals present in shallow soils. The sample locations were based on a modified 100 foot grid pattern established by utilizing a hand-held GPS device and measuring tape (see Figure 7). Prior to sampling the soil, vegetation and debris was cleared from the sample location, and discrete samples were collected from the top 0-2" of soil. A total of 40 samples were collected using disposable stainless steel spoons and placed in laboratory prepared containers. Surficial soil samples were analyzed for TAL metals, mercury, and cyanide. A total of six soil samples were also selected for PCB analysis.

2.1.5 Offsite Investigations

On October 27, 2004 Marcor advanced a total of four geoprobe borings to assess offsite impacts (see Figures 6 and 8). Borings were advanced using a 2-inch diameter macro-core sampling tube, and continuous split spoon soil sampling was conducted to subsurface depths ranging from 16-20 feet below grade. During the completion of subsurface borings at these locations soil conditions were recorded and soil samples were collected for field headspace analysis utilizing a PID (see Figure 14). The samples collected from each of the borings at depths that displayed the greatest perceived impacts (based on field conditions such as elevated PID readings, odors, staining, etc) were analyzed for TCL VOCs + TICS, TCL SVOCs + TICS, TAL Metals, and PCBs.

During the completion of subsurface borings at these locations, temporary 1" PVC groundwater wells were installed within the borings. Groundwater samples were collected on October 27, 28, and November 1 and analyzed for TCL VOCs + TICS, TCL SVOCs + TICS, TAL Metals, and PCBs.

2.1.6 Groundwater Flow Directions

Monitoring well locations and elevations were surveyed by Bryant Associates to establish the horizontal location and elevation of the measuring point, so that depth to water measurements could be utilized to calculate site specific groundwater elevations, groundwater contours, and groundwater flow directions. On December 13, 2004, depths to groundwater were measured within each of the six site monitoring wells, and monitoring wells P-1-DEC and P-7-DEC located on the western adjacent D.W. Winkleman Company property. The depth to groundwater and calculated groundwater elevations for each of the site monitoring wells and the two offsite monitoring wells is summarized in the following table.

SUMMARY OF GROUNDWATER DEPTH AND ELEVATION MEASUREMENTS DECEMBER 13, 2004				
Monitoring Well	**Screen Interval (ft)**	**Casing/PVC Elevation (ft)**	**Depth to Water (ft)**	**Groundwater Elevation (ft)**
MW-1-03	7.8-18	417.77	3.99	413.78
P-1-DEC	unknown	415.07	3.08	411.99
MW-2-03	7.8-18	417.92	5.98	411.94
P-7-DEC	unknown	415.90	4.06	411.84
MW-3-04	7.8-18	416.43	5.08	411.35
MW-4-03	7.8-18	417.97	8.35	409.62
MW-6-04	8-18	417.97	8.68	409.29
MW-5-03	8-18	418.88	14.42	404.46

As shown on Figure 8, shallow groundwater flow at the site was calculated to trend towards the south and southwest over a majority of the site (hydraulic gradient 1.3 percent). However groundwater flow on the western portion of the property trends towards the south and southeast (hydraulic gradient of 1.7 percent). As previously noted (from the results of test trench excavations), it appears that perched groundwater conditions exist within veins of fill materials throughout the site.

3.0 DATA USABILITY REVIEW

As part of the Site Investigation, media samples were collected from subsurface test trench and test pit excavations, surficial soils, and groundwater monitoring wells. The collected groundwater, surface soil, and subsurface soil samples were analyzed for TCL parameters, in accordance with EPA approved methodologies. For the samples collected for TCL parameter analysis, the project-specific analytical laboratory, O'Brien & Gere Laboratories, Inc. (OBG), provided analytical data reports in the form of NYSDEC ASP Category B reportables/deliverables packages.

OBG completed a review of the generated analytical data for compliance with Quality Control (QC) acceptance limits as specified in the applicable ASP method for each analysis. The following QC operations and items are considered in the validation of reported results: holding times; surrogate recovery; spiked sample recovery; duplicates/spike duplicate precision; tuning criteria; internal standard variation; continuing calibration variation; reference (check) sample recovery, and instrument, method, trip, and field blanks. The appropriate frequency for each operation is also considered.

Laboratory data was evaluated according to the quality assurance/ quality control requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol, September 1989, Rev. 06/2000, and the cited method. As referenced by the laboratory in the Data Usability Summary Reports, every effort has been made to report data that is compliant with the EPA methodology cited for each analysis. In cases where the laboratory was unable to meet all method requirements prior to sample expiry, either due to the nature of the sample or other technical difficulty, results are reported with qualification with the understanding that qualified results may not be suitable for compliance purposes.

In an effort to provide adequate, compliant, and defensible data, consistent with NYSDEC guidance, analytical data generated as part of the site investigations was reviewed by DataVal, Inc. The results of the internal laboratory review, validation, and usability assessment are included within each delivery group of analytical data. The project Data Usability Summary Reports will be submitted to the Department under separate cover. Additional copies of the project Analytical Data Reports and Data Usability Summary Reports are available upon request.

In general, a vast majority of the data produced during the SI activities is considered technically defensible and completely usable in its present form. The rejected data was limited to:

- The copper results from every test trench sample except T-H-01, due to unacceptable matrix spike recoveries
- The 3,3' dichlorobenzidine results from off-site soil samples, due to an extremely low spiked blank recovery
- The hexachlorocyclopentadiene, 2,4-dinitrophenol, and phenanthrene results in the additional trenches and test pits, due to unacceptable spiked sample recoveries.

Data qualification information is included within the analytical data tables included as Tables 1 through 22 of this report. The following is a detailed summary of the qualified data results prepared by DataVal, Inc.:

3.1 Sample Delivery Group 5406

Miscellaneous soil samples analyzed for VOCs, SVOCs, and Inorganics

VOCs

Acetone and methylene chloride were detected in the blanks associated with this group of samples. Based on this observation, methylene chloride should be considered undetected in each program sample. The acetone result from M-2 (1') has been similarly qualified.

The acetone results reported from this group of samples have been qualified as estimations due to low matrix spike recoveries.

The negative 1, 1, 2, 2,-tetrachloroethane result reported for each program sample has been qualified as an estimation due to low internal standard response.

SVOCs

The benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene results from M-1(3') and M-3(3.5') have been qualified as estimations due to poor internal standard response.

The identifications of dibenz(a,h)anthracene in M-3(3') and M-4(3.5') and di-n-butylphthalate in M-4(3.5') could not be verified, based on the mass spectra references included in the raw data. These analytes should be considered undetected in the affected samples.

Inorganics

The chromium, manganese, and selenium results obtained from this group of samples have been qualified as estimations due to low matrix spike recoveries.

Magnesium results have been qualified as estimations based on the poor precision demonstrated by laboratory split duplicate samples.

The results reported from M-1(3'), M-2(1'), and M-3(3'), including mercury and cyanide have been qualified as estimations because the samples contained more than 50% moisture.

3.2 Sample Delivery Group 5407

Test pit soil samples analyzed for VOCs, SVOCs, and Inorganics

VOCs

Acetone and methylene chloride were detected in the blanks associated with this group of samples. Based on this observation, acetone and methylene chloride concentrations below ten times the level of the contaminated blanks should be considered undetected.

The negative 1, 1, 2, 2,-tetrachloroethane result reported for every sample except TP-2(5') and the Trip Blank have been qualified as estimations due to a low internal standard response.

The identifications of 2-hexanone in TP-3(3') and 4-methyl-2-pentanone in TP-6(3') were not conclusive, based on the mass spectra references included in the raw data. Both analytes should be considered undetected in the affected samples.

SVOCs

The bis(2-ethylhexyl)phthalate result from TP-15(3'), the phenol, 4-nitrophenol and pentachlorophenol results from TP-2(5'), and the hexachlorocyclopentadiene result from every sample except TP-3(3') and TP-8(2') have been qualified as estimations due to poor calibration performance.

The benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthrecene, and benzo(g,h,i)perylene results from TP-6(3') and TP-8(2'), and benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthrecene and benzo(g,h,i)perylene results from TP-6(3'), TP-11(3'), and TP-15(3') have been qualified as estimations due to a low internal standard response.

Identifications of several analytes detected in this group of samples could not be verified, based on the mass spectra references included in the raw data. These analytes should be considered undetected in the affected samples. The affected results are listed below:

TP-3(3')	anthracene
TP-6(3')	acenaphthylene, dibenz(a,h)anthrecene
TP-8(2')	phenol, 4-methylphenol, anthracene

TP-10(2')	napthalene, benzo(a)anthracene
TP-11(3')	acenaphthene, anthracene
TP-13(4')	benzo(g,h,i)perylene
TP-15(3')	anthracene, dibenz(a,h)anthrecene

Inorganics

The antimony and zinc results obtained from this group of samples have been qualified as estimations due to low matrix spike recoveries.

Several samples contained iron concentrations that exceeded the linear range of the laboratory's ICP. The affected iron results, and all metals with inter-element corrections based on iron should be obtained from repeated analyses. These samples were diluted and reanalyzed.

3.3 Sample Delivery Group 5409

Test pit and miscellaneous soil samples analyzed for PCBs.

PCBs

Reported data should be considered technically defensible, completely usable, and without qualifications in its present form.

3.4 Sample Delivery Groups 5315, 5327, 5346, 5375, 5389, and 5398

Test trench soil samples analyzed for VOCs, SVOCs, and inorganics.

VOCs

Acetone and methylene chloride were detected in the blanks associated with this group of samples. Based on this observation, acetone and methylene chloride concentrations below ten times the level of the contaminated blanks should be considered undetected.

Positive results reported from T-E-01(2'), T-C-01(4'), and T-C-03(3') have been qualified as estimations due to high surrogate standard recoveries.

The acetone results reported from this group of samples have been qualified as estimations due to low matrix spike recoveries.

The negative 1,1,2,2-tetrachloroethane results reported from T-G-01(6'), T-F-01(2.5'), T-A-01(4'), T-B-03(5'), T-B-01(3'), T-B-02(3'), and T-D-03(3') have been qualified as estimations due to a low internal standard response.

The results reported from T-B-01(3') and T-B-02(3') have been qualified as estimations because the samples were not properly chilled prior to arriving at the laboratory.

SVOCs

The 2-methylphenol results reported from T-I-01(7.5'), T-I-02(8'), T-I-03(1'), T-H-01(7'), T-H-02(7'), T-G-01(6'), T-G-02(3'), and T-G-0(2') have been qualified as estimations due to a large shift in calibration response.

The benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthrecene, and benzo(g,h,i)perylene results from T-A-01(4'), T-A-02(3'), T-A-03(3'), T-B-01(3'), and T-B-02(3') have been qualified as estimations due to poor internal standard performance.

The results reported from T-B-01(3') and T-B-02(3') have been qualified as estimations because the samples were not properly chilled prior to arriving at the laboratory.

The following analyte identifications could not be verified, based on the mass spectra references included in the raw data. The analytes should be considered undetected in the affected samples.

T-F-01(2.5')	anthracene, indeno(1,2,-cd)pyrene, dibenz(a,h)anthracene
T-F-03(4')	phenol
T-E-01(2')	anthracene
T-E-02(4')	dibenz(a,h)anthracene
T-E-03(2')	dibenzofuran
T-B-01(3')	anthracene
T-B-02(3')	anthracene
T-B-03(5')	dibenz(a,h)anthracene
T-D-03(3')	fluoranthene
T-C-01(4')	carbazole
T-C-02(4')	naphthalene

Inorganics

The antimony, arsenic, manganese, nickel, silver, thallium, and zinc results obtained from this group of samples have been qualified as estimations due to unacceptable matrix spike recoveries. The selenium results from every sample except T-F-02(4'), T-C-01(4'), and T-C-03(3') have been similarly qualified. The copper results from every sample except T-H-01(7') have been rejected.

The sodium and vanadium results from this group of samples have been qualified as estimations due to poor serial dilution performance.

The results reported from T-A-02(3'), T-A-03(3'), T-B-02(3'), and T-B-03(5'), including mercury and cyanide, have been qualified as estimations because the samples contained more than 50% moisture.

The cyanide results reported from T-B-01(3') and T-B-02(3') have been qualified as estimations because the samples were not properly chilled prior to arriving at the laboratory.

3.5 Sample Delivery Groups 5764 and 5765

Surficial soil samples analyzed for Inorganics.

The lead and thallium results reported from SS-30, SS-31, SS-32, SS-33, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, and SS-40; and thallium results from SS-7, SS-8, SS-9, SS-10, SS-11, and SS-12 have been qualified as estimations due to low contract required detection limit standards recoveries.

The antimony, chromium, manganese, and thallium results obtained from this group of samples have been qualified as estimations due to unacceptable matrix spike recoveries.

Poor precision was demonstrated by the chromium, iron, and nickel concentrations obtained from field spilt duplicate samples. Chromium, iron, and nickel results have been qualified as estimations.

The copper, nickel, and sodium results from this group of samples have been qualified as estimations due to poor serial dilution performance.

The results reported from SS-28, and SS-33DUP, including mercury and cyanide, have been qualified as estimations because the samples contained more than 50% moisture.

Several samples contained iron concentrations that exceeded the linear range of the laboratory's ICP. The affected iron results, and all metals with inter-element corrections based on iron should be obtained from repeated analyses. These samples were diluted and reanalyzed.

3.6 Sample Delivery Group 5768

Surficial soil samples analyzed for PCBs.

Reported data should be considered technically defensible, completely usable, and without qualifications in its present form.

3.7 Sample Delivery Group 5774

Miscellaneous soil samples analyzed for VOCs, SVOCs, and inorganics.

VOCs

The acetone concentration reported from M-6DUP has been qualified as an estimation. It is assumed to represent a laboratory or program artifact.

The negative 1,1,2,2-tetrachloroethane result reported from each program sample has been qualified as an estimation due to low internal standard response

SVOCs

The pyrene, butylbenzylphthalate, 3,3-dichlorobenzidine, benzo(a)anthracene, bis(2-ethylhexyl)phthalate, chrysene, and di-n-octylphthalate results from M-6, and the benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, and denzo(g,h,iperylene results from both samples have been qualified as estimations due to poor internal standard performance.

4-Chloroaniline results have been qualified as estimations due to low spiked blank recoveries.

Fluorene results have been flagged as estimations because field split duplicate samples demonstrated poor measurement precision.

Indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene results have been qualified due to poor calibration performance.

The identifications of dibenz(a,h)anthracene and bis(2-ethylhexyl)phthalate from both program samples could not be verified, based on the mass spectra references included in the raw data. These analytes should be considered undetected.

Inorganics

The thallium results reported from this group of samples have been qualified as estimations due to poor contract required detection limit standards performance.

A matrix spike sample, a serial dilution, and laboratory split duplicates were not analyzed with this group of samples. Although omitting any one of these checks might not necessitate data qualifications, omitting all of the site specific QC must be considered a significant breach of ASP protocol. The results reported from this group of samples have been qualified as estimations.

3.8 Sample Delivery Group 6054

First round of groundwater samples; analyzed for VOCs, SVOCs, and inorganics, PCBs, and Pesticides.

VOCs

Acetone results have been qualified as estimations due to poor calibration performance.

Acetone and bromomethane results have been qualified due to low spike sample and spike blank recoveries.

SVOCs

The bis(2-ethylhexyl)phthalate concentrations reported from this group of samples are assumed to represent laboratory or program artifacts. Bis(2-ethylhexyl)phthalate should be considered undetected in this group of samples. The positive diethylphthalate results reported from MW-1-03, MW-2-03, MW-4-03, and MW-5-03 have been flagged as estimations because the may also represent artifacts.

The 2,2'-oxybis(1-chloropropane) and 4-nitrophenol results reported from MW-2-03 and diethylphthalate results from MW-2-03 have been qualified as estimations due to poor calibration performance.

Inorganics

The aluminum, iron, lead, and zinc results reported from this group of sample have been qualified as estimations due to poor agreement between field split duplicate samples.

The field custody records and laboratory worksheets do not indicated that this group of samples was properly preserved at the time of collection. Based on this omission, the results reported from this group of samples have been qualified as estimations.

PCBs

Reported data should be considered technically defensible, completely usable, and without qualifications.

Pesticides

Reported data should be considered technically defensible, completely usable, and without qualifications.

3.9 Sample Delivery Group 7778

Second round of groundwater samples; analyzed for VOCs, SVOCs, and inorganics, PCBs, and Pesticides.

VOCs

Acetone and methylene chloride were detected in the trip blank associated with this delivery group. Based on this observation, acetone should be considered undetected in this group of samples. Methylene chloride was not detected in samples.

Trichloroethylene results have been qualified as estimations due to poor calibration response.

The bromomethane, acetone, 2-butanone, and 2-hexanone results reported from this group of samples have been qualified as estimations due to low matrix spike recoveries.

SVOCs

The 4,6-dinitro-2-methylphenol, n-nitrosodiphenylamine, 4-bromo-phenylether, hexachlorobenzene, pentachlorophenol, phenanthrene, anthracene, cabazole, di-n-butylphalate, fluoranthene, pyrene, butylbenzylphthalate, 3,3'-dichlorobenzidine, benzo(a)-phthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)-pyrene, indeno(1,2,3-ce)pyrene, dibenz(a,h)anthracene, and benzo(g,h,I)perylene results reported from the initial (1:5) dilution analysis of MW-5-03 have been qualified as estimations due to poor internal standard performance.

The presence of bis(2-ethylhexyl)phthalate in MW-4-03, MW-6-04, and the field duplicate is assumed to represent a laboratory artifact and should be considered undetected in these samples.

Inorganics

The thallium results from MW-1-03 and MW-2-03, and the lead results from MW-3-04, MW-4-03, MW-6-04, and the field duplicate have been qualified as estimations due to poor CRDL performance.

PCBs

Reported data should be considered technically defensible, completely usable, and without qualifications.

Pesticides

Endosulfan II was reported as present in MW-5-03. However, the concentrations obtained from both chromatography columns differed significantly (0.010 ug/l and 0.053 ug/l). When the level of disturbance in the baselines of both columns is considered, it is felt very unlikely that this analyte is present. Endosulfan II should be interpreted as undetected in MW-5-03.

3.10 Sample Delivery Groups 9251, 9256, and 9270

Offsite soil and groundwater samples; analyzed for VOCs, SVOCs, and inorganics, and PCBs.

VOCs

Methylene chloride was detected in the blanks associated with this group of samples. Based upon this observation, methylene chloride should be considered in each program sample.

The trichloroethylene result reported from each aqueous sample has been qualified as an estimation due to poor calibration performance.

The acetone concentration reported from B-1-04 has been qualified as an estimation because the result was obtained from an analysis that was performed outside of the twelve hour window defined by the preceding BFB standard.

The acetone and 2-butanone results reported from each aqueous sample have been qualified as estimations due to low Laboratory Control Sample recoveries.

The 1,1,2,2-tetrachloroethane result reported from B-3-04 (8'-12') has been qualified as an estimation due to a low internal standard response.

The TICS reported from B-2-04 (8'-12') and Field Duplicate (B2) have been edited to provide more accurate identifications.

SVOCs

4-Chloroaniline, 3-nitroaniline, 4-nitroaniline, benzo (b) fluoranthene, benzo (k) fluoranthene, benzo (a) pyrene, indeno (1,2,3-cd) pyrene, benzo (g,h,i)perylene and hexachloropenradiene produced unacceptable spiked blank recoveries. The results reported for these analytes have been qualified as estimations in associated samples. The 3,3' dichlorobenzidine results reported from soil samples have been rejected due to an extremely low spiked blank recovery.

A TIC eluting at 3.80 minutes was removed from form 1F of B-1-04(8'-14') and B-4-04(8'-14') because a similar artifact was present in a method blank.

The presence of bis (2-ethylhexyl) phthalate in B-1-04(8'-14'), B-4-04(8'-14'), B-2-04, Field Duplicate B-2, B-3-04, and B-4-04 is assumed to represent a laboratory artifact. The reported concentrations have been flagged as estimations and should only be considered significant if consistent with site history.

Inorganics

The thallium results from B-2-04, Field Duplicate B2, B-3-04, and B-4-04 have been qualified as estimations due to poor CRDL performance.

The antimony and cyanide results reported from each soil sample , the selenium results from B-1-04, and the thallium result from each aqueous sample have been qualified as estimations due to unacceptable matrix spike recoveries.

The aluminum, copper, iron, lead, nickel, and zinc results obtained from aqueous samples, and all chromium results have been qualified as estimations due to the poor measurement precision indicated by the analysis of field split duplicate samples.

PCBs

The PCB results reported from B-1-04 and B-3-04 groundwaters have been qualified as estimations due to a low surrogate standard recovery.

3.11 Sample Delivery Group 97

Additional test pit and test trench subsurface soil samples; analyzed for VOCs and SVOCs.

VOCs

Methylene chloride was detected in the blanks associated with this group of samples. Based on this observation, the methylene chloride concentrations reported from TO-B-1, TPO-5D, and TPO-7 are assumed to represent laboratory artifacts.

The trichloroethylene results reported from this group of samples have been qualified as estimations due to poor calibration performance.

Positive analyte results reported from TO-B-1, TPO-5D, and TPO-7 have been qualified as estimations due to a low internal standard response.

The 1,1,2,2-tetrachloroethane result reported from TO-B-1 has been qualified as an estimation due to a low internal standard response.

The results reported from TPO-1 have been qualified as estimations because the sample was not associated with matrix spiked samples or a spiked blank.

The identification of toluene and ethylbenzene in TO-B-1, and xylene in TPO-7 and TPO-8 could not be confirmed, using the mass spectra references included in the raw data. These analytes should be considered undetected in the affected samples.

The Tenatively Identified Compounds reported from TO-B-1, TPO-5D, TPO-7, and TPO-8 have been edited to provide more accurate identifications.

The results reported from TO-B-1 and TPO-1 have been qualified as estimations because the samples were not maintained at the proper temperature between the time of collection and the time of laboratory receipt.

SVOCs

Four Tenatively Identified Compounds were present in the method blank associated with this group of samples. Similar artifacts were removed from the reports of TO-B-1, TPO-5, and TPO-8.

The concentration of bis(2-ethylhexyl)phthalate present in TPO-8 has been qualified as an estimation because it may represent a laboratory artifact.

Due to unacceptable spiked sample recoveries, positive benzo (a) anthracene, chrysene, benzo (b) fluoranthene, and benzo (a) pyrene results and all fluorene and 3,3'-dichlorobenzidine results have been qualified as estimations. Hexachlorocyclopentadiene, 2,4-dinitrophenol, phenanthrene, and fluoranthene results have been rejected.

Unacceptably low recoveries were reported for the chrysene-d12 and perlyene-d12 additions to TO-B-1, TPO-1, TPO-7l and TPO-8, and the perylene-d12 addition to TPO-5D. The analytes dependent upon the response of these internal standards have been qualified as estimations in the affected samples.

The results reported from TO-B-1 and TPO-1 have been qualified as estimations because the samples were not maintained at the proper temperature between the time of collection and the time of laboratory receipt.

Identifications of several analytes detected in this group of samples could not be verified, based on the mass spectra references included in the raw data. These analytes should be considered undetected in the affected samples. The affected results are listed below.

TO-B-1	benzo (a) anthracene
TPO-5	anthracene, benzo (a) anthracene
TPO-5D	anthracene, fluoranthene, benzo (a) anthracene
TPO-7	anthracene

The TICs reported from TPO-1, TPO-5, TPO-5D, TPO-7 and TPO-8 included identifications that were not conclusive, based on the library searches included in the raw data. Where necessary, Form 1F has been edited.

4.0 SITE INVESTIGATION RESULTS

4.1 Subsurface Soil Investigation Results

In an effort to further characterize the extent of impacted soil and groundwater in specific areas both on and off the subject property, and to assess the potential for off-site migration of constituents from the subject property, a series of phased subsurface investigations were completed at the site. In order to identify the subsurface presence of existing USTs, pipelines, debris, and/or general evidence of contaminant releases at the site, a series of nine test trench excavations and 20 test pit excavations were completed as part of the Site Investigation (Phase I SI). A listing of the subsurface conditions encountered within each of the completed test trench and test pit excavations is included as Figures 9 and 10.

4.1.1 Phase I Soil Investigations - Test Trenches and Test Pits

During the completion of the nine test trench and 20 test pit excavations, the soil conditions encountered were variable, but generally included 3 to 5 feet of concrete and/or urban fill (including sand, and/or silt mixed within concrete, metal, and plastic debris, crushed stone, gravel, brick, ash, cinders, and/or wood debris) overlying black, brown, or white peat/marl to a depth of approximately 10 to 12 feet below grade, underlain by a gray clay material. Groundwater was encountered at varying depths (4'-8') throughout the property. During the advancement of trenches A, C, F, and H veins of perched groundwater layers were encountered at depths ranging from 2'-3'.

A total of 27 soil samples were collected from onsite test trenches, 8 soil samples were collected from onsite test pits, and an additional 5 miscellaneous soil samples were collected from subsurface soils in the Parcel D section of the site. Note that the fifth miscellaneous sample was mistakenly labeled as M-6 (i.e. - there is no M-5 sample).

The most commonly encountered VOCs detected within site soils are acetone and 2-Butanone. Analytical results indicate that acetone is present in excess of the TAGM 4046 RSCO in 15 of the 40 soil samples, and 2-Butanone in 9 of the 40 soil samples. Benzene was observed in excess of the TAGM 4046 RSCO within one sample collected from trench C near the intersection with trench D.

The SVOCs detected in excess of the TAGM 4046 RSCO within site soils include:

- Benzo (a) Pyrene (31 Samples)
- Chrysene (27 samples)
- Benzo (a) anthrecene (26 samples)
- Phenol (9 samples)
- Benzo (b) fluoranthene (9 samples)
- Benzo (k) fluoranthene (8 samples)

- Dibenz (a,h) anthracene (8 samples)
- 4-Methylphenol (3 samples)
- 2-Methylphenol (1 sample)

SUBSURFACE SOIL SAMPLE ANALYTICAL DATA SUMMARY OF ORGANIC COMPOUNDS DETECTED IN EXCESS OF TAGM 4046 RSCO			
Sample ID	**Parameter**	**RSCO (ug/kg)**	**Detected Concentration (ug/kg)**
Test Trenches (see also Table 1)			
T-A-01(4 feet)	Benzo (a) anthracene	224	680
	Chrysene	400	810
	Benzo (a) pyrene	61	690
	Dibenz (a,h) anthracene	14	120
T-A-02 (3 feet)	Acetone	200	550
	Benzo (a) pyrene	61	210
T-B-01 (3 feet)	Benzo (a) pyrene	61	190
T-B-01 (3 feet)	Benzo (a) anthracene	224	320
	Benzo (a) pyrene	61	340
T-B-03 (5 feet)	Acetone	200	370
	Benzo (a) anthracene	224	300
	Benzo (a) pyrene	61	330
T-C-01 (4 feet)	Benzo (a) anthracene	224	1,100
	Chrysene	400	1,100
	Benzo (a) pyrene	61	940
	Dibenz (a,h) anthracene	14	170
T-C-02 (4 feet)	Acetone	200	460
	Benzene	60	230
	Benzo (a) anthracene	224	290
	Benzo (a) pyrene	61	220
T-C-03 (3 feet)	Benzo (a) anthracene	224	290
	Benzo (a) pyrene	61	240
	Dibenz (a,h) anthracene	14	48
T-D-01 (3 feet)	Acetone	200	300
	2- Butanone	300	950
	Phenol	800	1,200
	4-Methylphenol	900	1,700
	Benzo (a) anthracene	224	2,800
	Chrysene	400	3,100
	Benzo (b) fluoranthene	1,100	2,800
	Benzo (k) fluoranthene	1,100	2,500
	Benzo (a) pyrene	61	680
T-D-02 (2 feet)	Acetone	200	350
	2- Butanone	300	920
	Phenol	800	390
	Benzo (a) anthracene	224	2,800
	Chrysene	400	3,000

SUBSURFACE SOIL SAMPLE ANALYTICAL DATA SUMMARY OF ORGANIC COMPOUNDS DETECTED IN EXCESS OF TAGM 4046 RSCO			
Sample ID	**Parameter**	**RSCO (ug/kg)**	**Detected Concentration (ug/kg)**
	Benzo (b) fluoranthene	1,100	3,900
	Benzo (k) fluoranthene	1,100	3,300
	Benzo (a) pyrene	61	4,000
	Dibenz (a,h) anthracene	14	680
T-D-03 (3 feet)	Acetone	200	890
	2- Butanone	300	5,000
	Phenol	800	4,100
	4-Methylphenol	900	11,000
	Chrysene	400	1,600
T-E-01 (2 feet)	Acetone	200	240
	Benzo (a) anthracene	224	560
	Chrysene	400	700
	Benzo (a) pyrene	61	530
T-E-02 (4 feet)	Benzo (a) anthracene	224	2,200
	Chrysene	400	2,800
	Benzo (b) fluoranthene	1,100	2,400
	Benzo (k) fluoranthene	1,100	2,100
	Benzo (a) pyrene	61	2,200
T-E-03 (2 feet)	Benzo (a) anthracene	224	470
	Chrysene	400	610
	Benzo (a) pyrene	61	460
T-F-01 (2.5 feet)	Acetone	200	330
	2- Butanone	300	950
	Phenol	30	110
	Benzo (a) anthracene	224	450
	Chrysene	400	740
	Benzo (a) pyrene	61	480
T-F-02 (4 feet)	2- Butanone	300	420
	Phenol	30	110
	Benzo (a) anthracene	224	2,100
	Chrysene	400	2,300
	Benzo (b) fluoranthene	1,100	2,500
	Benzo (k) fluoranthene	1,100	1,800
	Benzo (a) pyrene	61	780
	Dibenz (a,h) anthracene	14	330
T-F-03 (4 feet)	2- Butanone	300	320
	Benzo (a) anthracene	224	930
	Chrysene	400	950
	Benzo (a) pyrene	61	880
	Dibenz (a,h) anthracene	14	150
T-G-01 (6 feet)	Acetone	200	200
T-G-02 (3 feet)	Acetone	110	330

SUBSURFACE SOIL SAMPLE ANALYTICAL DATA SUMMARY OF ORGANIC COMPOUNDS DETECTED IN EXCESS OF TAGM 4046 RSCO			
Sample ID	**Parameter**	**RSCO (ug/kg)**	**Detected Concentration (ug/kg)**
	2- Butanone	300	1,600
	Phenol	30	1,100
	Benzo (a) pyrene	61	100
T-G-03 (2 feet)	2- Butanone	300	320
	Phenol	30	480
	Benzo (a) anthracene	224	270
	Chrysene	400	430
	Benzo (b) fluoranthene	1,100	1,900
	Benzo (a) pyrene	61	490
	Dibenz (a,h) anthracene	14	160
T-H-01 (7 feet)	Acetone	200	460
	Benzo (a) anthracene	224	750
	Chrysene	400	700
	Benzo (a) pyrene	61	650
T-H-02 (7 feet)	Acetone	200	250
T-H-03 (3 feet)	Benzo (a) pyrene	61	130
T-I-01 (7.5 feet)	Benzo (a) anthracene	224	710
	Chrysene	400	720
	Benzo (a) pyrene	61	640
T-I-02 (8 feet)	Acetone	200	170
	Benzo (a) anthracene	224	680
	Chrysene	400	730
	Benzo (a) pyrene	61	600
T-I-03 (1 foot)	Benzo (a) anthracene	224	340
	Benzo (a) pyrene	61	340
Test Pits			
TP-2 (5 feet)	Benzo (a) anthracene	224	1,900
	Chrysene	400	2,300
	Benzo (a) pyrene	61	1,300
TP-3 (3 feet)	Phenol	800	300
	2-Methylphenol	100	1,300
	Benzo (a) anthracene	224	870
	Chrysene	400	940
	Benzo (a) pyrene	61	740
TP-6 (3 feet)	Phenol	800	900
	4-Methylphenol	900	1,200
	Benzo (a) anthrecene	224	4,200
	Chrysene	400	3,700
	Benzo (b) fluoranthene	1,100	4,100
	Benzo (k) fluoranthene	1,100	2,300
	Benzo (a) pyrene	61	2,800
TP-8 (2 feet)	Acetone	200	1,300

SUBSURFACE SOIL SAMPLE ANALYTICAL DATA SUMMARY OF ORGANIC COMPOUNDS DETECTED IN EXCESS OF TAGM 4046 RSCO			
Sample ID	**Parameter**	**RSCO (ug/kg)**	**Detected Concentration (ug/kg)**
	2- Butanone	300	3,400
	Benzo (a) anthrecene	224	760
	Chrysene	400	1,200
	Benzo (a) pyrene	61	750
TP-10 (2 feet)	Chrysene	400	580
	Benzo (a) pyrene	61	300
TP-11 (3 feet)	Benzo (a) anthrecene	224	540
	Chrysene	400	690
	Benzo (a) pyrene	61	630
	Dibenz (a,h) anthracene	14	120
TP-13 (4 feet)	Acetone	200	340
	Benzo (a) anthrecene	224	3,200
	Chrysene	400	3,400
	Benzo (b) fluoranthene	1,100	3,500
	Benzo (k) fluoranthene	1,100	2,700
	Benzo (a) pyrene	61	3,100
TP-15 (3 feet)	Acetone	200	1,000
	Benzo (a) anthrecene	224	340
	Benzo (a) pyrene	61	330
Miscellaneous Samples (Test Pits/Monitoring Well Boring)			
M-1 (TP-16, 3 feet)	Benzo (a) anthrecene	224	400
	Chrysene	400	480
	Benzo (a) pyrene	61	390
M-3 (TP-19, 3 feet)	Benzo (a) anthrecene	224	840
	Chrysene	400	990
	Benzo (a) pyrene	61	760
M-4 (TP-20, 3.5 feet)	Benzo (a) anthrecene	224	780
	Chrysene	400	960
	Benzo (a) pyrene	61	720
M-6 (MW-1-03)	Benzo (a) anthrecene	224	2,600
	Chrysene	400	2,600
	Benzo (b) fluoranthene	1,100	4,100
	Benzo (k) fluoranthene	1,100	1,300
	Benzo (a) pyrene	61	2,700
M-6 duplicate	Benzo (a) anthracene	224	3,400
	Chrysene	400	3,300
	Benzo (b) fluoranthene	1,100	4,400
	Benzo (k) fluoranthene	1,100	1,700
	Benzo (a) pyrene	61	3,200

Please note that matrix interference during analytical testing for volatile and semi-volatile compounds resulted in elevated detection limits for various samples. Also note that the identification of acetone may be a result of the natural breakdown of the nearby peat layer.

Elevated metals concentrations were observed in sitewide subsurface soils (see Tables 4, 5, and 6) The metals detected in excess of the TAGM 4046 RSCO or the Eastern USA Background Concentrations within site subsurface soils include:

ANALYTICAL DATA SUMMARY OF METALS DETECTED IN EXCESS OF THE TAGM 4046 RSCO OR THE EASTERN USA BACKGROUND CONCENTRATIONS WITHIN SITE SUBSURFACE SOILS		
Parameter (number of samples exceeding standards)	**Detected Range (ppm)**	**RSCO or Eastern US Background (ppm)**
Zinc (36 samples)	19.5 - 600	50
Calcium (24 samples)	1,930 – 215,000	35,000
Nickel (24 samples)	3.6 – 6,210	25
Arsenic (22 samples)	3.3 - 118	12
Mercury (17 samples)	<0.009 – 2.4	0.2
Magnesium (14 samples)	442 - 16,500	5,000
Cadmium (11 samples)	<0.043 – 5.2	1
Copper (9 samples)*	15.3 - 286	50
Lead (8 samples)	5.7 - 24,700	500
Selenium (8 samples)	<0.35 – 24.1	3.9
Barium (3 samples)	33 - 2,300	600
Chromium (1 sample)	2.5 - 210	40
Cobalt (1 sample)	<0.51 - 64.8	60
Sodium (1 sample)	67.1 - 11,700	8,000

*analytical results for copper in 24 samples collected from test trenches were rejected through data validation.

PCBs were not detected within subsurface soil samples collected from test pits nos. TP-4, TP-7, TP-13, TP-18, and TP-20 (P-1 through P-5 respectively, see Table 7).

4.1.2 Phase II Soil Investigations – Off Site Subsurface Samples

Four off-site soil borings were advanced on adjacent properties to the north, south, and west of the subject parcel. Note that off-site soil boring B-1-04 was actually advanced on the subject parcel in the immediate vicinity of the property border due to access issues with the adjacent property owner. No actual off-site investigation on the southern parcel is necessary for the following reasons:

- The only exceedences of TAGM 4046 RSCO's at B-1-04 were related to PAH
- PAH in urban fill is a characteristic of the Erie Canal corridor, which includes these properties
- The former use of the adjacent parcel is a railroad, which is assumed to exhibit PAH contamination

During the completion of the four Phase II SI (off-site) test borings, the soil conditions encountered were variable. Generally, borings B-1-04, B-2-04, and B-3-04 included 3 to 7 feet of urban fill (including asphalt, sand, glass, coal, gravel, and cinders), overlying black or brown peat/ marl to a depth of approximately 15 to 19 feet below grade, underlain by a gray clay material. Due to pieces of wood near the peat layer wedging within the sampling tube, Boring B-4-04 exhibited poor recovery of soil, but generally included 4 feet of brown sandy clay, underlain by gray gravel to a depth of 7 feet, underlain by brown peat. A petroleum odor was observed in boring B-1-04 at a depth of 9 to 14 feet, and B-2-04 at a depth of 5.5 to 9.5 feet.

PHASE II SI (OFF-SITE) TEST BORING SOIL SAMPLE ANALYTICAL DATA SUMMARY OF ORGANIC COMPOUNDS DETECTED IN EXCESS OF TAGM 4046 RSCO

Boring	Parameter	RSCO (ug/kg)	Detected Concentration (ug/kg)
B-1-04 (8-14')	Benzo (a) anthracene	224	780
	Chrysene	400	790
	Benzo (a) pyrene	61	470
B-2-04 (8-12')	Chrysene	400	480
B-2-04 DUPE	Methylene chloride	100	670
	Benzene	60	86
	Chrysene	400	570
B-3-04 (8-12')	No exceedences	NA	NA
B-4-04 (8-14')	No exceedences	NA	NA

PCBs were detected within boring B-3-04 (8'-12') at a concentration of 0.15 ppm (see Table 9). This detection does not exceed the RSCO of 1 ppm. Boring B-3-04 (8'-12') was installed within Greenway Avenue, a roadway adjacent to the D.W. Winkelman Company property. Since there have been no prior detections of PCBs on the subject property it is not anticipated that the PCBs detected within the adjacent roadway are the due to impacts from the subject property. The D.W. Winkleman Company property is listed as a NYSDEC Inactive Hazardous Waste Site (EPA #NYD986866382) due to a PCB oil spill resulting from a leaking transformer. An interim remedial action was conducted at the site to remove the source of the contamination, however, residual PCB contamination of the soils and groundwater remains. Boring B-3-04 was advanced approximately 50 feet north east of the former transformer location.

The metals detected in excess of the TAGM 4046 RSCO or the Eastern USA Background Concentrations within off-site subsurface soils include:

ANALYTICAL DATA SUMMARY OF METALS DETECTED IN EXCESS OF THE TAGM 4046 RSCO OR THE EASTERN USA BACKGROUND CONCENTRATIONS WITHIN OFF-SITE SUBSURFACE SOILS

Parameter (number of samples exceeding standards)	Detected Range (ppm)	RSCO or Eastern US Background (ppm)
Calcium (5 samples)	44,000 – 179,000	35,000
Magnesium (4 samples)	3,590 – 72,200	5,000
Nickel (3 samples)	8.6 - 396	25
Chromium (2 samples)	5.0 - 85	40
Selenium (2 samples)	<0.44 – 6.2	3.9
Mercury (1 sample)	0.023 – 0.33	0.2
Copper (1 sample)	6.9 – 51.1	50

4.1.3 Phase III Soil Investigations - Supplemental Subsurface Soil Investigations

During the completion of the three test trenches and eight test pits advanced as part of a supplemental subsurface investigation (Phase III SI), the soil conditions encountered were variable. Test excavations were advanced in the vicinity of monitoring well MW-5-03 in attempts to delineate the source of a layer of petroleum product which was observed within the well (see Section 2.1.3). Generally, trenches TO-B and TO-C, and test pits TPO-1, TPO-2, TPO-4, TPO-6, and TPO-8 encountered a black stained peat or fill material exhibiting a petroleum odor at approximately 6' to 9.5' below ground surface. Although several of the remaining trenches/test pits exhibited a slight petroleum odor, the extensive staining observed within the above listed excavations was not observed. Soil samples collected from several excavations in the vicinity of MW-5-03 were analyzed for total petroleum hydrocarbons using NYSDOH method 310.13 and compared to a sample of the LNAPL product observed within MW-5-03. Analytical results indicated that both the MW-5-03 and the surrounding soils contain elevated levels of diesel fuel. A listing of the subsurface conditions encountered within each of the completed test trench and test pit excavations is included as Figures 12 and 13.

PHASE III (SUPPLEMENTAL) SUBSURFACE SOIL SAMPLE ANALYTICAL DATA SUMMARY OF ORGANIC COMPOUNDS DETECTED IN EXCESS OF TAGM 4046 RSCO			
Trench/Test Pit	**Parameter**	**RSCO (ug/kg)**	**Detected Concentration (ug/kg)**
TO-B-1 (8')	Acetone	200	1,300
	2-Butanone	300	550
	Chrysene	400	1,100
	Benzo (a) pyrene	61	450
TPO-5 (9')	Acetone	200	240
	Benzo (a) pyrene	61	140
Field Dupe (TPO-5)	Acetone	200	360
	Benzo (a) pyrene	61	140
TPO-7 (6.5')	Acetone	200	480
	Benzo (a) anthracene	224	810
	Chrysene	400	940
	Benzo (a) pyrene	61	710
TPO-8 (5.5')	Benzo (a) anthracene	224	2,100
	Chrysene	400	2,000
	Benzo (b) fluoranthene	1,100	1,400
	Benzo (k) fluoranthene	1,100	1,600
	Benzo (a) pyrene	61	1,600
	Dibenz (a,h) anthracene	14	280

Please note that the high levels of diesel fuel within the collected samples may have caused matrix interference during analytical testing for volatile and semi-volatile compounds, which resulted in elevated detection limits for various samples. Also note that the identification of acetone may be a result of the natural breakdown of the nearby peat layer (see Table 11).

4.2 Surficial Soil Investigation Results

In an effort to delineate the extent of surficial metals contamination at the site, a total of 40 surficial soil samples were collected as part of surficial soil investigations. Sample collection locations were based on a modified 100 foot grid pattern (see Figure 7). Soil sample locations differed slightly from the intended 100-foot grid pattern in areas were concrete slabs or mulch piles were present at the ground surface.

4.2.1 Surficial Soil Samples

Surficial soil samples were analyzed for TAL metals, mercury, and cyanide. A total of six soil samples were also selected for PCB analysis (see Table 12).

The metals detected in excess of the TAGM 4046 RSCO or the Eastern USA Background Concentrations within site surface soils include:

ANALYTICAL DATA SUMMARY OF METALS DETECTED IN EXCESS OF THE TAGM 4046 RSCO OR THE EASTERN USA BACKGROUND CONCENTRATIONS WITHIN SITE SURFACE SOILS		
Parameter (number of samples exceeding standards)	**Detected Range (ppm)**	**RSCO or Eastern US Background (ppm)**
Calcium (40 samples)	11,800 – 294,000	35,000
Magnesium (39 samples)	3,620 – 39,400	5,000
Zinc (38 samples)	24.4 - 506	50
Nickel (28 samples)	9.5 – 4,840	25
Mercury (27 samples)	0.02 – 0.98	0.2
Chromium (16 sample)	7.1 - 246	40
Copper (14 samples)	10.1 - 180	50
Arsenic (4 samples)	2.9 – 22.2	12
Cadmium (2 samples)	<0.074 – 1.3	1
Selenium (1 sample)	<0.32 – 7	3.9
Total Cyanide (N/A)*	<0.52 – 0.94	N/A*

*Neither background concentrations nor RSCOs have been established for Cyanide

PCBs were not detected within surficial soil samples collected from surficial sample locations SS-28, SS-24, SS-1, SS-7, and SS-35 (P-6 through P-10, respectively, plus P-6 duplicate).

4.3 Groundwater Investigation Results

On July 23-28, 2003, five shallow groundwater monitoring wells were installed at the subject property (MW-1-03, MW-2-03, MW-3-03, MW-4-03, and MW-5-03) in order to assess the presence of potential shallow groundwater quality impacts at the site. Monitoring well MW-2-99 was pre-existing. On April 20, 2004 two additional groundwater monitoring wells (MW-3-04 and MW-6-04) were installed to replace damaged groundwater wells MW-2-99 and MW-3-03. In general, the geologic conditions encountered were variable, but generally included 3 to 5 feet of concrete and/or urban fill overlying black, brown, or white peat or marl to a depth of approximately 10 to 12 feet below grade, underlain by a gray clay material.

Monitoring wells MW-1-03, MW-2-03, MW-3-03, MW-4-03, and MW-5-03 were developed and purged using an electric peristaltic pump on July 28-29, 2003. During well development efforts an attempt was made to reduce turbidity readings to 50NTUs. Due to the fine nature of clay soils encountered at a depth of ±10 feet, improvement of turbidity readings was generally limited to values between 111-641 NTUs.

On April 27, 2004, monitoring wells MW-3-04 and MW-6-04 were developed and purged using disposable polyethylene bailers. The wells were bailed until turbidity levels visibly stabilized.

4.3.1 Results of Round I Groundwater Quality Sampling and Analysis

On August 4, 2003, groundwater samples were collected from monitoring wells MW-1-03, MW-2-03, MW-3-03, MW-4-03, and MW-5-03 by means of disposable polyethylene bailers for TCL volatile and semi-volatile organic compound analysis and TAL metals analysis, PCBs, and pesticides in accordance with NYSDEC Analytical Services Protocol (ASP). It was observed that MW-2-99 had been accidentally destroyed, and thus, was unavailable for sampling.

The round 1 groundwater sample analytical results are included within Table 14, 15, and 16. The presence of PCBs and pesticides was not detected within any of the groundwater samples. Laboratory analysis did not detect concentrations of VOCs and SVOCs within the groundwaters collected from monitoring well MW-3-03. As shown in the following table, only trace to low-level concentrations (below the TOGS 1.1.1 Groundwater Quality Class GA standards) of the following specific VOCs and SVOCs were detected within the groundwaters collected from the remaining four wells:

ROUND I GROUNDWATER SAMPLE ANALYTICAL DATA SUMMARY FOR VOCS AND SVOCS FOR MW-1-03, MW-2-03, MW-4-03, AND MW-5-03

Parameter (number of samples containing contaminant)	Detected Range (ppb)	TOGS 1.1.1 Class GA Groundwater Quality Standards (ppb)
Acetone (4 samples)	2-4	50
Carbon disulfide (4 samples)	0.1 – 0.6	60
cis, 1,2-Dichloroethene (1 sample)	0.5	5
Chloroform (1 sample)	0.4	7
Bromodichloromethane (1 sample)	0.1	50
Diethyl phthalate (4 samples)	1-2	50

Please note that the identification of acetone may be a result of the natural breakdown of the nearby peat layer.

The metals detected in excess of the TOGS 1.1.1 Class GA Groundwater Quality Standards include:

ANALYTICAL DATA SUMMARY OF METALS DETECTED IN EXCESS OF TOGS 1.1.1 CLASS GA GROUNDWATER QUALITY STANDARDS IN ROUND I GROUNDWATER SAMPLES

Parameter (number of samples exceeding standards)	Detected Range (ppm)	TOGS 1.1.1 Class GA Groundwater Quality Standards (ppm)
Sodium (5 samples)	25.7 - 337	20
Aluminum (4 samples)	0.0718 – 31.1	0.1

ANALYTICAL DATA SUMMARY OF METALS DETECTED IN EXCESS OF TOGS 1.1.1 CLASS GA GROUNDWATER QUALITY STANDARDS IN ROUND I GROUNDWATER SAMPLES		
Parameter (number of samples exceeding standards)	**Detected Range (ppm)**	**TOGS 1.1.1 Class GA Groundwater Quality Standards (ppm)**
Iron (4 samples)	0.290 – 87.9	0.3
Arsenic (3 samples)	<0.0015 – 0.0652	0.025
Manganese (2 samples)	0.0532 – 1.39	0.3
Magnesium (2 samples)	27.7 - 124	35
Vanadium (2 samples)	0.0015 – 0.0684	0.014
Antimony (1 sample)	<0.0017 – 0.0077	0.003
Chromium (1 sample)	<0.0016 – 0.324	0.05
Cobalt (1 sample)	<0.0014 – 0.0206	0.005
Copper (1 sample)	<0.00076 – 0.313	0.2
Lead (1 sample)	<0.0013 – 0.0980	0.025
Nickel (1 sample)	0.0023 – 1.48	0.1

Note that metals concentrations detected during this round of groundwater sampling may be elevated due to the high turbidity levels of the groundwater samples.

4.3.2 Results of Round II Groundwater Quality Sampling and Analysis

On April 27, 2004, groundwater samples were collected from monitoring wells MW-1-03, MW-2-03, MW-3-04, MW-4-03, MW-5-03, and MW-6-04 by means of dedicated disposable polyethylene bailers for analysis of TCL VOC and SVOC, TAL metals, PCBs, and pesticides in accordance with NYSDEC Analytical Services Protocol (ASP).

During the April 2004 groundwater monitoring event, LNAPL product was observed within MW-5-03. Product within the well was removed using a disposable polyethylene bailer prior to sampling the groundwater.

The round 2 groundwater sample analytical results are included within Tables 17, 18, and 19. Laboratory analysis did not detect concentrations of VOCs and SVOCs within the groundwaters collected from monitoring well MW-3-04. As shown in the following table, only trace to low-level concentrations (below the TOGS 1.1.1 Groundwater Quality Class GA standards) of the following specific VOCs and SVOCs were detected within the groundwaters collected from the remaining five wells:

ANALYTICAL DATA SUMMARY OF VOCS AND SVOCS OF ROUND II GROUNDWATER SAMPLES COLLECTED FROM MW-1-03, MW-2-03, MW-4-03, MW-5-03, AND MW-6-04		
Parameter (number of samples containing contaminant)	**Detected Range (ppb)**	**TOGS 1.1.1 Class GA Groundwater Quality Standards (ppb)**
Carbon disulfide (4 samples)	0.1 – 0.5	60
2-butanone (2 samples)	2-3	N/A
Cis-1,2-dichloroethene (1 sample)	0.1	5

The presence of PCBs and pesticides were not detected within the groundwater samples.

The metals detected in excess of the TOGS 1.1.1 Class GA Groundwater Quality Standards include:

ANALYTICAL DATA SUMMARY OF METALS DETECTED IN EXCESS OF TOGS 1.1.1 CLASS GA GROUNDWATER QUALITY STANDARDS IN ROUND II GROUNDWATER SAMPLES		
Parameter (number of samples exceeding standards)	**Detected Range (ppm)**	**TOGS 1.1.1 Class GA Groundwater Quality Standards (ppm)**
Sodium (6 samples)	49.4 – 705	20
Aluminum (6 samples)	0.982 – 19.3	0.1
Iron (6 samples)	2.04 – 20	0.3
Magnesium (4 samples)	26.9 – 95	35
Manganese (3 samples)	0.0568 – 1.57	0.3
Vanadium (3 samples)	0.0058 – 0.0491	0.014
Antimony (1 sample)	<0.0018 – 0.0048	0.003
Cobalt (1 sample)	<0.0016 – 0.005	0.005
Arsenic (1 sample)	<0.0019 – 0.0272	0.025
Lead (1 sample)	<0.00088 – 0.0672	0.025
Nickel (1 sample)	0.0021 – 0.588	0.1

Note that metals concentrations detected during this round of groundwater sampling may be elevated due to the high turbidity levels of the groundwater samples.

4.3.3 Results of Offsite Groundwater Quality Sampling and Analysis

On October 27 and 28, and November 1, 2004, groundwater samples were collected from the temporary monitoring wells TW-1-04 through TW-4-04 (installed within borings B-1-04 through B-4-04, respectively) by means of disposable polyethylene bailers for analysis of TCL VOCs and SVOCs plus tentatively identified compounds (TICS), TAL metals, and PCBs in accordance with NYSDEC Analytical Services Protocol (ASP).

The offsite groundwater sample analytical results are included within Tables 20, 21, and 22. Laboratory analysis did not detect concentrations of VOCs and SVOCs within the groundwaters collected from temporary well installations TW/B-2-04 and TW/B-4-04. Exceedences of the TOGS 1.1.1 Groundwater Quality Class GA standards of the following specific VOCs and SVOCs were detected within the groundwaters collected from the remaining two temporary monitoring wells (TW/B-1-04 and TW/B-3-04) as indicated in the table below.

SUMMARY OF ORGANIC COMPOUNDS DETECTED IN EXCESS OF TOGS 1.1.1 CLASS GA GROUNDWATER QUALITY STANDARDS OF GROUNDWATER SAMPLES COLLECTED FROM TEMPORARY OFF-SITE MONITORING WELLS			
Temporary Well/Boring ID	**Parameter**	**Detected Concentration (ug/kg)**	**TOGS 1.1.1 (ug/kg)**
TW/B-1-04	Acetone	120	50
	Phenol	2	1
TW/B-3-04	Vinyl chloride	520	2
	Chloroethane	32	5
	Trans 1,2-dichloroethene	290	5
	1,1-Dichloroethane	760	5
	Cis-1,2-dichloroehtene	460	5

The presence of PCBs were not detected within the offsite groundwater samples. Please note that the identification of acetone may be a result of the natural breakdown of the nearby peat layer.

The metals detected in excess of the TOGS 1.1.1 Class GA Groundwater Quality Standards in groundwater samples collected from offsite temporary monitoring wells include:

ANALYTICAL DATA SUMMARY OF METALS DETECTED IN EXCESS OF TOGS 1.1.1 CLASS GA GROUNDWATER QUALITY STANDARDS IN GROUNDWATER SAMPLES COLLECTED FROM OFFSITE TEMPORARY MONITORING WELLS		
Parameter (number of samples exceeding standards)	**Detected Range (ppm)**	**TOGS 1.1.1 (ppm)**
Aluminum (5 samples)	2.39 - 521	0.1
Manganese (5 samples)	0.770 – 36.5	0.3
Iron (5 samples)	6.03 – 2,160	0.3
Lead (4 samples)	0.0061 – 1.06	0.025
Antimony (3 samples)	<0.0028 – 0.0378	0.003
Arsenic (3 samples)	<0.0023 – 0.401	0.025
Magnesium (3 samples)	22.5 – 1,020	35
Nickel (3 samples)	0.0328 – 8.90	0.1
Sodium (3 samples)	10.6 - 431	20
Vanadium (3 samples)	0.0065 – 1.31	0.014
Barium (2 samples)	0.122 – 7.94	1.0
Cadmium (2 samples)	0.0568	0.005
Chromium (2 samples)	0.0059 – 1.19	0.05
Cobalt (2 samples)	<0.0024 – 0.425	0.005
Copper (2 samples)	0.0074 – 1.84	0.2
Selenium (2 samples)	<0.0040 - 0.121	0.01
Thallium (2 samples)	<0.0058 – 0.321	0.008
Beryllium (1 sample)	<0.000040 – 0.0271	0.011

Note that metals concentrations detected during this round of groundwater sampling may be elevated due to the high turbidity levels of the groundwater samples.

5.0 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

A qualitative human health risk evaluation was completed as part of the Site Investigation. The procedure for performing the risk assessment was consistent with USEPA methodologies, and the draft NYSDOH Qualitative Human Health Exposure Assessment information provided in the draft December 2002 DER-10 Technical Guidance for Site Investigation and Remediation. The sequencing of steps was modified to streamline the process consistent with the goals of Environmental Restoration Project site investigations. This qualitative exposure assessment was completed using a three-step process, including 1) contaminant identification and selection of contaminants of concern, 2) exposure assessment to identify actual or potential human exposure pathways, and 3) exposure assessment to identify actual or potential impacts to fish and wildlife resources.

5.1 Contaminant Identification

Data from the site investigation phase was used as the basis for the exposure assessment. Sampling was conducted for surface and subsurface soil, and groundwater. There was no surface water or air sampling performed as part of the Site Investigation.

Tables 1 through 22 present the results of the Site Investigation sampling and analysis program that was conducted at the site. As shown in the following summary table, a number of organic and heavy metals were identified at concentrations above TAGM 4046 health based soil cleanup objectives or TOGS 1.1.1 groundwater quality standards/guidance values within the media collected as part of the Site Investigation.

VOCs	**Media of Detection**
Acetone	subsurface soils
2-Butanone	subsurface soils
Benzene	subsurface soils

SVOCs	**Media of Detection**
Benzo(a)anthracene	subsurface soils
Benzo(a) pyrene	subsurface soils
Benzo(b)fluoranthene	subsurface soils
Benzo(k)fluoranthene	subsurface soils
Chrysene	subsurface soils
Dibenzo(a,h)anthracene	subsurface soils
2-Methylphenol	subsurface soils
4-Methylphenol	subsurface soils
Phenol	subsurface soils
LNAPL Diesel product	shallow groundwater and subsurface soils

Metals	**Media of Detection**
Aluminum	shallow groundwater
Antimony	shallow groundwater
Arsenic	shallow groundwater, surface and subsurface soils
Barium	subsurface soils
Cadmium	surface and subsurface soils
Chromium	shallow groundwater, surface and subsurface soils

Metals	**Media of Detection**
Calcium	surface and subsurface soils
Cobalt	shallow groundwater and subsurface soils
Copper	shallow groundwater, surface and subsurface soils
Iron	shallow groundwater
Lead	shallow groundwater and subsurface soils
Magnesium	shallow groundwater, surface and subsurface soils
Manganese	shallow groundwater
Mercury	surface and subsurface soils
Nickel	shallow groundwater, surface and subsurface soils
Selenium	surface and subsurface soils

Sodium	shallow groundwater and subsurface soils
Vanadium	shallow groundwater
Zinc	surface and subsurface soils

5.2 Exposure Assessment

The qualitative exposure assessment consisted of two steps:

1. Exposure Setting Characterization – Description of the physical characteristics of the site and populations near the site. This includes information such as soil types, geologic setting, and groundwater flow.

2. Exposure Pathway Identification – Identification of potentially exposed populations and the associated exposure pathway. The exposure pathway consists of four elements:
   - The contaminant source (e.g. - previous release)
   - The transport medium (e.g. - groundwater)
   - The exposure point (e.g. - potable water supply well)
   - The exposure route (e.g. - ingestion)

Exposure Setting Characterization

The former Syracuse Rigging site is located in a primarily commercial/industrial area of the City of Syracuse. Groundwater flow at the site trends in a southerly direction. Hydraulically downgradient from the site, the land usage is vacant or industrial. A small number of residential structures are located along Kidd and Lynch Avenues, both approximately 340 feet south and southwest of the subject property, respectively. Access to the property is unrestricted, with the exception of gated entrances that control vehicular access to the central and southern portions of the site. Given the location within the City, and the fact that drinking water in the area is provided by a public water supply, groundwater use for potable water is unlikely. Current populations that could potentially be impacted by contaminants at the site are limited due to the site location. The western portion of the subject site is currently used by the City of Syracuse Department of Public Works for mulching and composting activities. DPW has recently placed asphalt over a majority of this portion of the property.

Contamination leaving the site via the municipal sewer system, if any, would enter the Onondaga County sewer system. If there were workers in the sewer system at the time that precipitation or runoff from the site was entering the sewers, exposure would be possible, although unlikely. Based on this information, human populations potentially affected would include the following:

- Trespassers – unauthorized visitors to the site
- City of Syracuse Department of Public Works employees
- Area residents – persons living on Lynch and Kidd Avenues
- Area workers – persons working on neighboring properties
- County sewer workers – exposed to contaminated runoff entering the sewers
- General public – pedestrians or vehicle passengers on the adjacent roadways
- Future on-site construction workers – workers involved in site development at the subject site (note that this assessment excludes workers performing remedial activities as part of the project)

- Future off-site construction workers – workers involved in site development on neighboring properties
- Future site tenants and customers
- Users of mulch generated by DPW operations

Human Exposure Pathway Identification

As described above, the exposure pathway identification consists of the following four steps:

1. Contaminant source – Data from the sampling and analysis program identified levels of contamination in the surface soils, subsurface soils, and to a lesser extent shallow groundwaters.
2. Transport medium – The transport media for each contaminant source is identified in the table below.
3. Exposure points – The exposure point is the point of potential human contact with the contaminated medium under reasonable current and future land uses. The exposure points for the site are shown in the table below.

HUMAN EXPOSURE PATHWAY IDENTIFICATION		
Contaminant Source	**Transport Medium**	**Exposure Point**
Groundwater	Groundwater	Area residents
		Area workers
		Future on-site construction workers
		Future off-site construction workers
Surface Soil	Runoff	Trespassers
		DPW Employees
		Area workers
		County sewer workers
		Future on-site construction workers
		Future off-site construction workers
		Future site tenants and customers
		Users of mulch
	Soil Dispersion	Trespassers
		DPW Employees
		Area residents
		Area workers
		General public
		Future on-site construction workers
		Future off-site construction workers

HUMAN EXPOSURE PATHWAY IDENTIFICATION		
Contaminant Source	**Transport Medium**	**Exposure Point**
		Future site tenants and customers
		Users of mulch
Subsurface soil	Soil	Future on-site construction workers
	Soil Vapor	Trespassers
		DPW Employees
		Area residents
		Area workers
		County sewer workers
		General public
		Future on-site construction workers
		Future off-site construction workers
		Future site tenants and customers

4. Human Exposure Route – The routes of exposure for each potential exposure point identified above are discussed below:
   - Exposure of future on-site workers to site contaminants – On-site workers participating in future site development activities could be directly exposed to several contaminant sources. Future on-site workers could be exposed to site contaminants through groundwater and subsurface soils during general excavation activities, utility installation, foundation construction; contaminated stormwater runoff; and windblown dispersion of surface soil and volatile vapors. Exposure could occur via ingestion, inhalation, and/or dermal contact.
   - Exposure of potential off-site construction workers to site contaminants – Workers participating in future off-site development activities could be exposed to site contaminants through groundwater during general excavation activities, utility installation, foundation construction; contaminated stormwater runoff; and windblown dispersion of surface soil and volatile vapors. Exposure could occur via ingestion, inhalation, and/or dermal contact.
   - Exposure of DPW workers to site contaminants – DPW workers conducting mulching operations at the subject property could be directly exposed to contaminated stormwater runoff and windblown dispersion of surface soil and volatile vapors. Exposure could occur via ingestion, inhalation, and/or dermal contact.
   - Exposure of County sewer workers to contaminated runoff – Contaminated stormwater runoff and volatile vapors can enter storm sewer structures located along City Crossroads Drive. Exposure could occur via ingestion or dermal contact.
   - Exposure of site trespassers to site contaminants – Trespassers could be exposed to contaminated stormwater runoff and surficial soils and volatile vapors through windblown dispersion. Exposure could occur via ingestion, inhalation, and/or

dermal contact.

- Exposure of area residents to site contaminants – Off-site neighboring residents could be exposed to site contaminants through groundwater leaching into basements and windblown dispersion of surface soil and volatile vapors. Exposure could occur via ingestion, inhalation, and/or dermal contact.
- Exposure of area workers to site contaminants – Employees of off-site neighboring businesses could be exposed to site contaminants through groundwater leaching into basements; contaminated stormwater runoff; and windblown dispersion of surface soil and volatile vapors. Exposure could occur via ingestion, inhalation, and/or dermal contact.
- Exposure of future site tenants and customers to site contaminants – Future site tenants working or living on the subject property could be exposed to site contaminants from contaminated stormwater runoff and windblown dispersion of surface soil. Possible future construction of buildings on the subject site could expose future site tenants and customers to volatile subsurface vapors via soil vapor intrusion.
- Exposure of the general public to site contaminants – Pedestrians and vehicular traffic on neighboring roadways could be exposed to site contaminants through windblown dispersion of surface soil and volatile vapors. Exposure could occur via inhalation.
- Exposure of users of mulch to site contaminants – Users of the mulch produced by DPW operations could be exposed to site contaminants through absorption of contaminated stormwater runoff into the mulch and windblown dispersion of surface soil into the mulch. Exposure could occur via ingestion, inhalation, and/or dermal contact.

5.3 Environmental Exposure Assessment

The purpose of the environmental exposure assessment is to identify actual or potential impacts to fish and wildlife resources from site contaminants of ecological concern. The New York Natural Heritage Program databases have no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of the subject site.

6.0 SITE INVESTIGATION INTERPRETATIONS AND CONCLUSIONS

6.1 Surface Soil Investigation Findings

PCBs were not detected in surface soils. However, the results of analytical testing indicate that non-native surface soils throughout the subject property contain elevated concentrations of several metals.

6.2 Subsurface Soil Investigation Findings

PCBs were not detected in site subsurface soils. However, the results of subsurface soil investigations completed at the site and adjacent properties as part of the Site Investigation revealed contaminants of concern at the subject property:

PAH and Metals Contaminated Subsurface Soils – Sitewide: The results of analytical testing indicate that subsurface non-native soils throughout the subject property contain elevated levels of PAH and metals. The PAHs consistently identified in excess of TAGM standards consisted of:

- Benzo (a) anthrecene
- Benzo (a) pyrene
- Benzo (b) fluoranthene
- Benzo (k) fluoranthene
- Chrysene
- Dibenz (a,h) anthracene

Depth to native soils, which appear to be non-impacted, vary from 2 to 10 feet below grade.

Petroleum Impacted Subsurface Soils – Northwestern Portion of Site: Analytical testing and site observations indicate that subsurface non-native soils on the northwestern portion of the subject property are impacted with petroleum compounds, including limited VOCs (acetone, 2-butanone, and benzene). The identification of acetone may be a result of the natural breakdown of the nearby native peat layer, which is located up to 4 feet below grade.

Diesel Impacted Subsurface Soils – Southwestern Portion of Site: During the completion of test trenches, test pits, and test borings in the southwestern portion of the site, a petroleum (diesel) stained layer (consisting of non-native fill materials and the adjacent upper layer of peat) was observed on the southwestern portion of the site. A layer of LNAPL (diesel) within monitoring well MW-5-03 is currently being absorbed and disposed as an Interim Remedial Measure. Native peat lies approximately 8 to 10 feet below the ground surface in this portion of the property.

Off-Site Subsurface Soils: The results of analytical testing indicate that subsurface soils on neighboring properties contain elevated levels of PAH and metals, similar to those detected within on-site soils. PCBs were detected at a concentration of 0.15 ppm within soils collected from off-site boring B-3-04. This boring was placed in the vicinity of the known PCB-impacted area on the Winkleman property. Benzene and methylene chloride were detected at concentrations above applicable TAGM standards within soils collected from off-site boring B-2-04. The location of this boring borders the diesel-impacted area in the southwestern portion of the subject property.

6.3 Groundwater Investigation Findings

Analysis of groundwater samples did not reveal the presence of petroleum-related volatile organic compounds, semi-volatile organic compounds, PCBs, or pesticide concentrations above the applicable NYSDEC Class GA Groundwater Quality Standards. Furthermore, the results of groundwater sampling and analysis at installed monitoring wells revealed only limited impacts to area groundwater:

Metals Within Site and Off-Site Groundwater: Analytical results indicate that several metals exist within site and off-site groundwater in excess of the applicable TOGS Standards/Guidance Values. However, elevated turbidity levels within the groundwater samples collected from the wells, may have caused elevated metals detections within site groundwater. Area residents are provided with municipal water supply, and are unlikely to come into contact with the groundwater.

LNAPL Within MW-5-03 Groundwaters: The presence of LNAPL (diesel) was identified within monitoring well MW-5-03. The LNAPL is currently being absorbed and disposed as an IRM. During the course of the initial baildown tests and subsequent IRM, the thickness of the LNAPL layer has decreased from 0.93 to 0.10 feet.

VOCs Within Offsite Groundwaters: Analysis of the offsite groundwater sample collected from the temporary well installed within boring B-3-04 detected the following VOCs in excess of the applicable TOGS Standards/Guidance Values:

- vinyl chloride
- chloroethane
- trans-1, 2-dichloroethene
- 1,1-dichloroethene
- cis-1,2-dichloroethene

Depth-to-groundwater measurements indicate that groundwater in the vicinity of this boring flows in a south/southeast direction. Therefore, it appears that the solvent compounds detected within the groundwater sample collected from the temporary well installed within boring B-3-04 may be originating from the Winkleman property.

The concentrations of acetone and phenol detected in groundwater collected from temporary off-site well TW/B-1-04 exceed applicable TOGS Standards/Guidance Values. The identification of acetone may be a result of the natural breakdown of the nearby native peat layer.

6.4 Soil Berm Investigation Findings

The results of analytical testing performed under the direction of the NYSDEC Spills Program indicate that bermed soils generally contain elevated levels of five PAHs:

- benzo (a) anthracene
- benzo (a) pyrene
- benzo (b) fluoranthene
- benzo (k) fluoranthene
- chrysene

Since the berms were created from non-native subsurface soils excavated at the site, it is assumed that the soil berms also contain metals concentrations similar to the site background levels.

TABLES

LEGEND

(shaded)	= Compound Detected
Bold	= Stated Value Accepted Without Estimation
(shaded)	= Stated Value Exceeds TAGM 4046
J	= Estimated Value
U	= Not Detected Above Stated Method Detection Level
R	= Rejected Data
D	= Sample Diluted Before Analysis
SB	= Site Background
HEAST	= Refer to USEPA HEAST Dastabase
N/A	= Not Applicable
ND	= Not Detectable
*	= sum of these compound concentrations
ug/kg	= micrograms per kilogram (parts per billion, ppb)
mg/kg	= milligrams per kilogram (parts per million, ppm)
ug/l	= micrograms per liter (parts per billion, ppb)
mg/l	= milligrams per liter (parts per million, ppm)

TABLE 1:
Analytical Results
Test Trench Samples
VOCs and SVOCs

Test Trenches - Subsurface Soil Samples

Analyte	T-A-01 (4')		T-A-02 (3')		T-A-03 (3')		T-B-01 (3')		T-B-02 (3')		T-B-03 (5')		T-C-01 (4')		T-C-02 (4')		T-C-03 (3')	
EPA 8260B	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Chloromethane	<7	U	<13	U	<10	U	<7	U	<10	U	<10	U	<6	U	<45	U	<10	U
Vinyl Chloride	<7	U	<13	U	<10	U	<7	U	<10	U	<10	U	<6	U	<45	U	<10	U
Bromomethane	<7	U	<13	U	<10	U	<7	U	<10	U	<10	U	<6	U	<45	U	<10	U
Chloroethane	<7	U	<13	U	<10	U	<7	U	<10	U	<10	U	<6	U	<45	U	<10	U
Acetone	81	J	550	J	200	J	<21	UJ	<23	UJ	370	J	51	J	460	J	130	J
1, 1-Dichloroethene	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
Methylene chloride	<7	U	<10	U	<10	U	<7	U	<10	U	<10	U	<6	U	<40	U	<10	U
Carbon disulfide	5		4	J	4	J	<3	U	3	J	5	J	2	J	<22	U	2	J
trans-1,2-Dichloroethene	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
1,1-Dichloroethane	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
2-Butanone	23		220		73		5	J	<21	U	130		34	J	160		79	J
cis-1,2-Dichloroethene	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
Chloroform	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
1,2-Dichloroethane	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
1,1,1-Trichloroethane	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
Carbon tetrachloride	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
Benzene	1	J	<6	U	<5	U	<3	U	<5	U	1	J	17	J	230		5	J
1,2-Dichloropropane	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
Trichloroethene	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
Bromodichloromethane	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
cis-1,3-Dichloropropene	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
4-Methyl-2-pentanone	<7	U	<13	U	<10	U	<7	U	<10	U	<10	U	<6	U	<45	U	<10	U
trans-1,3-Dichloropropene	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
1,1,2-Trichloroethane	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
Toluene	7		2	J	2	J	2	J	3	J	7		4	J	<22	U	6	J
Dibromochloromethane	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
2-Hexanone	<7	U	<13	U	<10	U	<7	U	<10	U	<10	U	<6	U	<45	U	<10	U
Tetrachloroethene	<3	U	<6	U	4	J	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
Chlorobenzene	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
Ethylbenzene	3	J	<6	U	1	J	1	J	6		2	J	400	D	120		23	J
Bromoform	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
Xylene (total)	13		<6	U	4	J	7		23		8		45	J	190		68	J
Styrene	<3	U	<6	U	<5	U	<3	U	<5	U	<5	U	<3	U	<22	U	<5	U
1,1,2,2-Tetrachloroethane	<3	UJ	<6	UJ	<5	UJ	<3	UJ	<5	UJ	<5	UJ	<3	U	<22	U	<5	U
EPA 8260B																		
bis (2-Chloroethyl) ether	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Phenol	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
2-Chlorophenol	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
1,3-Dichlorobenzene	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
1,4-Dichlorobenzene	240	J	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
1,2-Dichlorobenzene	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
2-Methylphenol	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
2,2'-oxybis (1-Chloropropane)	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
4-Methylphenol	61	J	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
N-Nitroso-di-n-propylamine	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Hexachloroethane	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Nitrobenzene	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Isophorone	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
2-Nitrophenol	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
2,4-Dimethylphenol	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
bis (2-Chloroethyl) methane	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
2,4-Dichlorophenol	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
1,2,4-Trichlorobenzene	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Naphthalene	910		<880	U	<35,000	U	120	J	<690	UJ	<680	U	3,300		<640	U	460	
4-Chloroaniline	<450	UJ	<880	UJ	<35,000	UJ	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Hexachlorobutadiene	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
4-Chloro-3-methylphenol	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
2-Methylnaphthalene	420	J	<880	U	<35,000	U	190	J	110	J	<680	U	6,400		10,000		11,000	D
Hexachlorocyclopentadiene	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
2,4,6-Trichlorophenol	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
2,4,5-Trichlorophenol	<2,300	U	<4,400	U	<170,000	U	<2300	UJ	<3,500	UJ	<3,400	U	<3,700	U	<3,200	U	<2,100	U
2-Chloronaphthaline	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
2-Nitroaniline	<2,300	U	<4,400	U	<170,000	U	<2300	UJ	<3,500	UJ	<3,400	U	<3,700	U	<3,200	U	<2,100	U
Dimethyl pthalate	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Acenaphthylene	98	J	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	200	J	<640	U	<420	U
2,6-Dinitrotoluene	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
3-Nitroaniline	<2,300	UJ	<4,400	UJ	<170,000	UJ	<2300	UJ	<3,500	UJ	<3,400	U	<3,700	U	<3,200	U	<2,100	U
Acenaphthene	280	J	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	530	J	330	J	410	J
2,4-Dinitrophenol	<2,300	U	<4,400	U	<170,000	U	<2300	UJ	<3,500	UJ	<3,400	U	<3,700	U	<3,200	U	<2,100	U
4-Nitrophenol	59	J	<4,400	U	<170,000	U	<2300	UJ	<3,500	UJ	<3,400	U	<3,700	U	<3,200	U	<2,100	U
Dibenzofuran	240	J	<880	U	<35,000	U	49	J	<690	UJ	<680	U	430	J	160	J	280	J
2,4-Dinitrotoluene	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Diethyl phtalate	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Flourene	360	J	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	920		430	J	610	
4-Chlorophenyl phenyl ether	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
4-Nitroaniline	<2,300	U	<4,400	U	<170,000	U	<2300	UJ	<3,500	UJ	<3,400	U	<3,700	U	<3,200	U	<2,100	U
4,6-Dinitro-2-methylphenol	<2,300	U	<4,400	U	<170,000	U	<2300	UJ	<3,500	UJ	<3,400	U	<3,700	U	<3,200	U	<2,100	U
N-Nitrosodiphenylamine	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
4-Bromophenyl phenyl ether	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Hexachlorobenzene	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Pentachlorophenol	<2,300	U	<4,400	U	<170,000	U	<2300	UJ	<3,500	UJ	<3,400	U	<3,700	U	<3,200	U	<2,100	U
Phenanthrene	1,600		300	J	<35,000	U	240	J	300	J	190	J	2,800		1,300		1,900	
Anthracene	270	J	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	600	J	200	J	260	J
Carbazole	140	J	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	95	J	140	J
Di-n-butyl phthalate	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Flouranthene	1,300		410	J	<35,000	U	260	J	560	J	340	J	2,400		640		730	
Pyrene	1,500		400	J	<35,000	U	290	J	560	J	520	J	2,300		900		960	
Butyl benzyl phthalate	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
3,3'-Dichlorobenzidiene	<900	UJ	<1,800	UJ	<69,000	UJ	<930	UJ	<1,400	UJ	<1,400	U	<1,500	U	<1,300	U	<830	U
Benzo [a] anthracene	680		220	J	<35,000	U	180	J	320	UJ	300	J	1,100		290	J	290	J
Chrysene	810		250	J	<35,000	U	260	J	360	UJ	370	J	1,100		310	J	330	J
bis (2-Ethylhexyl) phthalate	69	J	<880	UJ	<35,000	UJ	<460	UJ	120	J	98	J	1,800		<640	U	<420	U
Di-n-octyl phthalate	<450	U	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	U	<750	U	<640	U	<420	U
Benzo [b] fluoranthene	840		210	J	<35,000	U	210	J	390	J	350	J	900		260	J	320	J
Benzo [k] fluoranthene	680		250	J	<35,000	U	180	J	330	J	270	J	890		240	J	240	J
Benzo [a] pyrene	690		210	J	<35,000	U	190	J	340	J	330	J	940		220	J	240	J
Indeno [1,2,3-cd] pyrene	300	J	110	J	<35,000	U	74	J	160	J	130	J	350	J	92	J	100	J
Dibenz [a,h] anthracene	120	J	<880	U	<35,000	U	<460	UJ	<690	UJ	<680	UJ	170	J	<640	UJ	48	J
Benzo [g,h,i] perylene	320	J	110	J	<35,000	U	81	J	160	J	140	J	350	J	88	J	100	J

Analyte	T-D-01 (3')		T-D-02 (2')		T-D-03 (3')		T-E-01 (2')		T-E-02 (4')		T-E-03 (2')		T-F-01 (2.5')		T-F-02 (4')		T-F-03 (4')	
EPA 8260B	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
Chloromethane	<40	U	<8	U	<28	U	<17	U	<7	U	<10	U	<9	U	<10	U	<7	U
Vinyl Chloride	<40	U	<8	U	<28	U	<17	U	<7	U	<10	U	<9	U	<10	U	<7	U
Bromomethane	<40	U	<8	U	<28	U	<17	U	<7	U	<10	U	<9	U	<10	U	<7	U
Chloroethane	<40	U	<8	U	<28	U	<17	U	<7	U	<10	U	<9	U	<10	U	<7	U
Acetone	300	J	350	J	890	J	240	J	110	J	110	J	330	J	47	UJ	58	J
1, 1-Dichloroethene	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
Methylene chloride	<40	U	<8	U	<30	U	<20	U	<7	U	<10	U	<9	U	<10	U	<7	U
Carbon disulfide	<20	U	14		16		5	J	2	J	5		7		<5	U	1	J
trans-1,2-Dichloroethene	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
1,1-Dichloroethane	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
2-Butanone	950		920	D	5,000	D	85	J	32		200		740		420		320	
cis-1,2-Dichloroethene	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
Chloroform	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
1,2-Dichloroethane	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
1,1,1-Trichloroethane	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
Carbon tetrachloride	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
Benzene	<20	U	6		4	J	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
1,2-Dichloropropane	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
Trichloroethene	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
Bromodichloromethane	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
cis-1,3-Dichloropropene	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
4-Methyl-2-pentanone	<40	U	<4	U	<28	U	<17	U	<7	U	<10	U	<9	U	<10	U	<7	U
trans-1,3-Dichloropropene	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
1,1,2-Trichloroethane	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
Toluene	11	J	16		20		<8	U	<3	U	1	J	2	J	<5	U	<3	U
Dibromochloromethane	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
2-Hexanone	<40	U	<8	U	<28	U	<17	U	<7	U	<10	U	<9	U	<10	U	<7	U
Tetrachloroethene	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
Chlorobenzene	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
Ethylbenzene	18	J	10		16		<8	U	<3	U	6		<5	U	2	J	1	J
Bromoform	<20	U	<4	U	<14	U	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
Xylene (total)	100		71		84		8	J	<3	U	4	J	2	J	9		3	J
Styrene	<20	U	<4	U	8	J	<8	U	<3	U	<5	U	<5	U	<5	U	<3	U
1,1,2,2-Tetrachloroethane	<20	U	<4	U	<14	UJ	<15	U	<3	U	<5	U	<5	UJ	<5	U	<3	U
EPA 8260B																		
bis (2-Chloroethyl) ether	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Phenol	1,200	J	390	J	4,100	J	<2,800	U	<890	U	<4,400	U	110	J	110	J	<460	U
2-Chlorophenol	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
1,3-Dichlorobenzene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
1,4-Dichlorobenzene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
1,2-Dichlorobenzene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
2-Methylphenol	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	88	J
2,2'-oxybis (1-Chloropropane)	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
4-Methylphenol	1,700	J	190	J	11,000	J	<2,800	U	<890	U	<4,400	U	<630	U	110	J	<460	U
N-Nitroso-di-n-propylamine	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Hexachloroethane	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Nitrobenzene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Isophorone	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
2-Nitrophenol	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
2,4-Dimethylphenol	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
bis (2-Chloroethyl) methane	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
2,4-Dichlorophenol	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
1,2,4-Trichlorobenzene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Naphthalene	1,100	J	690	J	<11,000	U	1,200	J	310	J	2,600	J	<630	U	410	J	530	
4-Chloroaniline	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Hexachlorobutadiene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
4-Chloro-3-methylphenol	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
2-Methylnaphthalene	980	J	280	J	<11,000	U	4,300		240	J	1,400	J	<630	U	600		220	J
Hexachlorocyclopentadiene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
2,4,6-Trichlorophenol	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
2,4,5-Trichlorophenol	<25,000	U	<5,300	U	<56,000	U	<14,000	U	<4,400	U	<22,000	U	<3,100	U	<2,200	U	<2,300	U
2-Chloronaphthaline	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
2-Nitroaniline	<25,000	U	<5,300	U	<56,000	U	<14,000	U	<4,400	U	<22,000	U	<3,100	U	<2,200	U	<2,300	U
Dimethyl pthalate	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Acenaphthylene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	83	J	150	J	<460	U
2,6-Dinitrotoluene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
3-Nitroaniline	<25,000	U	<5,300	U	<56,000	U	<14,000	U	<4,400	U	<22,000	U	<3,100	U	<2,200	U	<2,300	U
Acenaphthene	1,000	J	520	J	<11,000	U	<2,800	U	370	J	<4,400	U	150	J	300	J	350	J
2,4-Dinitrophenol	<25,000	U	<5,300	U	<56,000	U	<14,000	U	<4,400	U	<22,000	U	<3,100	U	<2,200	U	<2,300	U
4-Nitrophenol	<25,000	U	<5,300	U	<56,000	U	<14,000	U	<4,400	U	<22,000	U	<3,100	U	<2,200	U	<2,300	U
Dibenzofuran	920	J	310	J	<11,000	U	<2,800	U	230	J	<4,400	U	<630	U	270	J	230	J
2,4-Dinitrotoluene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Diethyl phtalate	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Flourene	1,900	J	640	J	<11,000	U	<2,800	U	420	J	550	J	99	J	350	J	410	J
4-Chlorophenyl phenyl ether	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
4-Nitroaniline	<25,000	U	<5,300	U	<56,000	U	<14,000	U	<4,400	U	<22,000	U	<3,100	U	<2,200	U	<2,300	U
4,6-Dinitro-2-methylphenol	<25,000	U	<5,300	U	<56,000	U	<14,000	U	<4,400	U	<22,000	U	<3,100	U	<2,200	U	<2,300	U
N-Nitrosodiphenylamine	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
4-Bromophenyl phenyl ether	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Hexachlorobenzene	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Pentachlorophenol	<25,000	U	<5,300	U	<56,000	U	<14,000	U	<4,400	U	<22,000	U	<3,100	U	<2,200	U	<2,300	U
Phenanthrene	8,600		4,100		1,600	J	4,000		4,400		610	J	400	J	2800		2,000	
Anthracene	1,500	J	930	J	<11,000	U	<2,800	U	660	J	<4,400	U	<630	U	560		480	
Carbazole	540	J	440	J	<11,000	U	<2,800	U	300	J	<4,400	U	<630	U	330	J	240	J
Di-n-butyl phthalate	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
Flouranthene	7,400		4,800		<11,000	U	1,300	J	4,300		530	J	880		4,000		2,000	
Pyrene	7,300		5,100		2,500	J	1,700	J	4,900		580	J	970		4,300		2,000	
Butyl benzyl phthalate	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	U
3,3'-Dichlorobenzidiene	<10,000	U	<2,100	U	<22,000	U	<5,600	U	<1,800	U	<8,900	U	<1,300	U	<870	U	<930	U
Benzo [a] anthracene	2,800	J	2,800		<11,000	U	560	J	2,200		470	J	450	J	2100		930	
Chrysene	3,100	J	3,000		1,600	J	700	J	2,800		610	J	480	J	2300		950	
bis (2-Ethylhexyl) phthalate	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	
Di-n-octyl phthalate	<5,000	U	<1,100	U	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	<430	U	<460	
Benzo [b] fluoranthene	2,800	J	3,900		<11,000	U	540	J	2,400		760	J	500	J	2500		940	
Benzo [k] fluoranthene	2,500	J	3,300		<11,000	U	430	J	2,100		690	J	450	J	1600		740	
Benzo [a] pyrene	2,700	J	4,000		<11,000	U	530	J	2,200		460	J	480	J	780		880	
Indeno [1,2,3-cd] pyrene	1,100	J	1,600		<11,000	U	<2,800	U	790	J	<4,400	U	<630	U	780		300	J
Dibenz [a,h] anthracene	<5,000	U	680	J	<11,000	U	<2,800	U	<890	U	<4,400	U	<630	U	330	J	150	J
Benzo [g,h,i] perylene	1,000	J	1,600		<11,000	U	<2,800	U	820	J	<4,400	U	230	J	760		300	J

Analyte	T-G-01 (6')		T-G-02 (3')		T-G-03 (2')		T-H-01 (7')		T-H-02 (7')		T-H-03 (3')		T-I-01 (7.5')		T-I-02 (8')		T-I-03 (1')		TAGM 4046 Soil Cleanup Objective
EPA 8260B	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg
Chloromethane	<9	U	<6	U	<6	U	<15	U	<14	U	<6	U	<32	U	<38	U	<5	U	
Vinyl Chloride	<9	U	<6	U	<6	U	<15	U	<14	U	<6	U	<32	U	<38	U	<5	U	200
Bromomethane	<9	U	<6	U	<6	U	<15	U	<14	U	<6	U	<32	U	<38	U	<5	U	
Chloroethane	<9	U	<6	U	<6	U	<15	U	<14	U	<6	U	<32	UJ	<38	U	<5	U	1,900
Acetone	290	J	330	J	150	J	460	J	250	J	44	J	90	U	<170	UJ	<13	UJ	200
1, 1-Dichloroethene	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	400
Methylene chloride	<9	U	<6	U	<6	U	<20	U	<10	U	<6	U	<30	U	<40	U	<5	U	100
Carbon disulfide	10		3	J	<3	U	14		14		2	J	10	J	<19	U	<3	U	2,700
trans-1,2-Dichloroethene	<5	U	<3	U	<3	U	<8	U	<7	U	2	J	<16	U	<19	U	<3	U	300
1,1-Dichloroethane	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	200
2-Butanone	120		1600	D	320		160		120		19		30	J	76		<10	U	300
cis-1,2-Dichloroethene	<5	U	<3	U	<3	U	3	J	<7	U	10		<16	U	<19	U	<3	U	
Chloroform	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	300
1,2-Dichloroethane	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	100
1,1,1-Trichloroethane	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	800
Carbon tetrachloride	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	600
Benzene	<5	U	<3	U	<3	U	<8	U	<7	U	1	J	<16	U	<19	U	<3	U	60
1,2-Dichloropropane	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	
Trichloroethene	<5	U	<3	U	<3	U	<8	U	<7	U	2	J	<16	U	<19	U	<3	U	700
Bromodichloromethane	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	
cis-1,3-Dichloropropene	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	
4-Methyl-2-pentanone	<9	U	<6	U	<6	U	<15	U	<14	U	<6	U	<32	U	<38	U	<5	U	1,000
trans-1,3-Dichloropropene	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	
1,1,2-Trichloroethane	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	
Toluene	1	J	0.9	J	0.7	J	8		5	J	2	J	<16	U	<19	U	<3	U	1,500
Dibromochloromethane	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	
2-Hexanone	<9	U	<6	U	1	J	<15	U	<14	U	<6	U	<32	U	<38	U	<5	U	
Tetrachloroethene	<5	U	2	J	0.6	J	<8	U	<7	U	3	J	<16	U	<19	U	<3	U	1,400
Chlorobenzene	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	1,700
Ethylbenzene	<5	U	<3	U	<3	U	4	J	2	J	0.7	J	<16	U	<19	U	<3	U	5,500
Bromoform	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	
Xylene (total)	2	J	<3	U	0.9	J	14		9		2	J	12	J	<19	U	<3	U	1,200
Styrene	<5	U	2	J	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	
1,1,2,2-Tetrachloroethane	<5	U	<3	U	<3	U	<8	U	<7	U	<3	U	<16	U	<19	U	<3	U	600
EPA 8260B																			
bis (2-Chloroethyl) ether	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
Phenol	<6,300		1,100		480		<2,700		<4,800		<430		<5,000		<5,900		<360		30
2-Chlorophenol	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		800
1,3-Dichlorobenzene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
1,4-Dichlorobenzene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
1,2-Dichlorobenzene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
2-Methylphenol	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		100
2,2'-oxybis (1-Chloropropane)	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
4-Methylphenol	<6,300	UJ	<400	UJ	<370	UJ	<2,700	UJ	<4,800	UJ	<430		<5,000	UJ	<5,900	UJ	<360	UJ	900
N-Nitroso-di-n-propylamine	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
Hexachloroethane	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
Nitrobenzene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		200
Isophorone	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		4,400
2-Nitrophenol	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		330
2,4-Dimethylphenol	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
bis (2-Chloroethyl) methane	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
2,4-Dichlorophenol	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		400
1,2,4-Trichlorobenzene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
Naphthalene	<6,300		280	J	51	J	460	J	<4,800		100	J	<5,000		<5,900		<360		13,000
4-Chloroaniline	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		220
Hexachlorobutadiene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
4-Chloro-3-methylphenol	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		240
2-Methylnaphthalene	<6,300		440		120	J	290	J	<4,800		180	J	<5,000		<5,900		<360		36,400
Hexachlorocyclopentadiene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
2,4,6-Trichlorophenol	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
2,4,5-Trichlorophenol	<31,000		<2,000	U	<1,900		<13,000		<24,000		<2,100		<25,000		<30,000		<1,800		100
2-Chloronaphthaline	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
2-Nitroaniline	<31,000		<2,000	U	<1,900		<13,000		<24,000		<2,100		<25,000		<30,000		<1,800		430
Dimethyl pthalate	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		2,000
Acenaphthylene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		120	J	41,000
2,6-Dinitrotoluene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		1,000
3-Nitroaniline	<31,000		<2,000	U	<1,900		<13,000		<24,000		<2,100		<25,000		<30,000		<1,800		500
Acenaphthene	<6,300		<400	U	<370		400	J	<4,800		<430		<5,000		<5,900		<360		50,000
2,4-Dinitrophenol	<31,000		<2,000	U	<1,900		<13,000		<24,000		<2,100		<25,000		<30,000		<1,800		200
4-Nitrophenol	<31,000		<2,000	U	<1,900		<13,000		<24,000		<2,100		<25,000		<30,000		<1,800		100
Dibenzofuran	<6,300		130	J	49	J	<2,700		<4,800		56	J	<5,000		<5,900		<360		6,200
2,4-Dinitrotoluene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
Diethyl phtalate	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		7,100
Flourene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		44	J	50,000
4-Chlorophenyl phenyl ether	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
4-Nitroaniline	<31,000		<2,000	U	<1,900		<13,000		<24,000		<2,100		<25,000		<30,000		<1,800		
4,6-Dinitro-2-methylphenol	<31,000		<2,000	U	<1,900		<13,000		<24,000		<2,100		<25,000		<30,000		<1,800		
N-Nitrosodiphenylamine	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
4-Bromophenyl phenyl ether	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
Hexachlorobenzene	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		410
Pentachlorophenol	<31,000		<2,000	U	<1,900		<13,000		<24,000		<2,100		<25,000		<30,000		<1,800		1,000
Phenanthrene	<6,300		270	J	150	J	480	J	1,200	J	150	J	600	J	600	J	310	J	50,000
Anthracene	<6,300		<400	U	<370		520	J	<4,800		<430		<5,000		<5,900		120	J	50,000
Carbazole	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
Di-n-butyl phthalate	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		
Flouranthene	730	J	86	J	71	J	1,700	J	540	J	120	J	1,400	J	980	J	690		50,000
Pyrene	860	J	120	J	100	J	1,600	J	780	J	130	J	1,300	J	1,100	J	780		50,000
Butyl benzyl phthalate	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		50,000
3,3'-Dichlorobenzidiene	<13,000		<790	U	<750		<5,700		<9,700		<850		<10,000		<12,000		<720		
Benzo [a] anthracene	<6,300		100	J	270	J	750	J	<4,800		110	J	710	J	680	J	340	J	224
Chrysene	<6,300		130	J	430		700	J	<4,800		200	J	720	J	730	J	320	J	400
bis (2-Ethylhexyl) phthalate	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		50,000
Di-n-octyl phthalate	<6,300		<400	U	<370		<2,700		<4,800		<430		<5,000		<5,900		<360		50,000
Benzo [b] fluoranthene	680	J	220	J	1,900		1,000	J	<4,800		190	J	820	J	910	J	460	J	1,100
Benzo [k] fluoranthene	<6,300		76	J	430		300	J	<4,800		110	J	<5,000		<5,900		150	J	1,100
Benzo [a] pyrene	<6,300		100	J	490		650	J	<4,800		130	J	640	J	600	J	340	J	61
Indeno [1,2,3-cd] pyrene	<6,300		51	J	390		<2,700	UJ	<4,800		76	J	<5,000		<5,900		120	J	3,200
Dibenz [a,h] anthracene	<6,300		<400	UJ	160	J	<2,700	UJ	<4,800		<430		<5,000		<5,900		<360	UJ	14
Benzo [g,h,i] perylene	<6,300		57	J	430		<2,700	UJ	<4,800		87	J	<5,000		<5,900		120	J	50,000

TABLE 2:
Analytical Results
Test Pit Samples
VOCs and SVOCs

Analyte	Test Pits - Subsurface Soil Samples																TAGM 4046 Soil Cleanup Objective
	TP-2 (5')		TP-3 (3')		TP-6 (3')		TP-8 (2')		TP-10 (2')		TP-11 (3')		TP-13 (4')		TP-15 (3')		
EPA 8260B	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**
Chloromethane	<65	U	<12	U	<7	U	<8	U	<6	U	<8	U	<9	U	<10	U	
Vinyl Chloride	<65	U	<12	U	<7	U	<8	U	<6	U	<8	U	<9	U	<10	U	200
Bromomethane	<65	U	<12	U	<7	U	<8	U	<6	U	<8	U	<9	U	<10	U	
Chloroethane	<65	U	<12	U	<7	U	<8	U	<6	U	<8	U	<9	U	<10	U	1,900
Acetone	<250	U	<81	U	**190**		**1,300**	D	<10	U	<80	U	**340**		**1,000**	D	200
1, 1-Dichloroethene	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	400
Methylene chloride	<70	U	<10	U	<7	U	<8	U	<6	U	<8	U	<9	U	<10	U	100
Carbon disulfide	19	J	**7**		2	J	**7**		**14**		**5**		3	J	**7**		2,700
trans-1,2-Dichloroethene	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	300
1,1-Dichloroethane	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	200
2-Butanone	88	J	**32**		**240**		**3,400**	D	7	J	13	J	**100**		**250**		300
cis-1,2-Dichloroethene	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	
Chloroform	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	300
1,2-Dichloroethane	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	100
1,1,1-Trichloroethane	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	800
Carbon tetrachloride	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	600
Benzene	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	1	J	60
1,2-Dichloropropane	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	
Trichloroethene	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	700
Bromodichloromethane	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	
cis-1,3-Dichloropropene	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	
4-Methyl-2-pentanone	<65	U	<12	U	<7	U	3	J	<6	U	<8	U	<9	U	<10	U	1,000
trans-1,3-Dichloropropene	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	
1,1,2-Trichloroethane	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	
Toluene	<33	U	**10**		2	J	**10**		**3**		4	J	2	J	**6**		1,500
Dibromochloromethane	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	
2-Hexanone	<65	U	<10	U	1	J	6	J	<6	U	<8	U	<9	U	<10	U	
Tetrachloroethene	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	1,400
Chlorobenzene	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	1,700
Ethylbenzene	<33	U	3	J	0.8	J	2	J	3	J	2	J	<4	U	3	J	5,500
Bromoform	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	
Xylene (total)	9	J	**22**		2	J	**8**		**18**		**8**		2	J	**10**		1,200
Styrene	<33	U	<6	U	<3	U	<4	U	<3	U	<4	U	<4	U	<5	U	
1,1,2,2-Tetrachloroethane	<33	U	<6	UJ	<3	UJ	<4	UJ	<3	UJ	<4	UJ	<4	UJ	<5	UJ	600
EPA 8260B																	
bis (2-Chloroethyl) ether	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
Phenol	<2,500	UJ	300	J	**900**		<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	30
2-Chlorophenol	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	800
1,3-Dichlorobenzene	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
1,4-Dichlorobenzene	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
1,2-Dichlorobenzene	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
2-Methylphenol	<2,500	U	1,300	J	48	J	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	100
2,2'-oxybis (1-Chloropropane)	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
4-Methylphenol	<2,500	U	<2,500	U	**1,200**		<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	900
N-Nitroso-di-n-propylamine	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
Hexachloroethane	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
Nitrobenzene	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	200
Isophorone	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	4,400
2-Nitrophenol	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	330
2,4-Dimethylphenol	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
bis (2-Chloroethyl) methane	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
2,4-Dichlorophenol	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	400
1,2,4-Trichlorobenzene	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
Naphthalene	610	J	840	J	**480**		<2,700	U	<2,000	U	520	J	240	J	<670	U	13,000
4-Chloroaniline	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	220
Hexachlorobutadiene	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	UJ	<520	U	<1,200	U	<670	U	
4-Chloro-3-methylphenol	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	240
2-Methylnaphthalene	1,600	J	1,500	J	410	J	<2,700	U	560	J	**1,400**		160	J	<670	U	36,400
Hexachlorocyclopentadiene	<2,500	UJ	<2,500	U	<450	UJ	<2,700	U	<2,000	UJ	<520	UJ	<1,200	UJ	<670	UJ	
2,4,6-Trichlorophenol	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
2,4,5-Trichlorophenol	<13,000	U	<12,000	U	<2,300	U	<13,000	U	<9,900	U	<2,600	U	<6,000	U	<3,300	U	100
2-Chloronaphthaline	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
2-Nitroaniline	<13,000	U	<12,000	U	<2,300	U	<13,000	U	<9,900	U	<2,600	U	<6,000	U	<3,300	U	430
Dimethyl pthalate	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	2,000
Acenaphthylene	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	180	J	240	J	<670	U	41,000
2,6-Dinitrotoluene	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	1,000
3-Nitroaniline	<13,000	U	<12,000	U	<2,300	U	<13,000	U	<9,900	U	<2,600	U	<6,000	U	<3,300	U	500
Acenaphthene	1,400	J	<2,500	U	**1,100**		<2,700	U	<2,000	U	<520	U	400	J	<670	U	50,000
2,4-Dinitrophenol	<13,000	U	<12,000	U	<2,300	U	<13,000	U	<9,900	U	<2,600	U	<6,000	U	<3,300	U	200
4-Nitrophenol	<13,000	UJ	<12,000	U	<2,300	U	<13,000	U	<9,900	U	<2,600	U	<6,000	U	<3,300	U	100
Dibenzofuran	<2,500	U	260	J	**950**		<2,700	U	<2,000	U	210	J	290	J	<670	U	6,200
2,4-Dinitrotoluene	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
Diethyl phtalate	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	7,100
Flourene	**4,600**		<2,500	U	**1,200**		<2,700	U	<2,000	U	180	J	580	J	<670	U	50,000
4-Chlorophenyl phenyl ether	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
4-Nitroaniline	<13,000	U	<12,000	U	<2,300	U	<13,000	U	<9,900	U	<2,600	U	<6,000	U	<3,300	U	
4,6-Dinitro-2-methylphenol	<13,000	U	<12,000	U	<2,300	U	<13,000	U	<9,900	U	<2,600	U	<6,000	U	<3,300	U	
N-Nitrosodiphenylamine	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
4-Bromophenyl phenyl ether	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	
Hexachlorobenzene	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	<520	U	<1,200	U	<670	U	410
Pentachlorophenol	<13,000	UJ	<12,000	U	<2,300	U	<13,000	U	<9,900	U	<2,600	U	<6,000	U	<3,300	U	1,000
Phenanthrene	<2,500	U	1,600	J	**8,800**	D	1,500	J	410	J	**800**		**5,200**		430	J	50,000
Anthracene	<2,500	U	<2,500	U	**1,400**		<2,700	U	<2,000	U	<520	U	1,200	J	<670	U	50,000
Carbazole	<2,500	U	<2,500	U	**1,200**		<2,700	U	<2,000	U	81	J	500	J	<670	U	
Di-n-butyl phthalate	<2,500	U	<2,500	U	<450	U	<2,700	U	<2,000	U	82	J	<1,200	U	<670	U	
Flouranthene	<2,500	U	1,400	J	**7,200**		1,500	J	270	J	**1,000**		**6,900**		640	J	50,000
Pyrene	**5,400**		1,600	J	**7,300**	D	2,400	J	1,100	J	**1,200**		**6,400**		**690**		50,000
Butyl benzyl phthalate	<2,500	U	<2,500	U	<450	UJ	<2,700	UJ	<2,000	U	<520	U	<1,200	U	<670	U	50,000
3,3'-Dichlorobenzidiene	<5,100	U	<5,000	U	<900	UJ	<5,400	UJ	<4,000	U	<1,000	U	<2,400	U	<1,300	U	
Benzo [a] anthracene	1,900	J	870	J	4,200	J	760	J	<2,000	U	**540**		**3,200**		340	J	224
Chrysene	2,300	J	940	J	3,700	J	1,200	J	580	J	**690**		**3,400**		390	J	400
bis (2-Ethylhexyl) phthalate	<2,500	U	<2,500	U	<450	UJ	<2,700	UJ	<2,000	U	<520	U	<1,200	U	120	J	50,000
Di-n-octyl phthalate	<2,500	U	<2,500	U	<450	UJ	<2,700	UJ	<2,000	U	<520	U	<1,200	U	<670	U	50,000
Benzo [b] fluoranthene	400	J	730	J	4,100	J	990	J	380	J	830	J	**3,500**		400	J	1,100
Benzo [k] fluoranthene	<2,500	U	550	J	2,300	J	650	J	<2,000	U	560	J	**2,700**		360	J	1,100
Benzo [a] pyrene	1,300	J	740	J	2,800	J	750	J	300	J	630	J	**3,100**		330	J	61
Indeno [1,2,3-cd] pyrene	<2,500	U	280	J	1,100	J	320	J	<2,000	U	270	J	960	J	130	J	3,200
Dibenz [a,h] anthracene	<2,500	U	<2,500	U	<450	UJ	<2,700	U	<2,000	U	120	J	<1,200	U	<670	UJ	14
Benzo [g,h,I] perylene	940	J	370	J	1,000	J	400	J	200	J	290	J	930	J	130	J	50,000

Analyte	Miscellaneous Samples - Subsurface Soil Samples												TAGM 4046 Soil Cleanup Objective
	M-1 (3')		M-2 (1')		M-3 (3')		M-4 (3.5')		M-6		M-6 dup.		
EPA 8260B	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**
Chloromethane	<12	U	<13	U	<17	U	<9	U	<7	U	<7	U	
Vinyl Chloride	<12	U	<13	U	<17	U	<9	U	<7	U	<7	U	200
Bromomethane	<12	U	<13	U	<17	U	<9	U	<7	U	<7	U	
Chloroethane	<12	U	<13	U	<17	U	<9	U	<7	U	<7	U	1,900
Acetone	150	J	<26	U	150	J	81	J	<14	U	6	J	200
1, 1-Dichloroethene	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	400
Methylene chloride	<10	U	<10	U	<20	U	<9	U	<7	U	<7	U	100
Carbon disulfide	<6	U	<7	U	2	J	2	J	<4	U	<4	U	2,700
trans-1,2-Dichloroethene	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	300
1,1-Dichloroethane	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	200
2-Butanone	54		6	J	59		31		<14	U	<14	U	300
cis-1,2-Dichloroethene	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	
Chloroform	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	300
1,2-Dichloroethane	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	100
1,1,1-Trichloroethane	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	800
Carbon tetrachloride	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	600
Benzene	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	60
1,2-Dichloropropane	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	
Trichloroethene	<6	U	<7	U	<9	U	<5	U	6		9		700
Bromodichloromethane	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	
cis-1,3-Dichloropropene	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	
4-Methyl-2-pentanone	<12	U	<13	U	<17	U	<9	U	<7	U	<7	U	1,000
trans-1,3-Dichloropropene	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	
1,1,2-Trichloroethane	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	
Toluene	4	J	<7	U	<9	U	1	J	<4	U	<4	U	1,500
Dibromochloromethane	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	
2-Hexanone	<12	U	<13	U	<17	U	<9	U	<7	U	<7	U	
Tetrachloroethene	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	1,400
Chlorobenzene	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	1,700
Ethylbenzene	1	J	<7	U	<9	U	<5	U	<4	U	<4	U	5,500
Bromoform	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	
Xylene (total)	4	J	<7	U	<9	U	1	J	<4	U	<4	U	1,200
Styrene	<6	U	<7	U	<9	U	<5	U	<4	U	<4	U	
1,1,2,2-Tetrachloroethane	<6	UJ	<7	UJ	<9	UJ	<5	UJ	<4	UJ	<4	UJ	600
EPA 8260B	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**
bis (2-Chloroethyl) ether	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
Phenol	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	30
2-Chlorophenol	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	800
1,3-Dichlorobenzene	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
1,4-Dichlorobenzene	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
1,2-Dichlorobenzene	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
2-Methylphenol	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	100
2,2'-oxybis (1-Chloropropane)	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
4-Methylphenol	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	900
N-Nitroso-di-n-propylamine	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
Hexachloroethane	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
Nitrobenzene	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	200
Isophorone	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	4,400
2-Nitrophenol	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	330
2,4-Dimethylphenol	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
bis (2-Chloroethyl) methane	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
2,4-Dichlorophenol	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	400
1,2,4-Trichlorobenzene	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
Naphthalene	<770	U	<880	U	<1,100	U	<620	U	120	J	140	J	13,000
4-Chloroaniline	<770	U	<880	U	<1,100	U	<620	U	<480	UJ	<900	UJ	220
Hexachlorobutadiene	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
4-Chloro-3-methylphenol	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	240
2-Methylnaphthalene	<770	U	<880	U	<1,100	U	91	J	120	J	150	J	36,400
Hexachlorocyclopentadiene	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
2,4,6-Trichlorophenol	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
2,4,5-Trichlorophenol	<3,900	U	<4,400	U	<5,700	U	<3,100	U	<2,400	U	<4,500	U	100
2-Chloronaphthaline	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
2-Nitroaniline	<3,900	U	<4,400	U	<5,700	U	<3,100	U	<2,400	U	<4,500	U	430
Dimethyl pthalate	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	2,000
Acenaphthylene	<770	U	<880	U	<1,100	U	69	J	150	J	150	J	41,000
2,6-Dinitrotoluene	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	1,000
3-Nitroaniline	<3,900	U	<4,400	U	<5,700	U	<3,100	U	<2,400	U	<4,500	U	500
Acenaphthene	<770	U	<880	U	<1,100	U	<620	U	120	J	340	J	50,000
2,4-Dinitrophenol	<3,900	U	<4,400	U	<5,700	U	<3,100	U	<2,400	U	<4,500	U	200
4-Nitrophenol	<3,900	U	<4,400	U	<5,700	U	<3,100	U	<2,400	U	<4,500	U	100
Dibenzofuran	<770	U	<880	U	<1,100	U	<620	U	100	J	220	J	6,200
2,4-Dinitrotoluene	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
Diethyl phtalate	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	7,100
Flourene	<770	U	<880	U	130	J	110	J	150	J	460	J	50,000
4-Chlorophenyl phenyl ether	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
4-Nitroaniline	<3,900	U	<4,400	U	<5,700	U	<3,100	U	<2,400	U	<4,500	U	
4,6-Dinitro-2-methylphenol	<3,900	U	<4,400	U	<5,700	U	<3,100	U	<2,400	U	<4,500	U	
N-Nitrosodiphenylamine	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
4-Bromophenyl phenyl ether	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
Hexachlorobenzene	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	410
Pentachlorophenol	<3,900	U	<4,400	U	<5,700	U	<3,100	U	<2,400	U	<4,500	U	1,000
Phenanthrene	660	J	<880	U	1,200		1,100		1,800		3,800		50,000
Anthracene	120	J	<880	U	210	J	250	J	610		1,300		50,000
Carbazole	<770	U	<880	U	120	J	77	J	190	J	390	J	
Di-n-butyl phthalate	<770	U	<880	U	<1,100	U	<620	U	<480	U	<900	U	
Flouranthene	710	J	100	J	1,700		1,400		4,200		6,700		50,000
Pyrene	1,100		100	J	2,000		1,500		5,500	J	6,400		50,000
Butyl benzyl phthalate	<770	U	<880	U	<1,100	U	<620	U	100	J	<900	U	50,000
3,3'-Dichlorobenzidiene	<1,600	U	<1,800	U	<2,300	U	<1,200	U	<950	UJ	<1,800	U	
Benzo [a] anthracene	400	J	<880	U	840	J	780		2,600	J	3,400		224
Chrysene	480	J	<880	U	990	J	960		2,600	J	3,300		400
bis (2-Ethylhexyl) phthalate	<770	U	<880	U	260	J	120	J	<480	UJ	<900	U	50,000
Di-n-octyl phthalate	<770	U	<880	U	<1,100	U	<620	U	<480	UJ	<900	U	50,000
Benzo [b] fluoranthene	460	J	<880	U	820	J	900		4,100	J	4,400	J	1,100
Benzo [k] fluoranthene	420	J	<880	U	860	J	650		1,300	J	1,700	J	1,100
Benzo [a] pyrene	390	J	<880	U	760	J	720		2,700	J	3,200	J	61
Indeno [1,2,3-cd] pyrene	170	J	<880	U	260	J	250	J	1,400	J	1,600	J	3,200
Dibenz [a,h] anthracene	<770	UJ	<880	U	<1,100	UJ	<620	U	<480	UJ	<900	UJ	14
Benzo [g,h,I] perylene	180	J	<880	U	350	J	250	J	1,600	J	1,700	J	50,000

TABLE 4:
Analytical Results
Test Trench Samples
Metals

Analyte	Test Trenches - Subsurface Soil Samples														TAGM 4046 Soil Cleanup Objective	Eastern USA/NYS Background
	T-A-01 (4')	T-A-02 (3')	T-A-03 (3')	T-B-01 (3')	T-B-02 (3')	T-B-03 (5')	T-C-01 (4')	T-C-02 (4')	T-C-03 (3')	T-D-01 (3')	T-D-02 (2')	T-D-03 (3')	T-E-01 (2')	T-E-02 (4')		
EPA 6010	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	2990	5,900 J	4,290 J	2,500	3,600 J	3,270 J	3,830	2,790	3,710	2,100	3,600 D	4,190 D	1,350	3260	SB	33,000
Antimony	4.7 J	1 J	1.8 J	5.8 J	2.6 J	2.7 J	0.26 J	<0.43 UJ	<0.27 UJ	4 J	6 DJ	0.74 UJ	0.44 J	0.71 J	SB	N/A
Arsenic	16.7 J	17.8 J	21.4 J	8.1 J	12.6 J	9.3 J	3.8 J	3.3 J	5.5 J	10.1	57.4 J	35.7 J	6.8 J	6.6 J	7.5 or SB	3-12
Barium	955	106 J	97.9 J	126	116 J	33.6 J	67.1	146	244	2,300 D	1,130	40.7	74.6	66.7	300 or SB	15-600
Beryllium	0.36 J	0.41 J	0.4 J	0.38 J	0.37 J	0.22 J	0.26 J	0.21 J	0.26 J	0.25 J	1.1 J	0.73 J	0.33 J	0.31 J	0.16 (HEAST) or SB	0-1.75
Cadmium	1.9	0.47 J	4.2 J	0.41 J	0.42 J	0.62 J	0.31 J	0.14 J	0.28 J	3.5	4.5 D	<0.13 U	<0.067 U	0.79 J	1 or SB	0.1-1
Calcium	102,000	20,700 J	46,100 J	104,000	89,100 J	12,900 J	118,000	71,800	147,000	77,000	20,300	7,920	65,500	105,000	SB	130-35,000
Chromium	20.5	15 J	123 J	8.9	12.1 J	35.8 J	8.9	7	9.7	27	62.5 D	8.9 D	4.2	22	10 or SB	1.5-40
Cobalt	4.7 J	5.9 J	5.8 J	3.7 J	5.2 J	4.4 J	4.9 J	2.8 J	4.3 J	3.9 J	14.7 D	3.2 D	0.92 J	4.6 J	30 or SB	2.5-60
Copper	R	R	R	R	R	R	R	R	R	R	R	R	R	R	25 or SB	1-50
Iron	39,500	17,000 J	53,300 J	22,800	27,000 J	30,400 J	14,400	9,990	12,600	23,400	138,000 D	11,500 D	9,530	64,600	2,000 or SB	2,000-550,000
Lead	2,840	132 J	510 J	386	252 J	68.1 J	94.6	102	184	24,700	3,470 D	5.7 D	49	75.7	SB	200-500
Magnesium	5,300	4,320 J	4,790 J	3910	5,370 J	1,580 J	16,400	10,900	18,900	4,480	934	1,420	1,390	1,840	SB	100-5,000
Manganese	321 J	250 J	251 J	159 J	237 J	185 J	361 J	231 J	329 J	212 J	626 DJ	255 DJ	108 J	933 J	SB	50-5,000
Nickel	20.8 J	164 J	619 J	13.2 J	18.6 J	365 J	14.4 J	12.8 J	17 J	25.9 J	77.9 DJ	11.1 DJ	5.6 J	29.2 J	13 or SB	0.5-25
Potassium	684	1,080 J	706 J	385 J	604 J	515 J	900	832 J	825	994	724 J	1,150	141 J	275 J	SB	8,500-43,000
Selenium	0.45 J	3 J	2.3 J	0.7 J	0.97 J	1.1 J	<0.32 U	1.5 J	<0.35 UJ	1.2 J	5 J	2.7 J	0.91 J	0.73 J	2 or SB	0.1-3.9
Silver	0.46 J	<0.34 UJ	<0.27 UJ	<0.18 UJ	<0.27 UJ	<0.26 UJ	<0.15 UJ	<0.25 UJ	<0.16 UJ	0.51 J	0.35 J	<0.22 UJ	<0.22 UJ	<0.17 UJ	SB	N/A
Sodium	398 J	172 J	121 J	282 J	362 J	340 J	788 J	391 J	704 J	1,100 J	1,680 J	11,700 J	191 J	178 J	SB	6,000-8,000
Thallium	<0.43 UJ	<0.84 UJ	<0.67 UJ	<0.44 UJ	<0.67 UJ	<0.65 UJ	<0.36 UJ	<0.62 UJ	<0.4 UJ	<0.48 UJ	2.5 UJ	1.1 UJ	<0.53 UJ	<0.43 UJ	SB	N/A
Vanadium	14.4 J	14.5 J	25.9 J	10.5 J	12.7 J	12 J	10 J	7.7 J	10.2 J	10.3 J	24.3 J	19.4 J	10.7 J	28.8 J	150 or SB	1-300
Zinc	863 DJ	213 J	1,940 DJ	120 J	72.3 J	113 J	71.7 J	61.3 J	87.3 J	1,970 DJ	5,020 DJ	24.7 DJ	36 J	156 J	20 or SB	9-50
EPA 7174	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Mercury	0.39	0.26 J	1.7 J	<0.09 J	0.11 J	0.096 J	0.41 J	0.027 J	0.14	0.99	0.37	0.13 J	0.49	0.16	0.1	0.001-0.2
EPA 9014	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Cyanide	0.56 J	0.65 J	<1.1 UJ	<0.69 UJ	0.69 J	<1.0 UJ	<0.56 U	<0.97 U	<0.62 U	<0.76 U	<0.8 U	<0.84 U	<0.83 U	0.26 J	N/A	N/A

Analyte	Test Trenches - Subsurface Soil Samples														TAGM 4046 Soil Cleanup Objective	Eastern USA/NYS Background
	T-E-03 (2')	T-F-01 (2.5')	T-F-02 (4')	T-F-03 (4')	T-G-01 (6')	T-G-02 (3')	T-G-03 (2')	T-H-01 (7')	T-H-02 (7')	T-H-03 (3')	T-I-01 (7.5')	T-I-02 (8')	T-I-03 (1')	N/A		
EPA 6010	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg
Aluminum	3,410 D	1,310	3,120	2,080	3,900 D	4,190 D	5,200	7,370 D	2,140 D	2,470	4,490	5,100 D	807		SB	33,000
Antimony	1.5 DJ	0.7 J	0.9 J	0.66 J	2.9 DJ	2.4 DJ	1.2 J	1.5 DJ	2.9 DJ	0.74 J	2.2 DJ	5.5 DJ	<0.24 UJ		SB	N/A
Arsenic	33.9 J	7 J	5.8 J	5.3 J	23.3 J	15 J	2.8 J	15.9 J	59.9 J	90.3 J	47.7 J	37.2 J	3.4 J		7.5 or SB	3-12
Barium	124	33	55.7	59.5	57.9	179	33.6	64.2	80.9	191	43	51.8	38		300 or SB	15-600
Beryllium	0.79 J	0.16 J	0.29 J	0.18 J	0.43 J	0.31 J	0.32 J	0.43 J	0.41 J	0.43 J	2.1	1.2 J	0.17 J		0.16 (HEAST) or SB	0-1.75
Cadmium	0.94 D	0.24 J	0.9 J	0.36 J	2.2 D	1.1 D	0.5 J	0.85 D	1.8 D	0.58 J	0.85 D	1.3 D	<0.043 UJ		1 or SB	0.1-1
Calcium	20,500	215,000	142,000	123,000	16,800	40,300	1,930	37,100	22,500	5,420	7,240	32,800	35,100		SB	130-35,000
Chromium	20.2 D	7.8	18.1	10.6	149 D	31 D	17.1	49.1 D	57.7 D	9.8	178	157 D	2.5		10 or SB	1.5-40
Cobalt	8.2 D	1.7 J	4.1 J	3.1 J	22.6 D	10 D	4.5 J	10.5 D	19.9 D	5.4 J	64.8 D	23.2 D	0.51 J		30 or SB	2.5-60
Copper	R	R	R	R	R	R	R	71.3	R	R	R	R	R		25 or SB	1-50
Iron	75,100 D	11,600	45,900	20,000	152,000 D	92,100 D	46,500	80,500 D	168,000 D	62,100	47,500	91,400 D	5,030		2,000 or SB	2,000-550,000
Lead	1,060 D	171	104	190	118 D	38 D	271	86.4 D	36.1	25	59.5 D	93.5 D	24.4		SB	200-500
Magnesium	7,520	6,390	3,820	3,680	2,010	7,300	1,130	14,700	3,170	1,620	1,020	2,010	1,950		SB	100-5,000
Manganese	446 DJ	109 J	660 J	285 J	1,210 DJ	1,030 DJ	1,160 J	624 DJ	985 DJ	272 J	171 J	505 DJ	62.5 J		SB	50-5,000
Nickel	20.4 DJ	20.8 J	21.5 J	20.2 J	6,210 DJ	271 DJ	18.7 J	255 DJ	598 DJ	34.2 J	7,120 D	852 DJ	3.6 J		13 or SB	0.5-25
Potassium	391 J	265 J	399 J	636 J	433 J	906	1,000	1,350	351 J	877	540	611 J	103 J		SB	8,500-43,000
Selenium	1.1 J	1.4 J	<0.36 U	0.41 J	3.8 J	1.2 J	0.8 J	1.8 J	9 J	4.5 J	12.4 J	4.3 J	0.53 J		2 or SB	0.1-3.9
Silver	<0.17 UJ	<0.25 UJ	<0.17 UJ	<0.18 UJ	<0.25 UJ	<0.15 UJ	<0.15 UJ	<0.21 UJ	<0.19 UJ	<0.17 UJ	<0.19 UJ	<0.23 UJ	<0.14 UJ		SB	N/A
Sodium	545 J	590 J	329 J	418 J	3,090 J	521 J	279 J	6,050 J	5,480 J	2,140 J	3,030 J	3,450 J	67.1 J		SB	6,000-8,000
Thallium	<0.85 UJ	<0.6 UJ	<0.42 UJ	<0.45 UJ	<3.0 UJ	<1.9 UJ	0.49 J	1 UJ	<2.3 UJ	<0.41 UJ	<0.48 UJ	<1.1 UJ	<0.34 UJ		SB	N/A
Vanadium	18.3 J	6.7 J	21.9 J	10.4 J	25.4 J	20.3 J	31.3 J	20.7 J	34.7 J	21.5 J	14 J	32 J	5.5 J		150 or SB	1-300
Zinc	157 DJ	111 J	169 J	95.5 J	881 DJ	55.5 DJ	33.2 J	71.3 DJ	59.5 DJ	59.2 J	613 DJ	196 DJ	19.5 J		20 or SB	9-50
EPA 7174	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg
Mercury	0.16	0.32	0.25	0.09 J	0.089 J	0.091 J	<0.009 U	0.18	0.15	0.061 J	0.22	0.21	0.077 J		0.1	0.001-0.2
EPA 9014	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg	mg/kg
Total Cyanide	0.26 J	<0.94 U	0.32 J	0.5 J	0.42 J	<0.59 U	<0.56 U	<0.81 U	0.32 J	<0.34 U	<0.75 U	<0.9 U	<0.54 U		N/A	N/A

TABLE 5:
Analytical Results
Test Pit Samples
Metals

Site Investigation Report
Former Syracuse Rigging Property
NYSDEC Brownfields Project No. B-00146-7
341 Peat Street
City of Syracuse, New York

Analyte	Test Pits - Subsurface Soil Samples																TAGM 4046 Soil Cleanup Objective	Eastern USA/ NYS Background
	TP-2 (5')		TP-3 (3')		TP-6 (3')		TP-8 (2')		TP-10 (2')		TP-11 (3')		TP-13 (4')		TP-15 (3')			
EPA 6010	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	mg/kg
Aluminum	6,390	D	3,090		4,110	D	2,280		2,820	D	3,280		3,040		6,840		SB	33,000
Antimony	2.7	DJ	1.9	J	2.4	DJ	2.6	J	2.9	DJ	5.3	J	0.66	J	0.7	J	SB	N/A
Arsenic	118		7.8		17.7		13.8		19.6		9		7.7		17.6		7.5 or SB	3-12
Barium	28.1		37.5		253		161		40.7		140		80.4		103		300 or SB	15-600
Beryllium	1.4		0.36	J	0.7	J	0.26	J	0.28	J	0.37	J	0.2	J	0.46	J	0.16 (HEAST) or SB	0-1.75
Cadmium	5.2	D	1	J	1.1	D	0.91	J	1.4	D	0.56	J	0.24	J	0.47	J	1 or SB	0.1-1
Calcium	6,360		25,900		8,080		119,000		9,030		15,500		130,000		51,200		SB	130-35,000
Chromium	125	D	42.7		28.9	D	20.6		210	D	15.5		10.9		16.4		10 or SB	1.5-40
Cobalt	58.9	D	6.8	J	10.2	D	5.8	J	18.5	D	4.9	J	2.4	J	6.3	J	30 or SB	2.5-60
Copper	286	D	45.8		76.3	D	60.6		114	D	32.6		24.6		54.9		25 or SB	1-50
Iron	261,000	D	57,700		108,000	D	71,900		201,000	D	34,700		18,800		29,100		2,000 or SB	2,000-550,000
Lead	218	D	60.3		645	D	955		54	D	692		156		118		SB	200-500
Magnesium	442		5,910		3,250		16,500		1,180		1,570		7,880		4,840		SB	100-5,000
Manganese	791	D	831		369	D	481		885	D	545		254		250		SB	50-5,000
Nickel	5,290	D	283		103	D	15.1		2,040	D	31.2		47.9		24.5		13 or SB	0.5-25
Potassium	386	J	609	J	684		841		344	J	361	J	600	J	997	J	SB	8,500-43,000
Selenium	24.1		1.1		3.5		0.73	J	12.4		0.77	J	1		2.1		2 or SB	0.1-3.9
Silver	<0.2	U	<0.2	U	<0.18	U	<0.21	U	<0.16	U	<0.2	U	<0.23	U	<0.26	U	SB	N/A
Sodium	1,770		4,190		1,260		478		1,580		175		187		163	J	SB	6,000-8,000
Thallium	<2.4	DU	<0.48	U	<0.87	DU	<0.52	U	<1.9	DU	<0.5	U	<0.58	U	<0.65	U	SB	N/A
Vanadium	19.6		32.6		21.9		10		17.9		16.8		10.7		15.9		150 or SB	1-300
Zinc	600	DJ	110	J	201	D	211	J	89.3	DJ	283	J	76.5	J	144	J	20 or SB	9-50
EPA 7174	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	mg/kg
Mercury	0.11	J	0.096	J	0.72		2.4		0.036	J	0.29		0.13	J	0.32		0.1	0.001-0.2
EPA 9014	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	mg/kg
Total Cyanide	<0.76	U	<0.75	U	0.39	J	<0.81	U	0.35	J	<0.78	U	<0.9	U	<1.0	U	N/A	N/A

TABLE 6:
Analytical Results
Miscellaneous Samples
Metals

Analyte	Miscelaneous Samples - Subsurface Soil Samples												TAGM 4046 Soil Cleanup Objective	Eastern USA/ NYS Background
	M-1 (3')		M-2 (1')		M-3 (3')		M-4 (3.5')		M-6		M-6 Dup.			
EPA 6010	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	**mg/kg**
Aluminum	3,560	J	1,880	J	2,310	J	**3,590**		3,300	J	3,360	J	SB	33,000
Antimony	1.2	J	0.61	J	3.1	J	1.8	J	1.2	J	1	J	SB	N/A
Arsenic	8.6	J	7.8	J	17.4	J	**8.8**		13.4	J	13.9	J	7.5 or SB	3-12
Barium	112	J	56	J	53.1	J	**56.2**		80	J	74.8	J	300 or SB	15-600
Beryllium	0.29	J	0.14	J	0.2	J	0.22	J	0.4	J	0.4	J	0.16 (HEAST) or SB	0-1.75
Cadmium	0.43	J	<0.11	UJ	0.84	J	0.53	J	0.89	J	0.85	J	1 or SB	0.1-1
Calcium	152,000	J	148,000	J	33,200	J	**57,700**		120,000	J	108,000	J	SB	130-35,000
Chromium	36.7	J	3.3	J	121	J	61.2	J	56.1	J	69.3	J	10 or SB	1.5-40
Cobalt	5.9	J	<0.51	UJ	11.9	J	6.9	J	6.5	J	6.4	J	30 or SB	2.5-60
Copper	36.6	J	15.3	J	89.9	J	**45**		64.7	J	68	J	25 or SB	1-50
Iron	35,000	J	5,670	J	76,300	J	**44,600**		31,600	J	37,900	J	2,000 or SB	2,000-550,000
Lead	41	J	18	J	55.6	J	**37.3**		89.9	J	98.2	J	SB	200-500
Magnesium	6,810	J	2,170	J	1,140	J	4,830	J	20,000	J	15,100	J	SB	100-5,000
Manganese	299	J	154	J	437	J	360	J	362	J	398	J	SB	50-5,000
Nickel	492	J	22.6	J	1,660	J	**856**		249	J	216	J	13 or SB	0.5-25
Potassium	763	J	146	J	149	J	477	J	589	J	515	J	SB	8,500-43,000
Selenium	1.3	J	5.6	J	3.5	J	0.94	J	1.1	J	0.85	J	2 or SB	0.1-3.9
Silver	<30	UJ	<0.35	UJ	<0.46	UJ	<0.24	U	<0.16	UJ	<0.15	UJ	SB	N/A
Sodium	505	J	1,740	J	3,000	J	**561**		169	J	149	J	SB	6,000-8,000
Thallium	<0.75	UJ	<0.85	UJ	<1.1	UJ	<0.59	U	<0.57	UJ	<0.54	UJ	SB	N/A
Vanadium	10.6	J	5.1	J	9.3	J	**10.2**		14.3	J	15.2	J	150 or SB	1-300
Zinc	50.3	J	27.8	J	66	J	**74.3**		327	J	353	J	20 or SB	9-50
EPA 7174	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	**mg/kg**
Mercury	0.2	J	0.077	J	0.14	J	0.14	J	0.51	J	0.61	J	0.1	0.001-0.2
EPA 9014	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**	**mg/kg**
Total Cyanide	<1.2	UJ	<1.3	UJ	<1.8	UJ	<0.93	U	0.38	J	0.4	J	N/A	N/A

Analyte	Subsurface Soil Samples (Test Pits) - PCBs										TAGM 4046 Soil Cleanup Objective
	P-1 (4')		P-2 (6')		P-3 (3')		P-4 (1')		P-5 (3.5')		
EPA 8082	**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**
PCB-1016	<1.0	U	<1.4	U	<0.94	U	<1.4	U	<0.94	U	10
PCB-1221	<1.0	U	<1.4	U	<0.94	U	<1.4	U	<0.94	U	10
PCB-1232	<1.0	U	<1.4	U	<0.94	U	<1.4	U	<0.94	U	10
PCB-1242	<1.0	U	<1.4	U	<0.94	U	<1.4	U	<0.94	U	10
PCB-1248	<1.0	U	<1.4	U	<0.94	U	<1.4	U	<0.94	U	10
PCB-1254	<1.0	U	<1.4	U	<0.94	U	<1.4	U	<0.94	U	10
PCB-1260	<1.0	U	<1.4	U	<0.94	U	<1.4	U	<0.94	U	10

Analyte	Offsite Samples - Subsurface Soil Samples										TAGM 4046 Soil Cleanup Objective
	B-1-04 (8'-14')		B-2-04 (8'-12')		B-2-04 DUP		B-3-04 (8'-12')		B-4-04 (8'-14')		
EPA 8260B	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**
Chloromethane	<88	U	<140	U	<180	U	<13	U	<6	U	
Vinyl Chloride	<88	U	<140	U	<180	U	<13	U	<6	U	200
Bromomethane	<88	U	<140	U	<180	U	<13	U	<6	U	
Chloroethane	<88	U	<140	U	<180	U	<13	U	<6	U	1,900
Acetone	<180	U	<280	U	<360	U	**110**		<11	U	200
1, 1-Dichloroethene	<44	U	<70	U	<89	U	<7	U	<3	U	400
Methylene chloride	<140	U	<140	U	670	J	<24	U	<6	U	100
Carbon disulfide	<44	U	<70	U	<89	U	2	J	<3	U	2,700
trans-1,2-Dichloroethene	<44	U	<70	U	<89	U	<7	U	<3	U	300
1,1-Dichloroethane	<44	U	<70	U	<89	U	2	J	<3	U	200
2-Butanone	<180	U	<280	U	<360	U	<26	U	<11	U	300
cis-1,2-Dichloroethene	<44	U	<70	U	<89	U	2	J	<3	U	
Chloroform	<44	U	<70	U	<89	U	<7	U	<3	U	300
1,2-Dichloroethane	<44	U	<70	U	<89	U	<7	U	<3	U	100
1,1,1-Trichloroethane	<44	U	<70	U	<89	U	<7	U	<3	U	800
Carbon tetrachloride	<44	U	<70	U	<89	U	<7	U	<3	U	600
Benzene	19	J	<70	U	86	J	4	J	<3	U	60
1,2-Dichloropropane	<44	U	<70	U	<89	U	<7	U	<3	U	
Trichloroethene	<44	U	<70	U	<89	U	<7	U	<3	U	700
Bromodichloromethane	<44	U	<70	U	<89	U	<7	U	<3	U	
cis-1,3-Dichloropropene	<44	U	<70	U	<89	U	<7	U	<3	U	
4-Methyl-2-pentanone	<88	U	<140	U	<180	U	<13	U	<6	U	1,000
trans-1,3-Dichloropropene	<44	U	<70	U	<89	U	<7	U	<3	U	
1,1,2-Trichloroethane	<44	U	<70	U	<89	U	<7	U	<3	U	
Toluene	<44	U	<70	U	41	J	<7	U	<3	U	1,500
Dibromochloromethane	<44	U	<70	U	<89	U	<7	U	<3	U	
2-Hexanone	<88	U	<140	U	<180	U	<13	U	<6	U	
Tetrachloroethene	<44	U	<70	U	<89	U	<7	U	<3	U	1,400
Chlorobenzene	<44	U	<70	U	<89	U	<7	U	<3	U	1,700
Ethylbenzene	<44	U	<70	U	<89	U	<7	U	<3	U	5,500
Bromoform	<44	U	<70	U	<89	U	<7	U	<3	U	
Xylene (total)	<44	U	<70	U	<89	U	<7	U	<3	U	1,200
Styrene	<44	U	<70	U	<89	U	<7	U	<3	U	
1,1,2,2-Tetrachloroethane	<44	U	<70	U	<89	U	<7	UJ	<3	U	600
EPA 8260B	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**
bis (2-Chloroethyl) ether	<590	U	<950	U	<1200	U	<880	U	<370	U	
Phenol	<590	U	<950	U	<1200	U	<880	U	<370	U	30
2-Chlorophenol	<590	U	<950	U	<1200	U	<880	U	<370	U	800
1,3-Dichlorobenzene	<590	U	<950	U	<1200	U	<880	U	<370	U	
1,4-Dichlorobenzene	<590	U	<950	U	<1200	U	<880	U	<370	U	
1,2-Dichlorobenzene	<590	U	<950	U	<1200	U	<880	U	<370	U	
2-Methylphenol	<590	U	<950	U	<1200	U	<880	U	<370	U	100
2,2'-oxybis (1-Chloropropane)	<590	U	<950	U	<1200	U	<880	U	<370	U	
4-Methylphenol	<590	U	<950	U	<1200	U	<880	U	<370	U	900
N-Nitroso-di-n-propylamine	<590	U	<950	U	<1200	U	<880	U	<370	U	
Hexachloroethane	<590	U	<950	U	<1200	U	<880	U	<370	U	
Nitrobenzene	<590	U	<950	U	<1200	U	<880	U	<370	U	200
Isophorone	<590	U	<950	U	<1200	U	<880	U	<370	U	4,400
2-Nitrophenol	<590	U	<950	U	<1200	U	<880	U	<370	U	330
2,4-Dimethylphenol	<590	U	<950	U	<1200	U	<880	U	<370	U	
bis (2-Chloroethyl) methane	<590	U	<950	U	<1200	U	<880	U	<370	U	
2,4-Dichlorophenol	<590	U	<950	U	<1200	U	<880	U	<370	U	400
1,2,4-Trichlorobenzene	<590	U	<950	U	<1200	U	<880	U	<370	U	
Naphthalene	150	J	<950	U	<1200	U	<880	U	<370	U	13,000
4-Chloroaniline	<590	UJ	<950	UJ	<1200	U	<880	UJ	<370	UJ	220
Hexachlorobutadiene	<590	U	<950	U	<1200	U	<880	U	<370	U	
4-Chloro-3-methylphenol	<590	U	<950	U	<1200	U	<880	U	<370	U	240
2-Methylnaphthalene	<590	U	<950	U	<1200	U	<880	U	<370	U	36,400
Hexachlorocyclopentadiene	<590	U	<950	U	<1200	UJ	<880	U	<370	U	
2,4,6-Trichlorophenol	<590	U	<950	U	<1200	U	<880	U	<370	U	
2,4,5-Trichlorophenol	<3000	U	<4800	U	<6000	U	<4400	U	<1900	U	100
2-Chloronaphthaline	<590	U	<950	U	<1200	U	<880	U	<370	U	
2-Nitroaniline	<3000	U	<4800	U	<6000	U	<4400	U	<1900	U	430
Dimethyl pthalate	<590	U	<950	U	<1200	U	<880	U	<370	U	2,000
Acenaphthylene	<590	U	<950	U	<1200	U	<880	U	<370	U	41,000
2,6-Dinitrotoluene	<590	U	<950	U	<1200	U	<880	U	<370	U	1,000
3-Nitroaniline	<3000	U	<4800	U	<6000	UJ	<4400	UJ	<1900	U	500
Acenaphthene	<590	U	<950	U	<1200	U	<880	U	<370	U	50,000
2,4-Dinitrophenol	<3000	U	<4800	U	<6000	U	<4400	U	<1900	U	200
4-Nitrophenol	<3000	U	<4800	U	<6000	U	<4400	U	<1900	U	100
Dibenzofuran	<590	U	<950	U	<1200	U	<880	U	<370	U	6,200
2,4-Dinitrotoluene	<590	U	<950	U	<1200	U	<880	U	<370	U	
Diethyl phtalate	<590	U	<950	U	<1200	U	<880	U	<370	U	7,100
Flourene	450	J	<950	U	<1200	U	<880	U	<370	U	50,000
4-Chlorophenyl phenyl ether	<590	U	<950	U	<1200	U	<880	U	<370	U	
4-Nitroaniline	<3000	U	<4800	UJ	<6000	UJ	<4400	UJ	<1900	UJ	
4,6-Dinitro-2-methylphenol	<3000	U	<4800	U	<6000	U	<4400	U	<1900	U	
N-Nitrosodiphenylamine	<590	U	<950	U	<1200	U	<880	U	<370	U	
4-Bromophenyl phenyl ether	<590	U	<950	U	<1200	U	<880	U	<370	U	
Hexachlorobenzene	<590	U	<950	U	<1200	U	<880	U	<370	U	410
Pentachlorophenol	<3000	U	<4800	U	<6000	U	<4400	U	<1900	U	1,000
Phenanthrene	**2000**		<950	U	<1200	U	<880	U	100	J	50,000
Anthracene	**620**		<950	U	<1200	U	<880	U	<370	U	50,000
Carbazole	210	J	<950	U	<1200	U	<880	U	<370	U	
Di-n-butyl phthalate	<590	U	<950	U	<1200	U	<880	U	<370	U	
Flouranthene	**2000**		<950	U	440	J	160	J	110	J	50,000
Pyrene	**1700**		<950	U	**1200**		210	J	90	J	50,000
Butyl benzyl phthalate	<590	U	<950	U	<1200	U	<880	U	<370	U	50,000
3,3'-Dichlorobenzidiene	R	R	R	R	R	R	R	R	R	R	
Benzo [a] anthracene	**780**		<950	U	<1200	U	<880	U	<370	U	224
Chrysene	**790**		480	J	570	J	<880	U	<370	U	400
bis (2-Ethylhexyl) phthalate	130	J	<950	U	<1200	U	<880	U	130	J	50,000
Di-n-octyl phthalate	<590	U	<950	U	<1200	U	<880	U	<370	U	50,000
Benzo [b] fluoranthene	450	J	<950	U	<1200	U	<880	U	44	J	1,100
Benzo [k] fluoranthene	530	J	<950	U	<1200	U	<880	U	<370	U	1,100
Benzo [a] pyrene	470	J	<950	U	<1200	U	<880	U	<370	U	61
Indeno [1,2,3-cd] pyrene	140	J	<950	U	<1200	U	<880	U	<370	U	3,200
Dibenz [a,h] anthracene	<590	U	<950	U	<1200	U	<880	U	<370	U	14
Benzo [g,h,I] perylene	120	J	<950	U	<1200	U	<880	U	<370	U	50,000

Analyte	Offsite Samples - Subsurface Soil										TAGM 4046 Soil Cleanup Objective
	B-1-04 (8'-14')		B-2-04 (8'-12')		B-2-04 DUP		B-3-04 (8'-12')		B-4-04 (8'-14')		
EPA 8082	**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**
PCB-1016	<0.030	U	<0.049	U	<0.061	U	<0.045	U	<0.045	U	1
PCB-1221	<0.030	U	<0.049	U	<0.061	U	<0.045	U	<0.045	U	1
PCB-1232	<0.030	U	<0.049	U	<0.061	U	<0.045	U	<0.045	U	1
PCB-1242	<0.030	U	<0.049	U	<0.061	U	<0.045	U	<0.045	U	1
PCB-1248	<0.030	U	<0.049	U	<0.061	U	<0.045	U	<0.045	U	1
PCB-1254	<0.030	U	<0.049	U	<0.061	U	<0.045	U	<0.045	U	1
PCB-1260	<0.030	U	<0.049	U	<0.061	U	**0.15**		<0.045	U	1

TABLE 10:
Analytical Results
Subsurface Soils - Offsite Sampling
Metals

Analyte	Offsite Samples - Subsurface Soil Samples										TAGM 4046 Soil Cleanup Objective	Eastern USA/ NYS Background
	B-1-04 (8'-14')		B-2-04 (8'-12')		B-2-04 DUP		B-3-04 (8'-12')		B-4-04 (8'-14')			
EPA 6010	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	mg/kg
Aluminum	**5330**		**1440**		**1320**		**3440**		**3240**		SB	33,000
Antimony	0.90	J	0.98	J	1.8	J	<0.74	UJ	<0.31	UJ	SB	N/A
Arsenic	**8.3**		**3.5**		**5.6**		**5.6**		**2.4**		7.5 or SB	3-12
Barium	**60.6**		**49.5**		**51.1**		**64.2**		**35.9**		300 or SB	15-600
Beryllium	0.25	J	0.043	J	0.028	J	0.18	J	0.20	J	0.16 (HEAST) or SB	0-1.75
Cadmium	0.091	J	<0.11	U	<0.14	U	<0.10	U	0.29	J	1 or SB	0.1-1
Calcium	**83900**		**99000**		**58100**		**44000**		**179000**		SB	130-35,000
Chromium	85	J	15.7	J	59.3	J	5.0	J	7.2	DJ	10 or SB	1.5-40
Cobalt	7.7	J	<0.69	U	0.94	J	2.1	J	1.4	J	30 or SB	2.5-60
Copper	**51.1**		**17.1**		**29.3**		**18**		**6.9**		25 or SB	1-50
Iron	**53900**		**12200**		**26500**		**9650**		**7990**	D	2,000 or SB	2,000-550,000
Lead	**15.8**		**18.3**		**20.9**		**30.1**		**6.6**		SB	200-500
Magnesium	**13900**		**6140**		**3590**		**5260**		**72200**	D	SB	100-5,000
Manganese	**520**		**267**		**299**		**231**		**230**	D	SB	50-5,000
Nickel	**396**		**63.1**		**179**		8.6	J	**8.9**		13 or SB	0.5-25
Potassium	**1340**		329	J	239	J	530	J	**1040**		SB	8,500-43,000
Selenium	**3.6**		**5.1**		**6.2**		**2.5**		<0.44	U	2 or SB	0.1-3.9
Silver	0.52	J	<0.69	U	<0.86	U	<0.64	U	<0.27	U	SB	N/A
Sodium	**274**		73.1	J	72.8	J	**427**		**141**		SB	6,000-8,000
Thallium	**2.0**		<1.7	U	<2.1	U	<1.5	U	<0.64	U	SB	N/A
Vanadium	**17.4**		5.3	J	4.9	J	7.8	J	7.6		150 or SB	1-300
Zinc	**38.6**		**30.9**		**30.2**		**40.1**		41.7	D	20 or SB	9-50
EPA 7174	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	mg/kg
Mercury	0.042	J	0.084	J	0.076	J	0.33	J	0.023	J	0.1	0.001-0.2
EPA 9014	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	mg/kg
Total Cyanide	3.2	J	<0.72	UJ	<0.89	UJ	0.63	J	<0.56	UJ	N/A	N/A

Analyte	Test Trenches/Pits - Subsurface Soil Samples												TAGM 4046 Soil Cleanup Objective
	TO-B-1		TPO-1		TPO-5		Field Dup. (TPO-5)		TPO-7		TPO-8		
EPA 8260B	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**
Chloromethane	<10	UJ	<690	UJ	<57	U	<96	U	<14	U	<40	U	
Vinyl Chloride	<10	UJ	<690	UJ	<57	U	<96	U	<14	U	<40	U	200
Bromomethane	<10	UJ	<690	UJ	<57	U	<96	U	<14	U	<40	U	
Chloroethane	<10	UJ	<690	UJ	<57	U	<96	U	<14	U	<40	U	1,900
Acetone	1300	DJ	<1400	UJ	**240**		360	J	480	J	**190**		200
1, 1-Dichloroethene	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	400
Methylene chloride	<5	UJ	<690	UJ	<57	U	<48	U	<7	U	<40	U	100
Carbon disulfide	48	J	<350	UJ	<29	U	<48	U	19	J	14	J	2,700
trans-1,2-Dichloroethene	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	300
1,1-Dichloroethane	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	200
2-Butanone	550	J	<1400	UJ	110	J	210	J	240	J	53	J	300
cis-1,2-Dichloroethene	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	
Chloroform	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	300
1,2-Dichloroethane	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	100
1,1,1-Trichloroethane	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	800
Carbon tetrachloride	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	600
Benzene	2	J	<350	UJ	<29	U	<48	U	3	J	<20	U	60
1,2-Dichloropropane	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	
Trichloroethene	<5	UJ	<350	UJ	<29	UJ	<48	UJ	<7	UJ	<20	UJ	700
Bromodichloromethane	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	
cis-1,3-Dichloropropene	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	
4-Methyl-2-pentanone	<10	UJ	<690	UJ	<57	U	<96	U	<14	U	<40	U	1,000
trans-1,3-Dichloropropene	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	
1,1,2-Trichloroethane	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	
Toluene	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	7	J	1,500
Dibromochloromethane	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	
2-Hexanone	<10	UJ	<690	UJ	<57	U	<96	U	<14	U	<40	U	
Tetrachloroethene	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	1,400
Chlorobenzene	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	1,700
Ethylbenzene	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	5,500
Bromoform	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	
Xylene (total)	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	**8.5**		1,200
Styrene	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	
1,1,2,2-Tetrachloroethane	<5	UJ	<350	UJ	<29	U	<48	U	<7	U	<20	U	600
EPA 8270	**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**		**ug/kg**
bis (2-Chloroethyl) ether	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
Phenol	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	30
2-Chlorophenol	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	800
1,3-Dichlorobenzene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
1,4-Dichlorobenzene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
1,2-Dichlorobenzene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
2-Methylphenol	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	100
2,2'-oxybis (1-Chloropropane)	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
4-Methylphenol	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	49	J	900
N-Nitroso-di-n-propylamine	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
Hexachloroethane	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
Nitrobenzene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	200
Isophorone	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	4,400
2-Nitrophenol	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	330
2,4-Dimethylphenol	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
bis (2-Chloroethyl) methane	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
2,4-Dichlorophenol	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	400
1,2,4-Trichlorobenzene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
Naphthalene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	**1400**		13,000
4-Chloroaniline	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	220
Hexachlorobutadiene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
4-Chloro-3-methylphenol	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	240
2-Methylnaphthalene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	**1,700**		36,400
Hexachlorocyclopentadiene	R	R	R	R	R	R	R	R	R	R	R	R	
2,4,6-Trichlorophenol	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
2,4,5-Trichlorophenol	<3300	UJ	<120000	UJ	<3000	U	<3300	U	<2600	U	<2000	U	100
2-Chloronaphthaline	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
2-Nitroaniline	<3300	UJ	<120000	UJ	<3000	U	<3300	U	<2600	U	<2000	U	430
Dimethyl pthalate	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	2,000
Acenaphthylene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	**640**		41,000
2,6-Dinitrotoluene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	1,000
3-Nitroaniline	<3300	UJ	<120000	UJ	<3000	U	<3300	U	<2600	U	<2000	U	500
Acenaphthene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	**1000**		50,000
2,4-Dinitrophenol	R	R	R	R	R	R	R	R	R	R	R	R	200
4-Nitrophenol	<3300	UJ	<120000	UJ	<3000	U	<3300	U	<2600	U	<2000	U	100
Dibenzofuran	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	**1200**		6,200
2,4-Dinitrotoluene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
Diethyl phtalate	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	7,100
Flourene	<650	UJ	<23000	UJ	<590	UJ	<670	UJ	<530	UJ	2400	J	50,000
4-Chlorophenyl phenyl ether	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
4-Nitroaniline	<3300	UJ	<120000	UJ	<3000	U	<3300	U	<2600	U	<2000	U	
4,6-Dinitro-2-methylphenol	<3300	UJ	<120000	UJ	<3000	U	<3300	U	<2600	U	<2000	U	
N-Nitrosodiphenylamine	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
4-Bromophenyl phenyl ether	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
Hexachlorobenzene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	410
Pentachlorophenol	<3300	UJ	<120000	UJ	<3000	U	<3300	U	<2600	U	<2000	U	1,000
Phenanthrene	R	R	R	R	R	R	R	R	R	R	R	R	50,000
Anthracene	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	**1800**		50,000
Carbazole	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	**520**		
Di-n-butyl phthalate	<650	UJ	<23000	UJ	<590	U	<670	U	<530	U	<410	U	
Flouranthene	R	R	R	R	R	R	<670	U	R	R	R	R	50,000
Pyrene	2,200	J	<23000	UJ	310	J	350	J	2,500	J	6,200	J	50,000
Butyl benzyl phthalate	<650	UJ	<23000	UJ	<590	U	<670	UJ	<530	UJ	<410	UJ	50,000
3,3'-Dichlorobenzidiene	<1300	UJ	<46000	UJ	<1200	UJ	<1300	UJ	<1100	UJ	<810	UJ	
Benzo [a] anthracene	<650	UJ	<23000	UJ	<590	U	<670	UJ	810	J	2100	J	224
Chrysene	1,100	J	<23000	UJ	200	J	210	J	940	J	2000	J	400
bis (2-Ethylhexyl) phthalate	<650	UJ	<23000	UJ	<590	U	<670	UJ	<530	UJ	82	J	50,000
Di-n-octyl phthalate	<650	UJ	<23000	UJ	<590	U	<670	UJ	<530	UJ	<410	UJ	50,000
Benzo [b] fluoranthene	670	J	<23000	UJ	150	J	130	J	760	J	1400	J	1,100
Benzo [k] fluoranthene	300	J	<23000	UJ	130	J	120	J	470	J	1600	J	1,100
Benzo [a] pyrene	450	J	<23000	UJ	140	J	140	J	710	J	1600	J	61
Indeno [1,2,3-cd] pyrene	310	J	<23000	UJ	81	J	71	J	370	J	640	J	3,200
Dibenz [a,h] anthracene	<650	UJ	<23000	UJ	<590	U	<670	UJ	<530	UJ	280	J	14
Benzo [g,h,I] perylene	400	J	<23000	UJ	75	J	76	J	<470	UJ	690	J	50,000

Analyte	Surficial Soil Samples																					TAGM 4046 Soil Cleanup Objective	Eastern USA/ NYS Background
	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12	SS-13	SS-13 dup.	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20		
EPA 6010	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	3,300	4,650	4,720	5,490	4,720	3,330	3,920	2,450	3,600	3,110 D	2,700	4,900	4,440	4,040	2,770	3,580	2,660	4,310 D	5,060	3,790	3,600	SB	33,000
Antimony	1.2 J	0.74 J	0.72 J	2.3 J	0.29 J	0.41 J	0.2 J	0.75 J	1.4 J	3.5 DJ	0.33 J	0.85 J	0.57 J	0.22 J	0.65 J	0.39 J	0.94 J	2.6 DJ	<0.18 UJ	0.61 J	1.4 J	SB	N/A
Arsenic	12.1	6.9	4.8	12.9	5.6	4.2	4.1	4.7	10.9	23	5.5	8.5	4.7	4.8	5	5.1	9.7	14.6	4.7	5.8	9.9	7.5 or SB	3-12
Barium	67.5	110	127	199	405	141	144	86.3	141	64.1	213	192	63.7	64.3	84	95.1	59.4	100	59.9	126	68.1	300 or SB	15-600
Beryllium	0.37 J	0.31 J	0.29 J	0.45 J	0.31 J	0.23 J	0.23 J	0.24 J	0.4 J	0.29 J	0.23 J	0.34 J	0.27 J	0.29 J	0.23 J	0.2 J	0.24 J	0.33 J	0.33 J	0.26 J	0.31 J	0.16 (HEAST) or SB	0-1.75
Cadmium	1 J	1.3	1 J	0.95 J	0.57 J	0.58 J	0.4 J	0.85 J	1.3 J	1 D	0.65 J	0.71 J	0.3 J	0.4 J	0.66 J	0.37 J	0.79 J	0.55 D	0.59 J	0.7 J	0.58 J	1 or SB	0.1-1
Calcium	81,700	146,000	96,600	99,200	187,000	148,000	123,000	187,000	110,000	60,800	207,000	117,000	132,000	138,000	116,000	108,000	79,800	71,200	83,900	132,000	96,300	SB	130-35,000
Chromium	87.5 J	33.6 J	30.3 J	23.5 J	34.7 J	23.5 J	41.4 J	18.7 J	54.9 J	246 DJ	40.3 J	31.4 J	16.7 J	19 J	21.5 J	16.4 J	86.4 J	150 DJ	10.6 J	45.4 J	76.6 J	10 or SB	1.5-40
Cobalt	8	5.7 J	6.4	7.1	6.3	3.6 J	3.3 J	6.8	7.7	30 D	4.3 J	5.6	4.1 J	4.7 J	5.8	2.8 J	8.3	15.4 D	5.1 J	4.8 J	6.2	30 or SB	2.5-60
Copper	75.8 J	48.3 J	46.2 J	64 J	28.3 J	29.2 J	28.4 J	35.7 J	104 J	180 DJ	20.8 J	40.8 J	37.7 J	33.3 J	36 J	36.8 J	74.5 J	129 DJ	17.5 J	36.1 J	80.2 J	25 or SB	1-50
Iron	38,600 J	22,400 J	20,000 J	26,400 J	10,900 J	9,510 J	11,200 J	10,900 J	34,100 J	190,000 DJ	9,300 J	24,100 J	13,800 J	16,700 J	18,200 J	13,000 J	52,300	105,000 DJ	13,900 J	24,200 J	46,100 J	2,000 or SB	2,000-550,000
Lead	80.7	145	133	349	142	162	238	104	230	93 D	188	225	67.5	64.2	175	146	95 J	101 D	57.2	98.6	82.3	SB	200-500
Magnesium	25,600	15,400	16,400	21,300	16,500	35,200	34,200	19,000	10,500	8,760	16,500	13,600	20,300	23,200	9,150	14,500	11,700	7,820	38,900	17,700	11,200	SB	100-5,000
Manganese	367 J	345 J	342 J	323 J	348 J	245 J	243 J	371 J	373 J	1,060 DH	289 J	325 J	277 J	292 J	287 J	346 J	420 J	794 DJ	323 J	312 J	445 J	SB	50-5,000
Nickel	385 J	146 J	23 J	21.7 J	30 J	13.9 J	12.5 J	23.3 J	319 J	4,840 DH	19.1 J	88.7 J	34.2 J	93.5 J	17.5 J	18.3 J	612 J	1,310 DJ	16.2 J	105 J	223 J	13 or SB	0.5-25
Potassium	550 J	732	832	795	936	892	613	692	493 J	378 H	617	800	1,100	828	690	1,270	466 J	608	584	629	448 J	SB	8,500-43,000
Selenium	1.5	<0.39 U	<0.34 U	<0.35 U	<0.34 U	<0.4 U	<0.35 U	<0.34 U	<0.42 U	7	<0.33 U	<0.33 U	<0.39 U	<0.37 U	0.37 J	<0.54 U	<0.39 U	1.5	<0.34 U	<0.32 U	0.52 J	2 or SB	0.1-3.9
Silver	<0.17 U	<0.13 U	<0.12 U	<0.12 U	<0.12 U	<0.14 U	<0.12 U	<0.12 U	<0.15 U	<0.12 U	<0.11 U	<0.11 U	<0.14 U	<0.13 U	<0.11 U	<0.18 U	<0.13 U	<0.11 U	<0.12 U	0.14 J	<0.13 U	SB	N/A
Sodium	154 J	130 J	129 J	157 J	158 J	226 J	989 J	151 J	174 J	119 J	209 J	206 J	281 J	320 J	141 J	704 J	95.3 J	153 J	129 J	175 J	261 J	SB	6,000-8,000
Thallium	<0.61 UJ	<0.48 UJ	<0.42 UJ	<0.44 UJ	<0.42 UJ	<0.5 UJ	<0.44 UJ	<0.42 UJ	<0.53 UJ	<2.2 UJD	<0.42 UJ	<0.41 UJ	<0.49 UJ	0.88 J	0.84 J	<0.67 UJ	0.51 J	<2 UJD	1.2 J	0.5 J	<0.49 UJ	SB	N/A
Vanadium	14.3	14.1	11.8	19.7	14.6	12	13.2	10.7	17.9	17.8	9.1	18.7	20.1	19.1	24.4	18.6	13.5	21	12.3	15.2	24.2	150 or SB	1-300
Zinc	291	278	318	230	95.3	189	246	121	506	81.9 D	86.9	148	109	102	206	225	240	149 D	129	115	119	20 or SB	9-50
EPA 7174	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Mercury	0.34	0.16	0.061 J	0.26	0.05 J	0.072 J	0.047 J	0.15	0.4	0.18	0.037	0.18	0.14	0.14	0.13	0.63	0.24	0.98	0.14	0.7	0.15	0.1	0.001-0.2
EPA 9014	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Cyanide	0.36 J	0.69 J	0.37 J	0.32 J	0.28 J	0.29 J	0.2 J	0.31 J	0.39 J	0.41 J	<0.52 U	<0.52 U	0.46 J	0.57 J	0.58	0.63 J	0.29 J	0.4 J	0.31 J	0.32 J	0.42 J	N/A	N/A

Analyte	Surficial Soil Samples																					TAGM 4046 Soil Cleanup Objective	Eastern USA/NYS Background
	SS-21	SS-22	SS-23	SS-24	SS-25	SS-26	SS-27	SS-28	SS-29	SS-30	SS-31	SS-32	SS-33	SS-33 dup	SS-34	SS-35	SS-36	SS-37	SS-38	SS-39	SS-40		
EPA 6010	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	1,620	1,930	1,780	4,600	2,220	2,870	3,180	2,960 J	4,680	6,080	4,910	2,460	3,220	1,620 J	4,560	3,880	8,150	3,580	3,560	4,910	4,490	SB	33,000
Antimony	<0.19 UJ	<0.18 UJ	<0.19 UJ	1.3 J	0.58 J	1.3 J	1.7 J	1.2 J	0.6 J	<0.18 UJ	<0.17 UJ	<0.17 UJ	1.5 J	0.67 J	1.9 J	0.6 J	0.42 J	2.1 J	0.33 J	0.56 J	0.8 J	SB	N/A
Arsenic	2.9	3.1	3.3	10.5	4.8	9.1	10.4	9.1 J	6.7	4.9	3.8	4.6	22.2	5.8 J	6.6	4.7	6.3	9.2	4.8	5.3	7.7	7.5 or SB	3-12
Barium	218	62.2	62.7	76.8	42.7	47.4	72.4	70.8 J	71.9	78.6	31.7	15.7	68	46.8 J	111	101	58.3	76.7	128	61.5	130	300 or SB	15-600
Beryllium	0.19 J	0.18 J	0.19 J	0.32 J	0.16 J	0.21 J	0.29 J	0.23 J	0.27 J	0.39 J	0.31 J	0.33 J	0.3 J	0.12 J	0.27 J	0.2 J	0.37 J	0.2 J	0.24 J	0.29 J	0.27 J	0.16 (HEAST) or SB	0-1.75
Cadmium	0.05 J	0.4 J	0.72 J	0.59 J	0.17 J	0.33 J	0.46 J	0.47 J	0.55 J	0.67 J	0.098 J	0.073 J	0.65 J	<0.074 UJ	0.52 J	0.33 J	0.057 J	0.11 J	0.41 J	0.37 J	0.46 J	1 or SB	0.1-1
Calcium	215,000	202,000	195,000	65,700	68,600	56,500	90,400	101,000 J	58,700	11,800	135,000	294,000 D	90,200	73,200 J	89,300	56,000	60,000	91,100	157,000	88,800	220,000	SB	130-35,000
Chromium	12.1 J	7.1 J	13.8 J	71.9 J	31 J	65.1 J	82.5 J	156 J	41.5 J	16 J	13 J	17.3 J	81.5 J	19.3 J	36.8 J	19.4 J	39.6 J	43.8 J	24.1 J	33 J	26.4 J	10 or SB	1.5-40
Cobalt	3.7 J	2.3 J	2.7 J	7.8	2.6 J	7.8	5.3 J	7.4 J	5.7	5.7	4.4 J	6.2	6.5 J	1.2 J	6	3.5 J	6.8	3.7 J	3.8 J	5.4 J	3.9 J	30 or SB	2.5-60
Copper	11 J	18.5 J	19.6 J	95.6 J	37.6 J	65.4 J	69.2 J	74.1 J	37.3 J	21.8 J	18.2 J	10.1 J	64.6 J	26.8 J	70.9 J	37.7 J	40 J	52.7 J	33.9 J	39.9 J	61.7 J	25 or SB	1-50
Iron	5,480 J	7,740 J	9,780 J	49,900 J	18,100 J	53,600 J	41,200 J	53,600 J	25,300 J	15,000 J	11,500 J	7,100 J	66,600 J	12,400 J	29,100 J	14,200 J	26,800 J	33,600 J	14,000 J	24,700 J	15,200 J	2,000 or SB	2,000-550,000
Lead	25	92.6	59	118	25.7	45.5	75.8	85.8 J	121	37.8 J	12 J	6.7 J	77.5 J	48.5 J	113 J	110 J	41 J	100 J	93.8 J	80.3 J	184 J	SB	200-500
Magnesium	17,300	13,900	24,200	14,600	9,680	6,960	8,790	11,900 J	11,000	3,620	39,400	7,450	15,100	6,660 J	13,500	9,280	23,000	12,000	19,400	20,400	28,100	SB	100-5,000
Manganese	197 J	252 J	241 J	587 J	316 J	488 J	433 J	590 J	426 J	464 J	347 J	274 J	404 J	190 J	413 J	309 J	423 J	360 J	315 J	358 J	325 J	SB	50-5,000
Nickel	14 J	9.5 J	20.9 J	244 J	54.9 J	745 J	184 J	301 J	233 J	15.3 J	19.1 J	17.7 J	262 J	70.5 J	156 J	31 J	96.9 J	144 J	34.9 J	88.4 J	53.3 J	13 or SB	0.5-25
Potassium	1,340	1,520	629	621	322 J	410 J	523 J	674 J	1,880	1,530	871	690 D	1,230	1,750 J	1,420	2,750	957	997	1,260	958	1,880	SB	8,500-43,000
Selenium	0.36 J	<0.33 U	<0.37 U	<0.35 U	<0.33 U	<0.36 U	0.41 J	<0.74 UJ	<0.33 U	0.79	<0.33 UJ	<0.32 UJ	<0.42 U	<0.67 UJ	<0.32 U	0.63	<0.35 U	<0.44 U	<0.42 U	<0.40 U	<0.65 U	2 or SB	0.1-3.9
Silver	<0.12 UJ	<0.11 U	<0.13 U	<0.12 U	<0.11 U	<0.12 U	<0.13 U	<0.26 UJ	<0.11 U	0.13 J	<0.11 UJ	<0.11 UJ	<0.14 U	0.31 J	<0.11 U	<0.12 U	<0.12 U	<0.15 U	<0.14 U	<0.14 U	<0.22 U	SB	N/A
Sodium	1,780 J	3,770 J	479 J	115 J	83.6 J	86.4 J	290 J	523 J	1,060 J	116 J	130 J	119 J	724 J	1,340 J	264 J	684 J	681 J	1,390 J	487 J	177 J	618 J	SB	6,000-8,000
Thallium	<0.45 UJ	<0.42 UJ	<0.49 UJ	<0.44 UJ	<0.41 UJ	<0.44 UJ	<0.46 UJ	<0.93 UJ	<0.42 UJ	0.44 J	<0.41 UJ	0.91 J	<0.52 UJ	<0.84 UJ	<0.41 UJ	<0.42 UJ	<0.44 UJ	<0.55 UJ	<0.52 UJ	<0.69 J	<0.81 UJ	SB	N/A
Vanadium	63.9	17.8	21.9	32.4	19.7	17.1	24.3	25.1 J	19.8	15.6	14.3	34.2	35.4	15 J	26.5	13.2	21.7	25.8	54.5	17.5	14.8	150 or SB	1-300
Zinc	38.3	107	153	205	65.4	73.3	105	148 J	168	82.1	36.9	24.4 D	135	85.7 J	178	159	63.2	139	129	109	195	20 or SB	9-50
EPA 7174	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Mercury	0.024 J	0.11	0.037 J	0.16	0.048 J	0.076 J	0.13	0.11 J	0.11	0.21	0.029 J	0.02 J	0.1 J	0.071 D	0.15	0.11	0.087 J	0.082 J	0.13	0.11 J	0.17 J	0.1	0.001-0.2
EPA 9014	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Cyanide	0.55 J	0.36 J	0.24 J	0.75	0.18 J	0.2 J	0.27 J	0.61 J	0.94	0.34 J	0.59	<0.51 U	0.71	0.61 J	0.41 J	0.43 J	0.23 J	0.48 J	0.74	<0.62 U	<1.0 U	N/A	N/A

TABLE 13:
Analytical Results
Surface Soil Samples
PCBs

Analyte	Surficial Soil Samples - PCBs												TAGM 4046 Soil Cleanup Objective
	P-6		P-6 dup		P-7		P-8		P-9		P-10		
EPA 8082	**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**		**mg/Kg**
PCB-1016	<0.81	U	<0.94	U	<0.55	U	<0.66	U	<0.53	U	<0.56	U	1
PCB-1221	<0.81	U	<0.94	U	<0.55	U	<0.66	U	<0.53	U	<0.56	U	1
PCB-1232	<0.81	U	<0.94	U	<0.55	U	<0.66	U	<0.53	U	<0.56	U	1
PCB-1242	<0.81	U	<0.94	U	<0.55	U	<0.66	U	<0.53	U	<0.56	U	1
PCB-1248	<0.81	U	<0.94	U	<0.55	U	<0.66	U	<0.53	U	<0.56	U	1
PCB-1254	<0.81	U	<0.94	U	<0.55	U	<0.66	U	<0.53	U	<0.56	U	1
PCB-1260	<0.81	U	<0.94	U	<0.55	U	<0.66	U	<0.53	U	<0.56	U	1

TABLE 14:
Analytical Results
Groundwater - Round #1
VOCs and SVOCs

Analyte	Groundwater Samples												TOGS 1.1.1 Class GA Standard/Guidance Value
	MW-1-03		MW-2-03		MW-3-03		MW-4-03		MW-5-03		MW-2-03 dup		
EPA 8260B	**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**
Chloromethane	<1	U	<1	U	<1	U	<1	U	<1	U	<1	U	
Vinyl Chloride	<1	U	<1	U	<1	U	<1	U	<1	U	<1	U	2
Bromomethane	<1	UJ	<1	UJ	<1	UJ	<1	UJ	<1	UJ	<1	UJ	5
Chloroethane	<1	U	<1	U	<1	U	<1	U	<1	U	<1	U	5
Acetone	2	J	2	J	<10	UJ	2	J	4	J	3	J	50
1, 1-Dichloroethene	<2	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Methylene chloride	<2	U	<2	U	<2	U	<2	U	<2	U	<2	U	5
Carbon disulfide	0.6		0.2	J	<0.5	U	0.1	J	0.2	J	0.2	J	60
trans-1,2-Dichloroethene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
1,1-Dichloroethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
2-Butanone	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
cis-1,2-Dichloroethene	<0.5	U	<0.5	U	<0.5	U	0.5		<0.5	U	<0.5	U	5
Chloroform	<0.5	U	<0.5	U	<0.5	U	0.4	J	<0.5	U	<0.5	U	7
1,2-Dichloroethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	0.6
1,1,1-Trichloroethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Carbon tetrachloride	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Benzene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	1
1,2-Dichloropropane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	1
Trichloroethene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Bromodichloromethane	<0.5	U	<0.5	U	<0.5	U	0.1	J	<0.5	U	<0.5	U	50
cis-1,3-Dichloropropene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	0.4*
4-Methyl-2-pentanone	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	
trans-1,3-Dichloropropene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	0.4*
1,1,2-Trichloroethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	1
Toluene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Dibromochloromethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	50
2-Hexanone	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	50
Tetrachloroethene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Chlorobenzene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Ethylbenzene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Bromoform	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	50
Xylene (total)	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Styrene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
1,1,2,2-Tetrachloroethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
EPA 8270	**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**
bis (2-Chloroethyl) ether	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	1
Phenol	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	1
2-Chlorophenol	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
1,3-Dichlorobenzene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	3
1,4-Dichlorobenzene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	3
1,2-Dichlorobenzene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	3
2-Methylphenol	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
2,2'-oxybis (1-Chloropropane)	<10	U	<10	UJ	<10	U	<10	U	<10	U	<10	U	
4-Methylphenol	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
N-Nitroso-di-n-propylamine	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
Hexachloroethane	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	5
Nitrobenzene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	0.4
Isophorone	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
2-Nitrophenol	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
2,4-Dimethylphenol	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
bis (2-Chloroethyl) methane	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
2,4-Dichlorophenol	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	5
1,2,4-Trichlorobenzene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	5
Naphthalene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	10
4-Chloroaniline	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	5
Hexachlorobutadiene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
4-Chloro-3-methylphenol	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
2-Methylnaphthalene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
Hexachlorocyclopentadiene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	5
2,4,6-Trichlorophenol	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
2,4,5-Trichlorophenol	<50	U	<50	U	<50	U	<50	U	<50	U	<50	U	
2-Chloronaphthalene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	10
2-Nitroaniline	<50	U	<50	U	<50	U	<50	U	<50	U	<50	U	5
Dimethyl pthalate	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
Acenaphthylene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
2,6-Dinitrotoluene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	5
3-Nitroaniline	<50	U	<50	U	<50	U	<50	U	<50	U	<50	U	5
Acenaphthene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	20
2,4-Dinitrophenol	<50	U	<50	U	<50	U	<50	U	<50	U	<50	U	10
4-Nitrophenol	<50	U	<50	UJ	<50	U	<50	U	<50	U	<50	U	
Dibenzofuran	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
2,4-Dinitrotoluene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	5
Diethyl phtalate	1	J	2	J	<10	U	0.1	J	2	J	<10	UJ	50
Flourene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
4-Chlorophenyl phenyl ether	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
4-Nitroaniline	<50	U	<50	U	<50	U	<50	U	<50	U	<50	U	5
4,6-Dinitro-2-methylphenol	<50	U	<50	U	<50	U	<50	U	<50	U	<50	U	
N-Nitrosodiphenylamine	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
4-Bromophenyl phenyl ether	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
Hexachlorobenzene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
Pentachlorophenol	<50	U	<50	U	<50	U	<50	U	<50	U	<50	U	
Phenanthrene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
Anthracene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
Carbazole	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
Di-n-butyl phthalate	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
Flouranthene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
Pyrene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
Butyl benzyl phthalate	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
3,3'-Dichlorobenzidiene	<20	U	<20	U	<20	U	<20	U	<20	U	<20	U	5
Benzo [a] anthracene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	0.002
Chrysene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	0.002
bis (2-Ethylhexyl) phthalate	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	5
Di-n-octyl phthalate	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	50
Benzo [b] fluoranthene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	0.002
Benzo [k] fluoranthene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	0.002
Benzo [a] pyrene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	ND
Indeno [1,2,3-cd] pyrene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	0.002
Dibenz [a,h] anthracene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	
Benzo [g,h,l] perylene	<10	U	<10	U	<10	U	<10	U	<10	U	<10	U	

TABLE 15:
Analytical Results
Groundwater - Round #1
Metals

Analyte	Groundwater Samples												TOGS 1.1.1 Class GA Standard/Guidance Value
	MW-1-03		MW-2-03		MW-3-03		MW-4-03		MW-5-03		MW-2-03 dup		
EPA 6010	**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**
Aluminum	0.0718	J	5.89	J	1.14	J	0.631	J	31.1	J	2.94	J	0.1
Antimony	<0.0017	UJ	<0.0017	UJ	<0.0017	UJ	<0.0017	UJ	0.0077	J	<0.0017	UJ	0.003
Arsenic	0.0030	J	0.0057	J	0.0106	J	<0.0015	UJ	0.0652	J	0.0037	J	0.025
Barium	0.0698	J	0.171	J	0.0859	J	0.145	J	0.515	J	0.151	J	1.0
Beryllium	<0.000050	UJ	0.00031	J	0.00009	J	0.00005	J	0.0013	J	0.00009	J	0.011
Cadmium	<0.00035	UJ	0.0015	J	<0.00035	UJ	<0.00035	UJ	<0.00035	UJ	<0.00035	UJ	0.005
Calcium	176	J	313	J	204	J	190	J	729	J	262	J	N/A
Chromium	<0.0016	UJ	0.0162	J	0.0041	J	0.0020	J	0.324	J	0.0069	J	0.05
Cobalt	<0.0014	UJ	<0.0014	UJ	<0.0014	UJ	<0.0014	UJ	0.0206	J	<0.0014	UJ	0.005
Copper	<0.00076	UJ	0.0141	J	0.0050	J	0.0022	J	0.313	J	0.0058	J	0.2
Iron	0.290	J	12.7	J	6.35	J	1.01	J	87.9	J	5.79	J	0.3
Lead	<0.0013	UJ	0.0127	J	<0.0013	UJ	<0.0013	UJ	0.0980	J	0.0043	J	0.025
Magnesium	28.6	J	29.8	J	55.5	J	27.7	J	124	J	27.7	J	35
Manganese	0.0532	J	0.210	J	0.0604	J	0.771	J	1.39	J	0.130	J	0.3
Nickel	0.0023	J	0.0890	J	0.0059	J	0.0089	J	1.48	J	0.0482	J	0.1
Potassium	4.11	J	28.4	J	2.63	J	61.2	J	29.8	J	27.8	J	N/A
Selenium	<0.0032	UJ	<0.0032	UJ	<0.0032	UJ	<0.0032	UJ	<0.0032	UJ	<0.0032	UJ	0.01
Silver	<0.0011	UJ	<0.0011	UJ	<0.0011	UJ	<0.0011	UJ	<0.0011	UJ	<0.0011	UJ	0.05
Sodium	25.7	J	51.2	J	58.2	J	165	J	337	J	53.6	J	20
Thallium	<0.0040	UJ	<0.0040	UJ	<0.0040	UJ	<0.0040	UJ	<0.0040	UJ	<0.0040	UJ	0.008
Vanadium	0.0022	J	0.0160	J	0.0015	J	0.0030	J	0.0684	J	0.0090	J	0.014
Zinc	0.0059	J	0.0485	J	0.0090	J	0.0040	J	0.175	J	0.0186	J	N/A
EPA 7470	**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**
Mercury	<0.000048	UJ	0.000054	J	<0.000048	UJ	<0.000048	UJ	0.00014	J	<0.000048	UJ	0.007
EPA 9014	**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**
Total Cyanide	<0.010	UJ	<0.010	UJ	<0.010	UJ	<0.010	UJ	0.0042	J	<0.010	UJ	0.2

TABLE 16:
Analytical Results
Groundwater - Round #1
PCBs and Pesticides

Site Investigation Report
Former Syracuse Rigging Property
NYSDEC Brownfields Project No. B-00146-7
341 Peat Street
City of Syracuse, New York

Analyte	Groundwater Samples												TOGS 1.1.1 Class GA Standard/Guidance Value
	MW-1-03		MW-2-03		MW-3-03		MW-4-03		MW-5-03		MW-2-03 dup		
EPA 8082	**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**
PCB-1016	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1221	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1232	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1242	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1248	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1254	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1260	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB TOTAL	0.0		0.0		0.0		0.0		0.0		0.0		0.09
EPA 8081	**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**
a-BHC	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	
b-BHC	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	
d-BHC	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	
Lindane	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	
Hepachlor	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	0.04
Aldrin	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	ND
Heptachlor epoxide	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	0.03
Endosulfan I	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	<0.05	U	
Dieldrin	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	
4-4-DDE	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	0.2
Endrin	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	ND
Endosulfan II	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	
4-4-DDD	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	0.3
Endosulfan sulfate	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	
4-4-DDT	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	0.2
Methoxychlor	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	35
Endrin aldehyde	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	5
Endrin ketone	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U	5
a-Chlordane	<.05	U	<.05	U	<.05	U	<.05	U	<.05	U	<.05	U	0.05
y-Chlordane	<.05	U	<.05	U	<.05	U	<.05	U	<.05	U	<.05	U	0.05
Toxaphene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	0.06

Analyte	Groundwater Samples														TOGS 1.1.1 Class GA Standard/Guidance Value
	MW-1-03		MW-2-03		MW-3-04		MW-4-03		MW-5-03		MW-6-04		MW-2-03 dup		
EPA 8260B	**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**
Chloromethane	<1	U	<1	U	<1	U	<1	U	<1	U	<1	U	<1	U	
Vinyl Chloride	<1	U	<1	U	<1	U	<1	U	<1	U	<1	U	<1	U	2
Bromomethane	<1	UJ	<1	UJ	<1	UJ	<1	UJ	<1	UJ	<1	UJ	<1	UJ	5
Chloroethane	<1	U	<1	U	<1	U	<1	U	<1	U	<1	U	<1	U	5
Acetone	<10	UJ	<10	UJ	<10	UJ	<10	UJ	<10	UJ	<10	UJ	<10	UJ	50
1, 1-Dichloroethene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Methylene chloride	<2	U	<2	U	<2	U	<2	U	<2	U	<2	U	<2	U	5
Carbon disulfide	0.4	J	0.2	J	<0.5	U	0.1	J	<0.5	U	0.1	J	0.3	J	60
trans-1,2-Dichloroethene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
1,1-Dichloroethane	<0.5	U	<0.5	UJ	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
2-Butanone	<10	UJ	<10	U	<10	UJ	2	J	3	J	<10	UJ	<10	UJ	
cis-1,2-Dichloroethene	<0.5	U	<0.5	U	<0.5	U	0.1	J	<0.5	U	<0.5	U	<0.5	U	5
Chloroform	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	7
1,2-Dichloroethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	0.6
1,1,1-Trichloroethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Carbon tetrachloride	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Benzene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	1
1,2-Dichloropropane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	1
Trichloroethene	<0.5	UJ	<0.5	UJ	<0.5	UJ	<0.5	UJ	<0.5	UJ	<0.5	UJ	<0.5	UJ	5
Bromodichloromethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	50
cis-1,3-Dichloropropene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	0.4*
4-Methyl-2-pentanone	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	<5	U	
trans-1,3-Dichloropropene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	0.4*
1,1,2-Trichloroethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	1
Toluene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Dibromochloromethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	50
2-Hexanone	<5	UJ	<5	UJ	<5	UJ	<5	UJ	<5	UJ	<5	UJ	<5	UJ	50
Tetrachloroethene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Chlorobenzene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Ethylbenzene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Bromoform	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	50
Xylene (total)	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
Styrene	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
1,1,2,2-Tetrachloroethane	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	5
EPA 8270	**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**
bis (2-Chloroethyl) ether	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	1
Phenol	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	1
2-Chlorophenol	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
1,3-Dichlorobenzene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	3
1,4-Dichlorobenzene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	3
1,2-Dichlorobenzene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	3
2-Methylphenol	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
2,2'-oxybis (1-Chloropropane)	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
4-Methylphenol	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
N-Nitroso-di-n-propylamine	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
Hexachloroethane	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	5
Nitrobenzene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	0.4
Isophorone	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	50
2-Nitrophenol	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
2,4-Dimethylphenol	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	50
bis (2-Chloroethyl) methane	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
2,4-Dichlorophenol	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	5
1,2,4-Trichlorobenzene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	5
Naphthalene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	10
4-Chloroaniline	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	5
Hexachlorobutadiene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
4-Chloro-3-methylphenol	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
2-Methylnaphthalene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
Hexachlorocyclopentadiene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	5
2,4,6-Trichlorophenol	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
2,4,5-Trichlorophenol	<50	U	<50	U	<50	U	<50	U	<250	U	<50	U	<50	U	
2-Chloronaphthalene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	10
2-Nitroaniline	<50	U	<50	U	<50	U	<50	U	<250	U	<50	U	<50	U	5
Dimethyl pthalate	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	50
Acenaphthylene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
2,6-Dinitrotoluene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	5
3-Nitroaniline	<50	U	<50	U	<50	U	<50	U	<250	U	<50	U	<50	U	5
Acenaphthene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	20
2,4-Dinitrophenol	<50	U	<50	U	<50	U	<50	U	<250	U	<50	U	<50	U	10
4-Nitrophenol	<50	U	<50	U	<50	U	<50	U	<250	U	<50	U	<50	U	
Dibenzofuran	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
2,4-Dinitrotoluene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	5
Diethyl phtalate	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	50
Flourene	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	50
4-Chlorophenyl phenyl ether	<10	U	<10	U	<10	U	<10	U	<50	U	<10	U	<10	U	
4-Nitroaniline	<50	U	<50	U	<50	U	<50	U	<250	U	<50	U	<50	U	5
4,6-Dinitro-2-methylphenol	<50	U	<50	U	<50	U	<50	U	<250	UJ	<50	U	<50	U	
N-Nitrosodiphenylamine	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	50
4-Bromophenyl phenyl ether	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	
Hexachlorobenzene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	
Pentachlorophenol	<50	U	<50	U	<50	U	<50	U	<250	UJ	<50	U	<50	U	
Phenanthrene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	50
Anthracene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	50
Carbazole	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	
Di-n-butyl phthalate	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	
Flouranthene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	50
Pyrene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	50
Butyl benzyl phthalate	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	50
3,3'-Dichlorobenzidiene	<20	U	<20	U	<20	U	<20	U	<100	UJ	<20	U	<20	U	5
Benzo [a] anthracene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	0.002
Chrysene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	0.002
bis (2-Ethylhexyl) phthalate	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	5
Di-n-octyl phthalate	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	50
Benzo [b] fluoranthene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	0.002
Benzo [k] fluoranthene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	0.002
Benzo [a] pyrene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	ND
Indeno [1,2,3-cd] pyrene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	0.002
Dibenz [a,h] anthracene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	
Benzo [g,h,I] perylene	<10	U	<10	U	<10	U	<10	U	<50	UJ	<10	U	<10	U	

TABLE 18:
Analytical Results
Groundwater - Round #2
Metals

Site Investigation Report
Former Syracuse Rigging Property
NYSDEC Brownfields Project No. B-00146-7
341 Peat Street
City of Syracuse, New York

Analyte	Groundwater Samples														TOGS 1.1.1 Class GA Standard/Guidance Value
	MW-1-03		MW-2-03		MW-3-04		MW-4-03		MW-5-03		MW-6-04		MW-2-03 dup		
EPA 6010	**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**
Aluminum	**0.982**		**2.49**		**8.19**		**7.17**		**19.3**		**3.28**		**5.56**		0.1
Antimony	<0.0018	U	0.0023	J	<0.0018	U	0.0023	J	0.0048	J	<0.0018	U	0.0018	J	0.003
Arsenic	<0.0019	U	0.0090	J	**0.0102**		**0.0125**		**0.0272**		0.0027	J	0.0094	J	0.025
Barium	0.0373	J	**0.119**		**0.217**		**0.151**		**0.362**		**0.200**		**0.143**		1.0
Beryllium	<0.000053	U	0.00011	J	0.00028	J	0.00017	J	0.00074	J	<0.000053	U	0.00020	J	0.011
Cadmium	<0.00034	U	<0.00034	U	<0.00034	U	<0.00034	U	<0.00034	U	<0.00034	U	<0.00034	U	0.005
Calcium	**192**		**244**		**254**		**304**		**840**		**510**		**316**		N/A
Chromium	0.0020	J	**0.0111**		**0.0147**		**0.0228**		**0.178**		0.0048	J	**0.0215**		0.05
Cobalt	<0.0016	U	<0.0016	U	<0.0016	U	<0.0016	U	0.005	J	<0.0016	U	<0.0016	U	0.005
Copper	0.0014	J	0.0066	J	**0.0118**		**0.0106**		**0.184**		0.0068	J	**0.0220**		0.2
Iron	**2.04**		**12.1**		**15.1**		**19.9**		**75.3**		**6.05**		**20**		0.3
Lead	<0.00088	U	0.0036	J	0.0062	J	0.0072	J	**0.0672**		0.0062	J	0.0091	J	0.025
Magnesium	**31.4**		**26.9**		**69.5**		**58.7**		**95**		**38.8**		**30**		35
Manganese	**0.0568**		**0.106**		**0.298**		**0.322**		**1.47**		**0.414**		**0.185**		0.3
Nickel	0.0021	J	0.0215	J	0.0120	J	0.0165	J	**0.588**		0.0086	J	0.0429	J	0.1
Potassium	4.41	J	**27.1**		**5.74**		**28.5**		**45.9**		**28**		**27.8**		N/A
Selenium	<0.0034	U	<0.0034	U	<0.0034	U	<0.0034	U	0.0039	J	<0.0034	U	<0.0034	U	0.01
Silver	<0.0015	U	<0.0015	U	<0.0015	U	<0.0015	U	<0.0015	U	<0.0015	U	<0.0015	U	0.05
Sodium	**66.2**		**53.2**		**73.8**		**234**		**705**		**592**		**49.4**		20
Thallium	<0.0037	UJ	<0.0037	UJ	<0.0037	U	<0.0037	U	<0.0037	U	<0.0037	U	<0.0037	U	0.008
Vanadium	0.0076	J	0.0163	J	0.0136	J	0.0491	J	0.0491	J	0.0058	J	0.0309	J	0.014
Zinc	0.0036	J	**0.0204**		**0.0249**		**0.0257**		**0.0917**		**0.0177**		**0.0416**		N/A
EPA 7470	**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**
Mercury	<0.000049	U	<0.000049	U	<0.000049	U	<0.000049	U	**0.000091**	J	<0.000049	U	<0.000049	U	0.007
EPA 9014	**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**
Total Cyanide	<0.010	U	<0.010	U	<0.010	U	<0.010	U	<0.010	U	<0.010	U	<0.010	U	0.2

TABLE 19:
Analytical Results
Groundwater - Round #2
PCBs and Pesticides

Site Investigation Report
Former Syracuse Rigging Property
NYSDEC Brownfields Project No. B-00146-7
341 Peat Street
City of Syracuse, New York

Analyte	**Groundwater Samples**														**TOGS 1.1.1 Class GA Standard/Guidance Value**
	MW-1-03		MW-2-03		MW-3-04		MW-4-03		MW-5-03		MW-6-04		MW-2-03 dup		
EPA 8082	**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**
PCB-1016	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1221	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1232	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1242	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1248	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1254	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB-1260	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	<0.5	U	N/A
PCB TOTAL	0		0		0		0		0		0		0		0.09
EPA 8081	**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**
a-BHC	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	
b-BHC	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	
d-BHC	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	
Lindane	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	
Hepachlor	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	0.04
Aldrin	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	ND
Heptachlor epoxide	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	0.03
Endosulfan I	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	
Dieldrin	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	
4-4-DDE	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	0.2
Endrin	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	ND
Endosulfan II	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	
4-4-DDD	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	0.3
Endosulfan sulfate	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	
4-4-DDT	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	0.2
Methoxychlor	<0.50	U	<0.50	U	<0.50	U	<0.50	U	<0.50	U	<0.50	U	<0.50	U	35
Endrin aldehyde	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	5
Endrin ketone	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	<0.10	U	5
a-Chlordane	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	0.05
y-Chlordane	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	<0.050	U	0.05
Toxaphene	<0.50	U	<0.50	U	<0.50	U	<0.50	U	<0.50	U	<0.50	U	<0.50	U	0.06

Analyte	Offsite Groundwater Samples										TOGS 1.1.1 Class GA Standard/Guidance Value
	TW/B-1-04		TW/B-2-04		TW/B-2-04 DUP		TW/B-3-04		TW/B-4-04		
EPA 8260B	ug/l		ug/l		ug/l		ug/l		ug/l		ug/l
Chloromethane	<1	U	<1	U	<1	U	<25	U	<1	U	
Vinyl Chloride	<1	U	<1	U	<1	U	**520**		<1	U	2
Bromomethane	<1	U	<1	U	<1	U	<25	U	<1	U	5
Chloroethane	<1	U	<1	U	<1	U	**32**		<1	U	5
Acetone	120	DJ	5	J	4	J	<250	UJ	4	J	50
1, 1-Dichloroethene	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	5
Methylene chloride	<0.5	U	<0.5	U	<0.5	U	4	U	<0.5	U	5
Carbon disulfide	<0.5	U	0.2	J	0.2	J	<12	U	0.1	J	60
trans-1,2-Dichloroethene	<0.5	U	<0.5	U	<0.5	U	**290**		<0.5	U	5
1,1-Dichloroethane	<0.5	U	<0.5	U	<0.5	U	**760**		<0.5	U	5
2-Butanone	6	J	1	J	1	J	<250	UJ	<10	UJ	
cis-1,2-Dichloroethene	<0.5	U	<0.5	U	<0.5	U	**460**		<0.5	U	5
Chloroform	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	7
1,2-Dichloroethane	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	0.6
1,1,1-Trichloroethane	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	5
Carbon tetrachloride	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	5
Benzene	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	1
1,2-Dichloropropane	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	1
Trichloroethene	<0.5	U	<0.5	UJ	<0.5	UJ	4	J	<0.5	UJ	5
Bromodichloromethane	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	50
cis-1,3-Dichloropropene	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	0.4*
4-Methyl-2-pentanone	<0.5	U	<5	U	<5	U	<120	U	<5	U	
trans-1,3-Dichloropropene	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	0.4*
1,1,2-Trichloroethane	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	1
Toluene	0.4	J	<0.5	U	<0.5	U	4	J	<0.5	U	5
Dibromochloromethane	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	50
2-Hexanone	<5	U	<5	U	<5	U	<120	U	<5	U	50
Tetrachloroethene	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	5
Chlorobenzene	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	5
Ethylbenzene	0.1	J	<0.5	U	<0.5	U	<12	U	<0.5	U	5
Bromoform	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	50
Xylene (total)	0.8		1	J	0.2	J	<12	U	<0.5	U	5
Styrene	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	5
1,1,2,2-Tetrachloroethane	<0.5	U	<0.5	U	<0.5	U	<12	U	<0.5	U	5
EPA 8270											
bis (2-Chloroethyl) ether	<12	U	<10	U	<11	U	<10	U	<10	U	1
Phenol	2	J	<10	U	<11	U	<10	U	<10	U	1
2-Chlorophenol	<12	U	<10	U	<11	U	<10	U	<10	U	
1,3-Dichlorobenzene	<12	U	<10	U	<11	U	<10	U	<10	U	3
1,4-Dichlorobenzene	<12	U	<10	U	<11	U	<10	U	<10	U	3
1,2-Dichlorobenzene	<12	U	<10	U	<11	U	<10	U	<10	U	3
2-Methylphenol	<12	U	<10	U	<11	U	<10	U	<10	U	
2,2'-oxybis (1-Chloropropane)	<12	U	<10	U	<11	U	<10	U	<10	U	
4-Methylphenol	<12	U	<10	U	<11	U	<10	U	<10	U	
N-Nitroso-di-n-propylamine	<12	U	<10	U	<11	U	<10	U	<10	U	
Hexachloroethane	<12	U	<10	U	<11	U	<10	U	<10	U	5
Nitrobenzene	<12	U	<10	U	<11	U	<10	U	<10	U	0.4
Isophorone	<12	U	<10	U	<11	U	<10	U	<10	U	50
2-Nitrophenol	<12	U	<10	U	<11	U	<10	U	<10	U	
2,4-Dimethylphenol	<12	U	<10	U	<11	U	<10	U	<10	U	50
bis (2-Chloroethyl) methane	<12	U	<10	U	<11	U	<10	U	<10	U	
2,4-Dichlorophenol	<12	U	<10	U	<11	U	<10	U	<10	U	5
1,2,4-Trichlorobenzene	<12	U	<10	U	<11	U	<10	U	<10	U	5
Naphthalene	<12	U	<10	U	<11	U	<10	U	<10	U	10
4-Chloroaniline	<12	UJ	<10	UJ	<11	UJ	<10	UJ	<10	UJ	5
Hexachlorobutadiene	<12	U	<10	U	<11	U	<10	U	<10	U	
4-Chloro-3-methylphenol	<12	U	<10	U	<11	U	<10	U	<10	U	
2-Methylnaphthalene	<12	U	<10	U	<11	U	<10	U	<10	U	
Hexachlorocyclopentadiene	<12	UJ	<10	UJ	<11	UJ	<10	UJ	<10	UJ	5
2,4,6-Trichlorophenol	<12	U	<10	U	<11	U	<10	U	<10	U	
2,4,5-Trichlorophenol	<58	U	<52	U	<54	U	<50	U	<50	U	
2-Chloronaphthalene	<12	U	<10	U	<11	U	<10	U	<10	U	10
2-Nitroaniline	<58	U	<52	U	<54	U	<50	U	<50	U	5
Dimethyl pthalate	<12	U	<10	U	<11	U	<10	U	<10	U	50
Acenaphthylene	<12	U	<10	U	<11	U	<10	U	<10	U	
2,6-Dinitrotoluene	<12	U	<10	U	<11	U	<10	U	<10	U	5
3-Nitroaniline	<58	U	<52	U	<54	U	<50	U	<50	U	5
Acenaphthene	<12	U	<10	U	<11	U	<10	U	<10	U	20
2,4-Dinitrophenol	<58	U	<52	U	<54	U	<50	U	<50	U	10
4-Nitrophenol	<58	U	<52	U	<54	U	<50	U	<50	U	
Dibenzofuran	<12	U	<10	U	<11	U	<10	U	<10	U	
2,4-Dinitrotoluene	<12	U	<10	U	<11	U	<10	U	<10	U	5
Diethyl phtalate	<12	U	<10	U	<11	U	<10	U	<10	U	50
Flourene	<12	U	<10	U	<11	U	<10	U	<10	U	50
4-Chlorophenyl phenyl ether	<12	U	<10	U	<11	U	<10	U	<10	U	
4-Nitroaniline	<58	U	<52	U	<54	U	<50	U	<50	U	5
4,6-Dinitro-2-methylphenol	<58	U	<52	U	<54	U	<50	U	<50	U	
N-Nitrosodiphenylamine	<12	U	<10	U	<11	U	<10	U	<10	U	50
4-Bromophenyl phenyl ether	<12	U	<10	U	<11	U	<10	U	<10	U	
Hexachlorobenzene	<12	U	<10	U	<11	U	<10	U	<10	U	
Pentachlorophenol	<58	U	<52	U	<54	U	<50	U	<50	U	
Phenanthrene	<12	U	<10	U	<11	U	<10	U	<10	U	50
Anthracene	<12	U	<10	U	<11	U	<10	U	<10	U	50
Carbazole	<12	U	<10	U	<11	U	<10	U	<10	U	
Di-n-butyl phthalate	<12	U	<10	U	<11	U	<10	U	<10	U	
Flouranthene	<12	U	<10	U	<11	U	<10	U	<10	U	50
Pyrene	<12	U	<10	U	<11	U	<10	U	<10	U	50
Butyl benzyl phthalate	<12	U	<10	U	<11	U	<10	U	<10	U	50
3,3'-Dichlorobenzidiene	<23	U	<21	U	<22	U	<20	U	<20	U	5
Benzo [a] anthracene	<12	U	<10	U	<11	U	<10	U	<10	U	0.002
Chrysene	<12	U	<10	U	<11	U	<10	U	<10	U	0.002
bis (2-Ethylhexyl) phthalate	<12	U	2	J	4	J	3	J	4	J	5
Di-n-octyl phthalate	<12	U	<10	U	<11	U	<10	U	<10	U	50
Benzo [b] fluoranthene	<12	U	<10	U	<11	U	<10	U	<10	U	0.002
Benzo [k] fluoranthene	<12	U	<10	U	<11	U	<10	U	<10	U	0.002
Benzo [a] pyrene	<12	U	<10	U	<11	U	<10	U	<10	U	ND
Indeno [1,2,3-cd] pyrene	<12	U	<10	U	<11	U	<10	U	<10	U	0.002
Dibenz [a,h] anthracene	<12	U	<10	U	<11	U	<10	U	<10	U	
Benzo [g,h,I] perylene	<12	U	<10	U	<11	U	<10	U	<10	U	

Analyte	Offsite Groundwater Samples										TOGS 1.1.1 Class GA Standard/Guidance Value
	TW/B-1-04		TW/B-2-04		TW/B-2-04 DUP		TW/B-3-04		TW/B-4-04		
EPA 8082	**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**		**ug/l**
PCB-1016	<0.54	UJ	<0.52	U	<0.52	U	<0.52	UJ	<0.74	U	N/A
PCB-1221	<0.54	UJ	<0.52	U	<0.52	U	<0.52	UJ	<0.74	U	N/A
PCB-1232	<0.54	UJ	<0.52	U	<0.52	U	<0.52	UJ	<0.74	U	N/A
PCB-1242	<0.54	UJ	<0.52	U	<0.52	U	<0.52	UJ	<0.74	U	N/A
PCB-1248	<0.54	UJ	<0.52	U	<0.52	U	<0.52	UJ	<0.74	U	N/A
PCB-1254	<0.54	UJ	<0.52	U	<0.52	U	<0.52	UJ	<0.74	U	N/A
PCB-1260	<0.54	UJ	<0.52	U	<0.52	U	<0.52	UJ	<0.74	U	N/A
PCB TOTAL	0		0		0		0		0		0.09

TABLE 22:
Analytical Results
Groundwater - Offsite Sampling
Metals

Analyte	Offsite Groundwater Samples										TOGS 1.1.1 Class GA Standard/Guidance Value
	TW/B-1-04		TW/B-2-04		TW/B-2-04 DUP		TW/B-3-04		TW/B-4-04		
EPA 6010	**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**		**mg/l**
Aluminum	204	DJ	2.39	J	4.67	J	521	J	3.82	J	0.1
Antimony	0.0126	DJ	<0.0028	UJ	0.0032	J	0.0378	J	<0.0028	UJ	0.003
Arsenic	0.280	DJ	0.066	J	0.0092	J	0.401	J	<0.0023	UJ	0.025
Barium	2.35	J	0.127	J	0.170	J	7.94	J	0.122	J	1.0
Beryllium	0.0093	J	<0.000040	UJ	<0.000040	UJ	0.0271	J	<0.000040	UJ	0.011
Cadmium	0.0065	DJ	<0.00038	UJ	<0.00038	UJ	0.0568	J	<0.00038	UJ	0.005
Calcium	2200	DJ	276	J	316	J	28100	DJ	219	J	N/A
Chromium	0.684	DJ	0.0124	J	0.0266	J	1.19	J	0.0059	J	0.05
Cobalt	0.193	DJ	<0.0024	UJ	<0.0024	UJ	0.425	J	<0.0024	UJ	0.005
Copper	1.04	DJ	0.0232	J	0.0455	J	1.84	J	0.0074	J	0.2
Iron	539	DJ	9.25	J	17.7	J	2160	J	6.03	J	0.3
Lead	0.701	DJ	0.0387	J	0.0742	J	1.06	DJ	0.0061	J	0.025
Magnesium	596	J	22.5	J	25	J	1020	J	40.4	J	35
Manganese	9.26	DJ	0.770	J	0.928	J	36.5	J	1.12	J	0.3
Nickel	8.90	J	0.0985	J	0.193	J	1.81	J	0.0328	J	0.1
Potassium	82.1	J	8.29	J	8.62	J	170	J	11.8	J	N/A
Selenium	0.0331	DJ	<0.0040	UJ	0.0075	J	0.121	J	<0.0040	UJ	0.01
Silver	0.0052	J	<0.0024	UJ	<0.0024	UJ	<0.0240	UJ	<0.0024	UJ	0.05
Sodium	431	J	10.6	J	10.6	J	173	J	132	J	20
Thallium	0.0428	DJ	<0.0058	UJ	<0.0058	UJ	0.321	J	<0.0058	UJ	0.008
Vanadium	0.452	DJ	0.0084	J	0.0147	J	1.31	J	0.0065	J	0.014
Zinc	1.54	DJ	0.0514	J	0.0981	J	4.10	J	0.0539	J	N/A
EPA 7470	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**
Mercury	0.0012	J	0.00026	J	0.00021	J	<0.000070	UJ	0.00087	J	0.007
EPA 9014	**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**		**mg/kg**
Total Cyanide	0.014		<0.010	U	<0.010	U	0.0033	J	<0.010	U	0.2

EXHIBITS

CROSSROADS PARK SOIL PILE SAMPLING - ANALYTICAL DATA SUMMARY

Sample Location:	TAGM 4046		SP-1		SP-2		SP-3		SP-4		SP-5		SP-6		SP-7	
Lab ID:	Rec. Cleanup		L81354-1		L81354-2		L81354-3		L81354-4		L81354-5		L81354-6		L81354-7	
Analysis	Objective	Units	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL
Total Solids			85.7		87.4		83.4		87.3		88.3		86.6		86.6	
EPA 8260 VOCs																
Chloromethane		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Vinyl chloride	1200	ug/kg	U	2	U	2	U	2	U	2	U	2	U	2	U	2
Chloroethane	1900	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Bromomethane		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
1,1-Dichloroethene	400	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Acetone	200	ug/kg	U	25	U	28	U	29	U	28	U	22	U	21	U	23
Carbon disulfide	2700	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Methylene chloride	100	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
trans-1,2-Dichloroethene	300	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
1,1-Dichloroethane	200	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
cis-1,2-Dichloroethene		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
MEK(2-Butanone)	300	ug/kg	U	25	U	28	U	29	U	28	U	22	U	21	U	23
Chloroform	300	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
1,1,1-Trichloroethane	800	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Carbon tetrachloride	600	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Benzene	60	ug/kg	U	0.7	U	0.8	U	0.8	U	0.8	U	0.6	U	0.6	U	0.6
1,2-Dichloroethane	100	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Trichloroethene	700	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
1,2-Dichloropropane		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Bromodichloromethane		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
cis-1,3-Dichloropropene		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
MIBK(4-Methyl-2-pentanone)	1000	ug/kg	U	10	U	11	U	11	U	11	U	9	U	8	U	9
Toluene	1500	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
trans-1,3-Dichloropropene		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
1,1,2-Trichloroethane		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Tetrachloroethene	1400	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
2-Hexanone		ug/kg	U	10	U	11	U	11	U	11	U	9	U	8	U	9
Dibromochloromethane		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Chlorobenzene	1700	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Ethylbenzene	5500	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
p-Xylene/m-Xylene		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
o-Xylene		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Styrene		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
Bromoform		ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
1,1,2,2-Tetrachloroethane	600	ug/kg	U	5	U	6	U	6	U	6	U	4	U	4	U	5
TOTAL VOC	**10000**	ug/kg		**217.7**		**254.8**		**256.8**		**254.8**		**180.6**		**176.6**		**211.6**
EPA 8270 SEMI-VOCs																
Bis(2-chloroethylether)		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
1,3-Dichlorobenzene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
1,4-Dichlorobenzene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
1,2-Dichlorobenzene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Bis(2-chloroisopropylether		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Hexachloroethane		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
N-Nitrosodi-N-propylamine		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Nitrobenzene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Isophorone		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Bis(2-chloroethoxymethane)		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
1,2,4-Trichlorobenzene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Naphthalene	13000	ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	J	1300	U	1400
4-Chloroaniline		ug/kg	U	2900	U	2800	U	3000	U	2900	U	2800	U	2900	U	2900
Hexachlorobutadiene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
2-Methylnaphthalene	36400	ug/kg	J	330	U	1400	U	1500	U	1400	U	1400	J	590	U	1400
Hexachlorocyclopentadiene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
2-Chloronaphthalene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
2-Nitroaniline		ug/kg	U	5800	U	5700	U	6000	U	5700	U	5600	U	5800	U	5800
Dimethylphthalate		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Acenaphthylene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
2,6-Dinitrotoluene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
3-Nitroaniline		ug/kg	U	5800	U	5700	U	6000	U	5700	U	5600	U	5800	U	5800
Acenaphthene	50000	ug/kg	U	1500	U	1400	U	1500	U	1400	J	360	J	1400	U	1400
Dibenzofuran	6200	ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	J	920	U	1400
2,4-Dinitrotoluene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Diethylphthalate		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Fluorene	50000	ug/kg	U	1500	U	1400	U	1500	U	1400	J	440	J	1400	U	1400
4-Chlorophenylphenylether		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
4-Nitroaniline		ug/kg	U	5800	U	5700	U	6000	U	5700	U	5600	U	5800	U	5800
N-Nitrosodiphenylamine		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
4-Bromophenylphenylether		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Hexachlorobenzene		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Phenanthrene	50000	ug/kg	J	1400	J	1300	J	1400	J	770		4400		18000		2500
Anthracene	50000	ug/kg	U	1500	U	1400	U	1500	U	1400	J	1200		3700	U	1400
Carbazole		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	J	1100	U	1400
Di-n-butyl phthalate		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Fluoranthene	50000	ug/kg		1700	J	1400		1700	U	1400		5100		18000		4200
Pyrene	50000	ug/kg		3700		4700		2700		2600		4700		18000		4100
Butylbenzyl phthalate		ug/kg	U	1500	U	1400		1600	U	1400	U	1400	U	1400	U	1400
Benzo(a)anthracene	224	ug/kg	J	**950**	J	**910**	J	**890**	J	**640**		**2300**		**8800**		**2200**
3,3-Dichlorobenzidine		ug/kg	U	2900	U	2800	U	3000	U	2900	U	2800	U	2900	U	2900
Chrysene	400	ug/kg	J	**1400**	J	**1200**	J	**1100**	J	**940**		**2400**		**8200**		**2500**
Bis-2-ethylhexyl phthalate		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Di-n-octyl phthalate		ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Benzo(b)fluoranthene	1100	ug/kg		**1500**	J	**1300**	J	**1300**	J	970		**3000**		**8100**		**3600**
Benzo(k)fluoranthene	1100	ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400		3000	J	1300
Benzo(a)pyrene	61	ug/kg	J	**1000**	J	**930**	J	**1000**	J	**780**		**2100**		**6300**		**2400**
Indeno(1,2,3-cd)pyrene	3200	ug/kg	U	1500	U	1400	U	1500	U	1400	J	870		2500	J	980
Dibenzo(a,h)anthracene	14	ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400	U	1400	U	1400
Benzo(g,h,i)perylene	50000	ug/kg	U	1500	U	1400	U	1500	U	1400	U	1400		2100	U	1400
TOTAL SVOC	**500000**	ug/kg		**90680**		**87640**		**91190**		**84200**		**96870**		**165810**		**97380**

CROSSROADS PARK SOIL PILE SAMPLING - ANALYTICAL DATA SUMMARY

Sample Location:	TAGM 4046		SP-8		SP-9		SP-10		SP-11		SP-12		SP-13		SP-14	
Lab ID:	Rec. Cleanup		L81354-8		L81354-9		L81354-10		L81354-11		L81354-12		L81354-13		L81354-14	
Analysis	Objective	Units	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL
Total Solids			85.2		84.4		81.8		81.3		82.3		78.7		78.7	
EPA 8260 VOCs																
Chloromethane		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Vinyl chloride	1200	ug/kg	U	2	U	2	U	2	U	2	U	2	U	2	U	3
Chloroethane	1900	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Bromomethane		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
1,1-Dichloroethene	400	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Acetone	200	ug/kg	U	26	U	28	U	31	U	29	U	27	U	27	U	31
Carbon disulfide	2700	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Methylene chloride	100	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
trans-1,2-Dichloroethene	300	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
1,1-Dichloroethane	200	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
cis-1,2-Dichloroethene		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
MEK(2-Butanone)	300	ug/kg	U	26	U	28	U	31	U	29	U	27	U	27	U	31
Chloroform	300	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
1,1,1-Trichloroethane	800	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Carbon tetrachloride	600	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Benzene	60	ug/kg	U	0.7	U	0.8	U	0.9	U	0.8	U	0.8	U	0.8	U	0.9
1,2-Dichloroethane	100	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Trichloroethene	700	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
1,2-Dichloropropane		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Bromodichloromethane		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
cis-1,3-Dichloropropene		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
MIBK(4-Methyl-2-pentanone)	1000	ug/kg	U	10	U	11	U	12	U	11	U	11	U	11	U	13
Toluene	1500	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
trans-1,3-Dichloropropene		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
1,1,2-Trichloroethane		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Tetrachloroethene	1400	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
2-Hexanone		ug/kg	U	10	U	11	U	12	U	11	U	11	U	11	U	13
Dibromochloromethane		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Chlorobenzene	1700	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Ethylbenzene	5500	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
p-Xylene/m-Xylene		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
o-Xylene		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Styrene		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
Bromoform		ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
1,1,2,2-Tetrachloroethane	600	ug/kg	U	5	U	6	U	6	U	6	U	5	U	5	U	6
TOTAL VOC	10000	ug/kg		219.7		254.8		262.9		256.8		223.8		223.8		265.9
EPA 8270 SEMI-VOCs																
Bis(2-chloroethylether)		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
1,3-Dichlorobenzene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
1,4-Dichlorobenzene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
1,2-Dichlorobenzene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Bis(2-chloroisopropylether		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Hexachloroethane		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
N-Nitrosodi-N-propylamine		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Nitrobenzene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Isophorone		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Bis(2-chloroethoxymethane)		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
1,2,4-Trichlorobenzene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Naphthalene	13000	ug/kg	U	1500	U	1500	U	1500	J	330	U	1500	U	1600	U	1600
4-Chloroaniline		ug/kg	U	2900	U	3000	U	3100	U	3100	U	3000	U	3200	U	3200
Hexachlorobutadiene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
2-Methylnaphthalene	36400	ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Hexachlorocyclopentadiene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
2-Chloronaphthalene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
2-Nitroaniline		ug/kg	U	5900	U	5900	U	6100	U	6100	U	6100	U	6400	U	6300
Dimethylphthalate		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Acenaphthylene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
2,6-Dinitrotoluene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
3-Nitroaniline		ug/kg	U	5900	U	5900	U	6100	U	6100	U	6100	U	6400	U	6300
Acenaphthene	50000	ug/kg	U	1500	U	1500	U	1500	J	620	U	1500	U	1600	U	1600
Dibenzofuran	6200	ug/kg	U	1500	U	1500	U	1500	J	450	U	1500	U	1600	U	1600
2,4-Dinitrotoluene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Diethylphthalate		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Fluorene	50000	ug/kg	U	1500	U	1500	U	1500	J	910	U	1500	U	1600	J	460
4-Chlorophenylphenylether		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
4-Nitroaniline		ug/kg	U	5900	U	5900	U	6100	U	6100	U	6100	U	6400	U	6300
N-Nitrosodiphenylamine		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
4-Bromophenylphenylether		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Hexachlorobenzene		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Phenanthrene	50000	ug/kg	J	1100		2000		5400		8000		2500	J	950		5000
Anthracene	50000	ug/kg	U	1500	U	1500	J	1200		1800	U	1500	U	1600	J	980
Carbazole		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Di-n-butyl phthalate		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Fluoranthene	50000	ug/kg		1900		4300		8700		9600		3600	J	1600		5400
Pyrene	50000	ug/kg		1900		7500		9600		8500		4300		1800		7400
Butylbenzyl phthalate		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Benzo(a)anthracene	224	ug/kg	J	1100		2300		4700		4400		2100	J	950		3100
3,3-Dichlorobenzidine		ug/kg	U	2900	U	3000	U	3100	U	3100	U	3000	U	3200	U	3200
Chrysene	400	ug/kg	J	1200		2400		4500		4700		2300	J	1000		3500
Bis-2-ethylhexyl phthalate		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Di-n-octyl phthalate		ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Benzo(b)fluoranthene	1100	ug/kg		1600		3000		6400		6100		2900	J	1500		3900
Benzo(k)fluoranthene	1100	ug/kg	U	1500	J	1400		2100		2500	U	1500	U	1600	J	1300
Benzo(a)pyrene	61	ug/kg	J	1100		2200		4100		3900		1900	J	990		2800
Indeno(1,2,3-cd)pyrene	3200	ug/kg	U	1500	J	970		1600		1700	J	690	U	1600	J	1000
Dibenzo(a,h)anthracene	14	ug/kg	U	1500	U	1500	U	1500	U	1500	U	1500	U	1600	U	1600
Benzo(g,h,i)perylene	50000	ug/kg	U	1500	U	1500	J	1500		1600	U	1500	U	1600	U	1600
TOTAL SVOC	500000	ug/kg		90400		103770		125300		124610		100090		95190		114540

CROSSROADS PARK SOIL PILE SAMPLING - ANALYTICAL DATA SUMMARY

Sample Location:	TAGM 4046		SP-15		SP-16		SP-17		SP-18		SP-19		SP-20		SP-21	
Lab ID:	Rec. Cleanup		L81354-15		L81354-16		L81354-17		L81354-18		L81354-19		L81354-20		L81354-21	
Analysis	Objective	Units	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL
Total Solids			73.7		75.3		71		63.4		56.4		70.1		75.3	
EPA 8260 VOCs																
Chloromethane		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Vinyl chloride	1200	ug/kg	U	2	U	2	U	3	U	3	U	3	U	3	U	3
Chloroethane	1900	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Bromomethane		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
1,1-Dichloroethene	400	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Acetone	200	ug/kg	U	31	U	27	U	32	U	36	U	42	U	34	U	33
Carbon disulfide	2700	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Methylene chloride	100	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
trans-1,2-Dichloroethene	300	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
1,1-Dichloroethane	200	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
cis-1,2-Dichloroethene		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
MEK(2-Butanone)	300	ug/kg	U	31	U	27	U	32	U	36	U	42	U	34	U	33
Chloroform	300	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
1,1,1-Trichloroethane	800	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Carbon tetrachloride	600	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Benzene	60	ug/kg	U	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U	0.9
1,2-Dichloroethane	100	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Trichloroethene	700	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
1,2-Dichloropropane		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Bromodichloromethane		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
cis-1,3-Dichloropropene		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
MIBK(4-Methyl-2-pentanone)	1000	ug/kg	U	12	U	11	U	13	U	15	U	17	U	14	U	13
Toluene	1500	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
trans-1,3-Dichloropropene		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
1,1,2-Trichloroethane		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Tetrachloroethene	1400	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
2-Hexanone		ug/kg	U	12	U	11	U	13	U	15	U	17	U	14	U	13
Dibromochloromethane		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Chlorobenzene	1700	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Ethylbenzene	5500	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
p-Xylene/m-Xylene		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
o-Xylene		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Styrene		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
Bromoform		ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
1,1,2,2-Tetrachloroethane	600	ug/kg	U	6	U	5	U	6	U	7	U	8	U	7	U	7
TOTAL VOC	10000	ug/kg		262.9		223.8		267.9		309		354		303		298.9
EPA 8270 SEMI-VOCs																
Bis(2-chloroethyl)ether)		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
1,3-Dichlorobenzene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
1,4-Dichlorobenzene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
1,2-Dichlorobenzene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Bis(2-chloroisopropylether		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Hexachloroethane		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
N-Nitrosodi-N-propylamine		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Nitrobenzene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Isophorone		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Bis(2-chloroethoxymethane)		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
1,2,4-Trichlorobenzene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Naphthalene	13000	ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
4-Chloroaniline		ug/kg	U	3400	U	660	U	1400	U	1600	U	1800	U	1400	U	1300
Hexachlorobutadiene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
2-Methylnaphthalene	36400	ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Hexachlorocyclopentadiene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
2-Chloronaphthalene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
2-Nitroaniline		ug/kg	U	6800	U	1300	U	2800	U	3100	U	3500	U	2800	U	2600
Dimethylphthalate		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Acenaphthylene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
2,6-Dinitrotoluene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
3-Nitroaniline		ug/kg	U	6800	U	1300	U	2800	U	3100	U	3500	U	2800	U	2600
Acenaphthene	50000	ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Dibenzofuran	6200	ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
2,4-Dinitrotoluene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Diethylphthalate		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Fluorene	50000	ug/kg	J	420	U	330	U	700	U	790	U	880	U	710	U	660
4-Chlorophenylphenylether		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
4-Nitroaniline		ug/kg	U	6800	U	1300	U	2800	U	3100	U	3500	U	2800	U	2600
N-Nitrosodiphenylamine		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
4-Bromophenylphenylether		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Hexachlorobenzene		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Phenanthrene	50000	ug/kg		2500		370	J	660	J	410		1400	J	550	J	610
Anthracene	50000	ug/kg	U	1700	U	330	U	700	U	790	J	310	U	710	U	660
Carbazole		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Di-n-butyl phthalate		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Fluoranthene	50000	ug/kg		2600		680		1200		2200		3300		1100		1200
Pyrene	50000	ug/kg		3000		1100		1600		2600		3400		2000		1900
Butylbenzyl phthalate		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Benzo(a)anthracene	224	ug/kg	J	**1400**		**430**		**730**		**1100**		**2000**	J	**710**		**830**
3,3-Dichlorobenzidine		ug/kg	U	3400	U	660	U	1400	U	1600	U	1800	U	1400	U	1300
Chrysene	400	ug/kg	J	**1400**		**480**		**840**		**990**		**1800**		**890**		**790**
Bis-2-ethylhexyl phthalate		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Di-n-octyl phthalate		ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Benzo(b)fluoranthene	1100	ug/kg		**1900**		**660**		**1200**		**1600**		**2600**		**1200**		1100
Benzo(k)fluoranthene	1100	ug/kg	U	1700	U	330	U	700	J	720		**1300**	U	710	J	490
Benzo(a)pyrene	61	ug/kg	J	**1300**		**440**		**770**		**1200**		**2000**		**800**		**970**
Indeno(1,2,3-cd)pyrene	3200	ug/kg	U	1700	J	270	J	460	J	620		930	J	490	J	530
Dibenzo(a,h)anthracene	14	ug/kg	U	1700	U	330	U	700	U	790	U	880	U	710	U	660
Benzo(g,h,i)perylene	50000	ug/kg	U	1700	J	300	U	700	J	570	J	830	J	540	J	520
TOTAL SVOC	500000	ug/kg		104620		21830		44560		52160		63890		45040		42440

Exhibit 1
Analytical Results
Soil Berm Samples

Site Investigation Report
Former Syracuse Rigging Property
NYSDEC Brownfields Project No. B-00146-7
City of Syracuse, New York

CROSSROADS PARK SOIL PILE SAMPLING - ANALYTICAL DATA SUMMARY

Sample Location:	TAGM 4046		SP-22		SP-23		SP-24		SP-25		SP-26		SP-27		SP-28	
Lab ID:	Rec. Cleanup		L81354-22		L81354-23		L81354-24		L81354-25		L81354-26		L81354-27		L81354-28	
Analysis	Objective	Units	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL	Result	RDL
Total Solids			71.9		71.9		71.7		78.2		74.5		77.7		82.6	
EPA 8260 VOCs																
Chloromethane		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Vinyl chloride	1200	ug/kg	U	2	U	3	U	3	U	2	U	3	U	3	U	2
Chloroethane	1900	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Bromomethane		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
1,1-Dichloroethene	400	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Acetone	200	ug/kg	U	30	U	33	U	32	U	29	U	33	U	32	U	27
Carbon disulfide	2700	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Methylene chloride	100	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
trans-1,2-Dichloroethene	300	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
1,1-Dichloroethane	200	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
cis-1,2-Dichloroethene		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
MEK(2-Butanone)	300	ug/kg	U	30	U	33	U	32	U	29	U	33	U	32	U	27
Chloroform	300	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
1,1,1-Trichloroethane	800	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Carbon tetrachloride	600	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Benzene	60	ug/kg	U	0.8	U	0.9	U	0.9	U	0.8	U	0.9	U	0.9	U	0.8
1,2-Dichloroethane	100	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Trichloroethene	700	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
1,2-Dichloropropane		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Bromodichloromethane		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
cis-1,3-Dichloropropene		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
MIBK(4-Methyl-2-pentanone)	1000	ug/kg	U	12	U	13	U	13	U	12	U	13	U	13	U	11
Toluene	1500	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
trans-1,3-Dichloropropene		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
1,1,2-Trichloroethane		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Tetrachloroethene	1400	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
2-Hexanone		ug/kg	U	12	U	13	U	13	U	12	U	13	U	13	U	11
Dibromochloromethane		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Chlorobenzene	1700	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Ethylbenzene	5500	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
p-Xylene/m-Xylene		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
o-Xylene		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Styrene		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
Bromoform		ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
1,1,2,2-Tetrachloroethane	600	ug/kg	U	6	U	7	U	6	U	6	U	7	U	6	U	5
TOTAL VOC	**10000**	ug/kg		**260.8**		**298.9**		**267.9**		**258.8**		**298.9**		**267.9**		**223.8**
EPA 8270 SEMI-VOCs																
Bis(2-chloroethylether)		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
1,3-Dichlorobenzene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
1,4-Dichlorobenzene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
1,2-Dichlorobenzene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Bis(2-chloroisopropylether		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Hexachloroethane		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
N-Nitrosodi-N-propylamine		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Nitrobenzene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Isophorone		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Bis(2-chloroethoxymethane)		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
1,2,4-Trichlorobenzene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Naphthalene	13000	ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
4-Chloroaniline		ug/kg	U	1400	U	1400	U	1400	U	1300	U	1300	U	1300	U	1200
Hexachlorobutadiene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
2-Methylnaphthalene	36400	ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Hexachlorocyclopentadiene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
2-Chloronaphthalene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
2-Nitroaniline		ug/kg	U	2800	U	2800	U	2800	U	2600	U	2700	U	2600	U	2400
Dimethylphthalate		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Acenaphthylene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
2,6-Dinitrotoluene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
3-Nitroaniline		ug/kg	U	2800	U	2800	U	2800	U	2600	U	2700	U	2600	U	2400
Acenaphthene	50000	ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Dibenzofuran	6200	ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
2,4-Dinitrotoluene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Diethylphthalate		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Fluorene	50000	ug/kg	U	690	U	690	U	690	J	180	U	670	J	170	U	610
4-Chlorophenylphenylether		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
4-Nitroaniline		ug/kg	U	2800	U	2800	U	2800	U	2600	U	2700	U	2600	U	2400
N-Nitrosodiphenylamine		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
4-Bromophenylphenylether		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Hexachlorobenzene		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Phenanthrene	50000	ug/kg	J	640	J	480		970		1900		780		1900	J	460
Anthracene	50000	ug/kg	U	690	U	690	J	220	J	540	J	160	J	470	U	610
Carbazole		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Di-n-butyl phthalate		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Fluoranthene	50000	ug/kg		1200		920		1700		2400		1200		2500		650
Pyrene	50000	ug/kg		1800		1000		2000		2500		1200		2600		720
Butylbenzyl phthalate		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Benzo(a)anthracene	224	ug/kg		**880**	J	**630**		**1200**		**1400**		**720**		**1400**	J	**360**
3,3-Dichlorobenzidine		ug/kg	U	1400	U	1400	U	1400	U	1300	U	1300	U	1300	U	1200
Chrysene	400	ug/kg		**910**		**730**		**1300**		**1400**		**710**		**1300**	J	310
Bis-2-ethylhexyl phthalate		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Di-n-octyl phthalate		ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Benzo(b)fluoranthene	1100	ug/kg		**1400**		960		**1500**		**1500**		760		**1500**	U	610
Benzo(k)fluoranthene	1100	ug/kg	J	660	J	330	J	520	J	630	U	670	J	560	U	610
Benzo(a)pyrene	61	ug/kg		**1100**	J	**660**		**1100**		**1300**	J	**590**		**1100**	J	**400**
Indeno(1,2,3-cd)pyrene	3200	ug/kg	J	500	U	690	J	460	J	550	U	670	J	520	U	610
Dibenzo(a,h)anthracene	14	ug/kg	U	690	U	690	U	690	U	640	U	670	U	640	U	610
Benzo(g,h,i)perylene	50000	ug/kg	J	520	J	300	J	430	J	530	J	270	J	430	J	170
TOTAL SVOC	**500000**	ug/kg		**44960**		**42050**		**46060**		**46350**		**41210**		**45970**		**35850**

FIGURES

LEGEND	
(shaded box)	= Moist/Saturated Soils
Refusal	= Excavator could not advance deeper, typically due to presence of concrete footers and thick concrete slabs
Field 0.0	= Field PID reading in ppm
Headspace 0.0	= Headspace PID reading in ppm
T-A-01	= Sample number, analyzed by laboratory

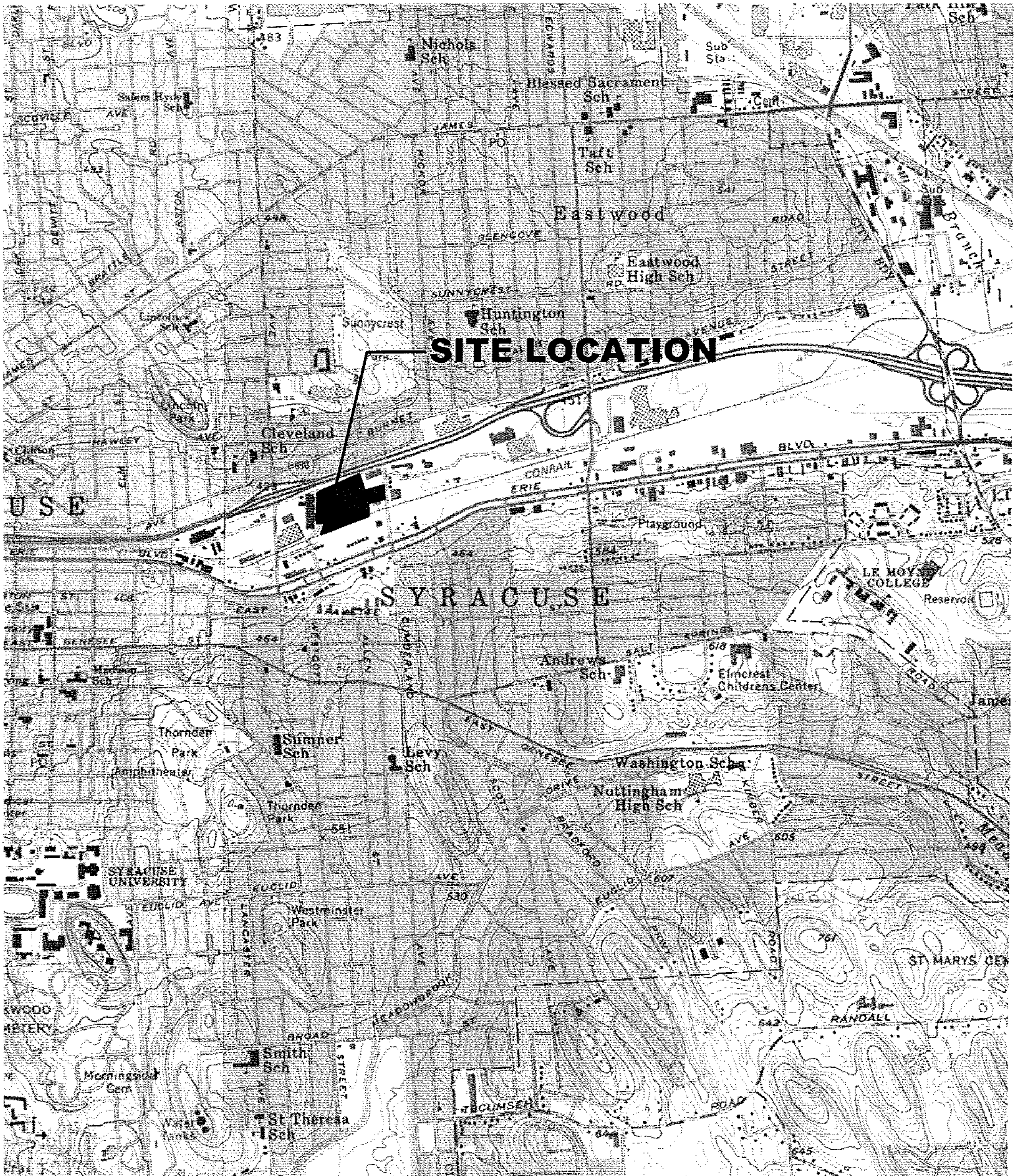


FIGURE 1 - LOCATION PLAN

CITY CROSSROADS PARK
341 PEAT STREET
SYRACUSE, NEW YORK

SITE INVESTIGATION REPORT

Scale: 1" = 2,000'

02850

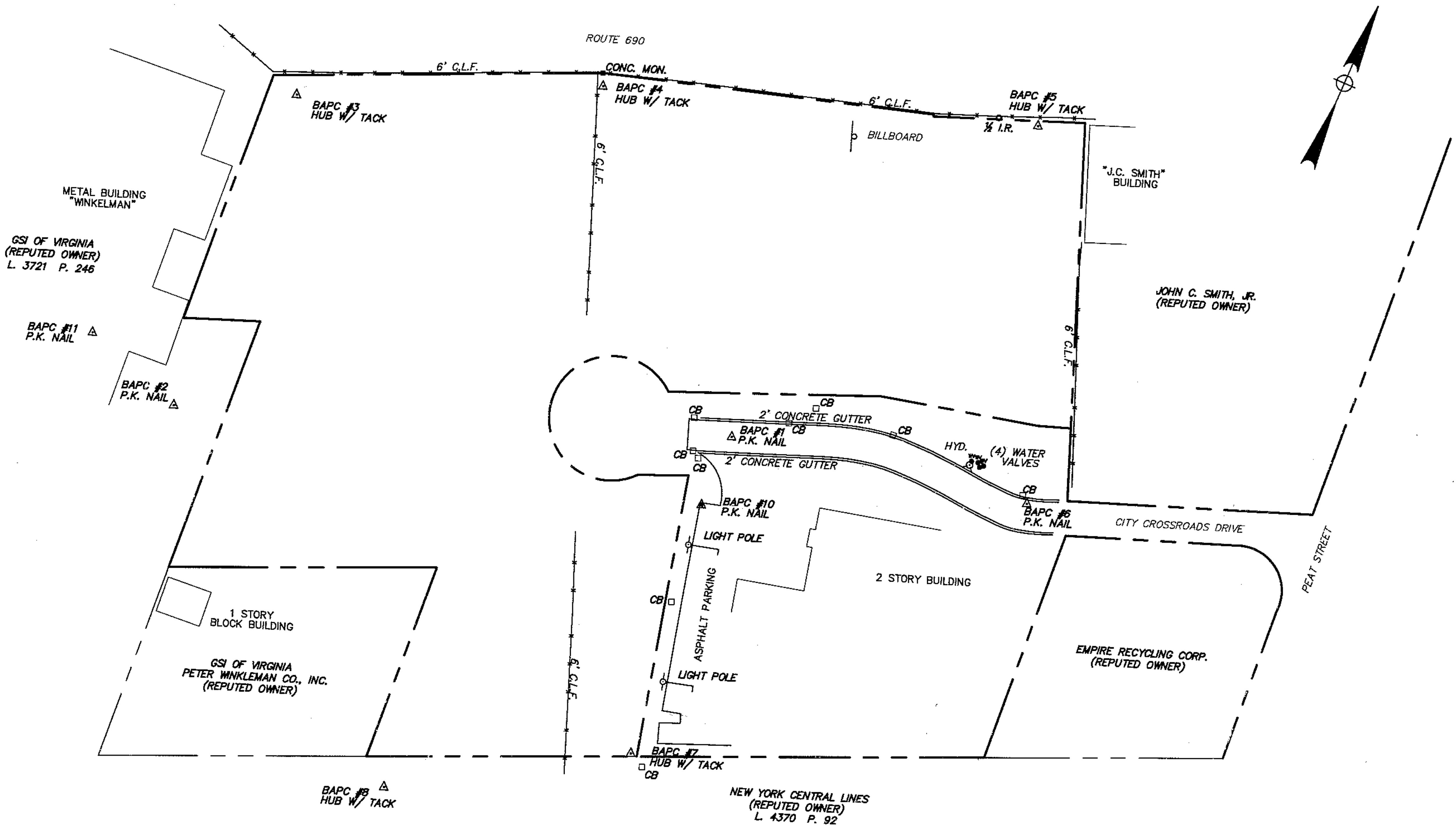
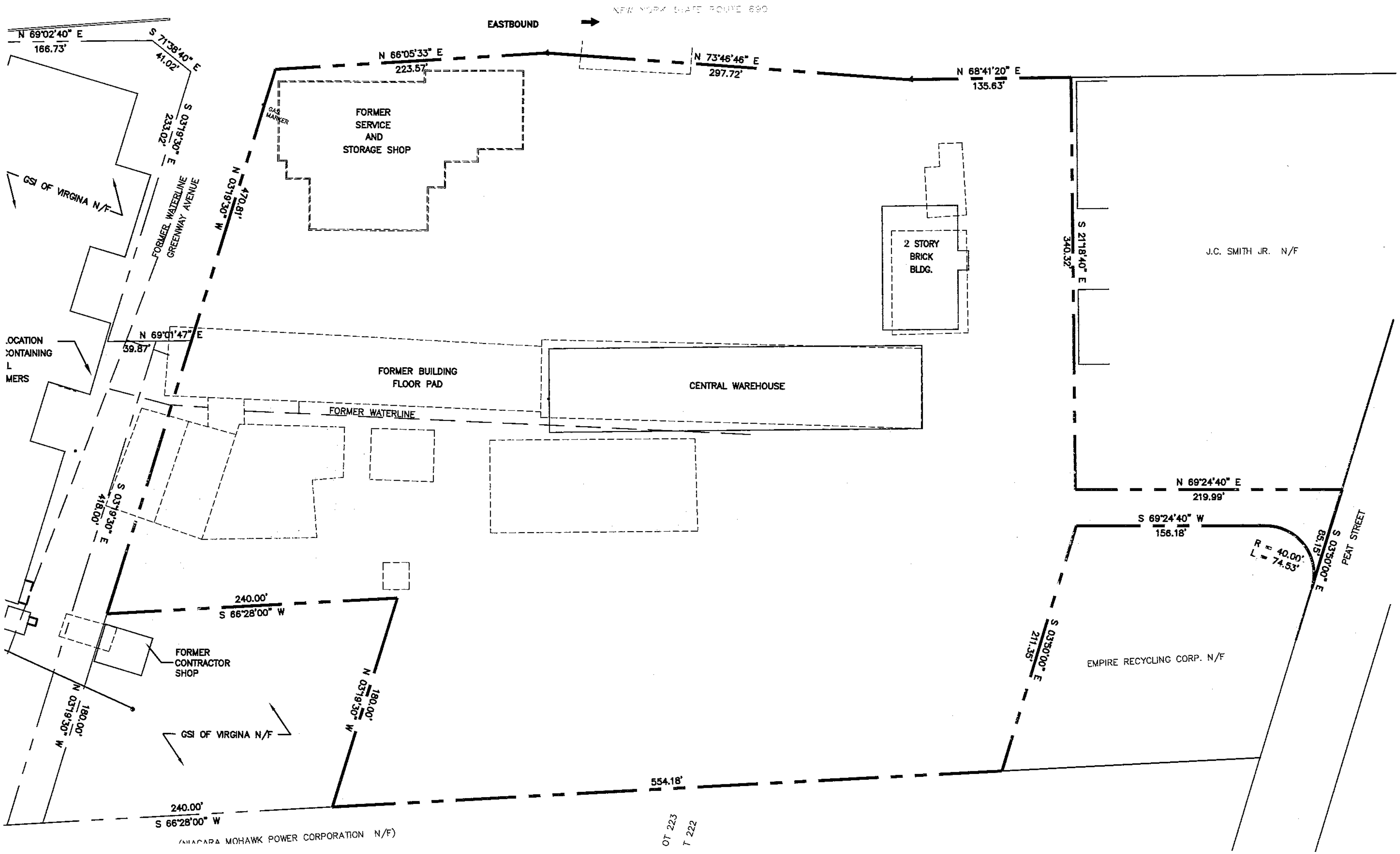


FIGURE 2 - SITE PLAN

CITY CROSSROADS PARK
341 PEAT STREET
SYRACUSE, NEW YORK

SITE INVESTIGATION REPORT

Scale: 1" = 100'



NOTES:

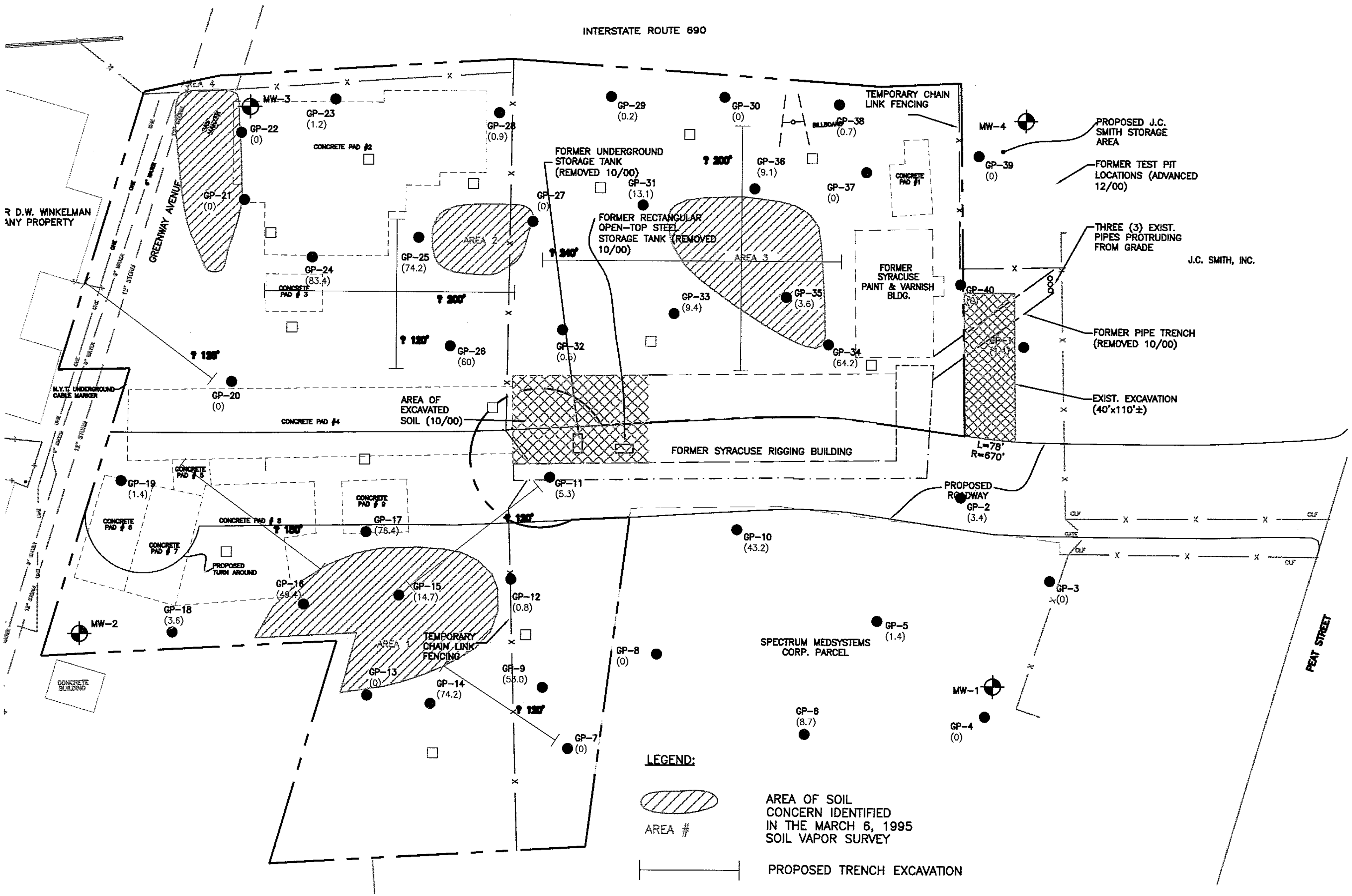
1. PREPARED TO SHOW GENERAL ARRANGEMENT OF PROPERTY FOR SI / RAR WORK PLAN. DO NOT USE FOR ANY OTHER PURPOSE.

FIGURE 3 - PRE-DEMOLITION SITE LAYOUT

CITY CROSSROADS PARK
341 PEAT STREET
SYRACUSE, NEW YORK

SITE INVESTIGATION REPORT

Scale: 1" = 80'



LEGEND:

AREA # — AREA OF SOIL CONCERN IDENTIFIED IN THE MARCH 6, 1995 SOIL VAPOR SURVEY

PROPOSED TRENCH EXCAVATION

PROPOSED TRENCH PIT

MW-1 — GROUNDWATER MONITORING WELL INSTALLED IN APRIL 1999 LIMITED SUBSURFACE SCREENING REPORT

GP-1 (0) — SOIL BORING W/ MAX. PID SCREENING (ppm) IDENTIFIED IN THE SEPTEMBER 2, 1999

FORMER SYRACUSE RIGGING PROPERTY
341 PEAT STREET SYRACUSE, NEW YORK
NYSDEC SPILL NO. 0005223

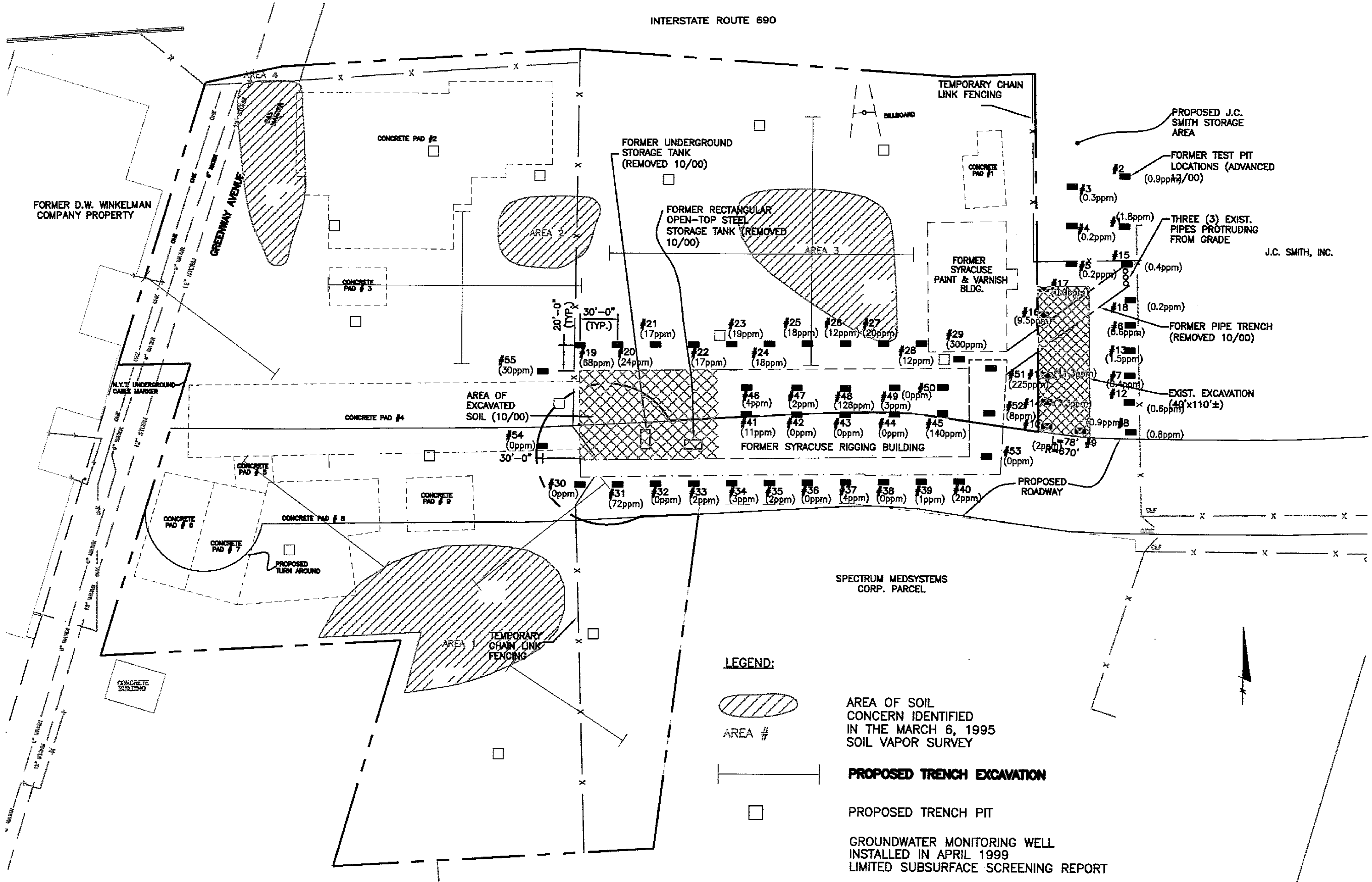
FIGURE 4 - 1999 LIMITED SUBSURFACE SCREENING MAP

CITY CROSSROADS PARK
341 PEAT STREET
SYRACUSE, NEW YORK

SITE INVESTIGATION REPORT

Scale: 1" = 80'

02850



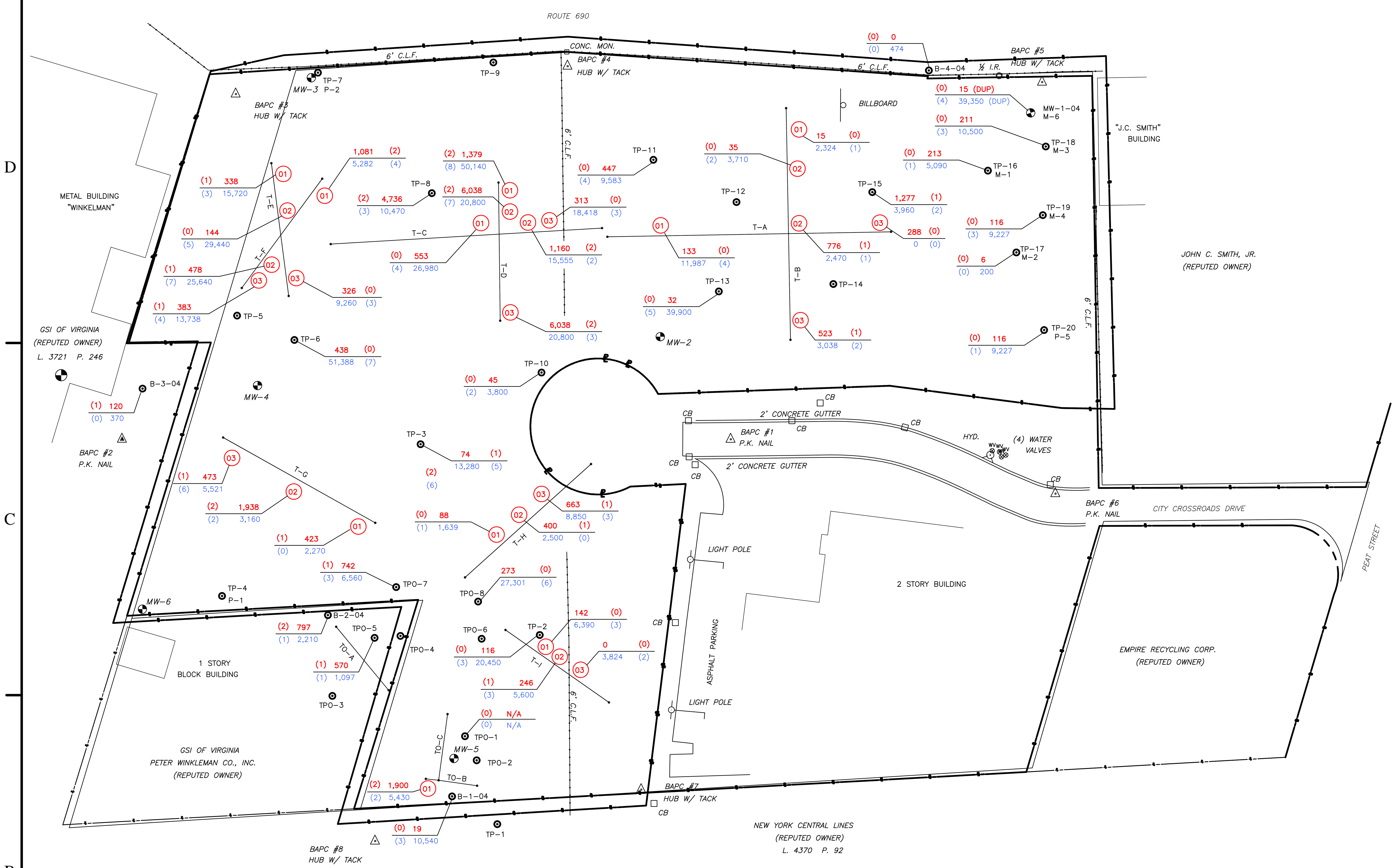
FORMER SYRACUSE RIGGING PROPERTY
341 PEAT STREET SYRACUSE, NEW YORK
NYSDEC SPILL NO. 0005223

FIGURE 5 - 2000 PARCEL D EXPLORATORY EXCAVATION MAP

CITY CROSSROADS PARK
341 PEAT STREET
SYRACUSE, NEW YORK

SITE INVESTIGATION REPORT

Scale: 1" = 100'



SUBSURFACE SOIL VOC/SVOC CONTAMINANT CONCENTRATION MAP

SCALE: 1"=50'

SCALE IN FEET

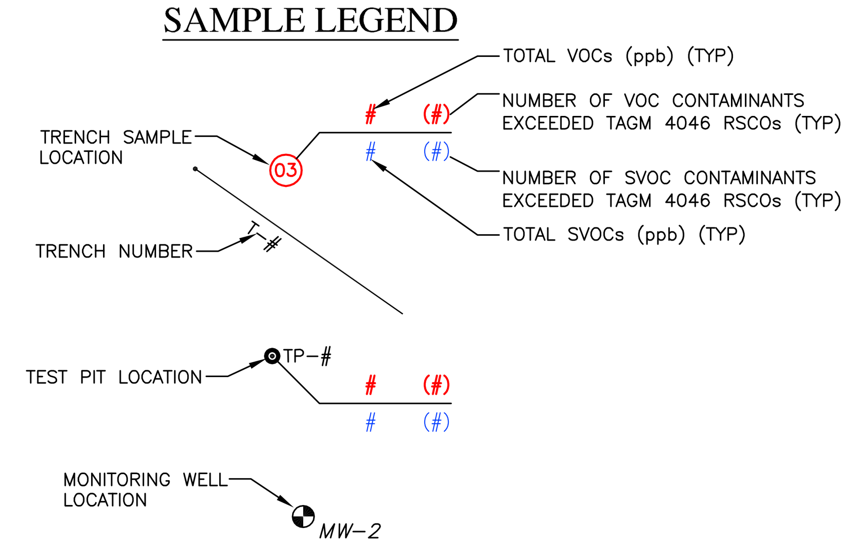
50 0 25 50 100 200

1" = 50'

ABBREVIATIONS

- B – OFFSITE BORING
- DUP – DUPLICATE SAMPLE
- M – MISCELLANEOUS SOIL SAMPLE
- MW – MONITORING WELL
- P – SUBSURFACE PCB SAMPLE
- T – TEST TRENCH
- TO – TEST TRENCH (SUPPLEMENTAL "0.1" INVESTIGATION)
- TP – TEST PIT
- TPO – TEST PIT (SUPPLEMENTAL "0.1" INVESTIGATION)

SAMPLE LEGEND



SCHEDULE

TEST PIT LOCATION	SAMPLE DEPTH (FT)	TOTAL VOCs (ppb)	# OVER TAGM	SPECIFIC CONTAMINANTS EXCEEDING TAGM 4046 RSCOs	TOTAL SVOCs (ppb)	# OVER TAGM	SPECIFIC CONTAMINANTS EXCEEDING TAGM 4046 RSCOs
TP-2	5	116	0		20450	3	Chrysene Benzo (a) anthrecene Benzo (a) pyrene
TP-3	3	74	0		13280	5	Phenol 2-Methylphenol Chrysene Benzo (a) anthrecene Benzo (a) pyrene
TP-6	3	438	0		51388	7	Phenol 4-Methylphenol Benzo (a) anthrecene Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) pyrene
TP-8	2	4736	2	Acetone 2-Butanone	10470	3	Chrysene Benzo (a) anthrecene Benzo (a) pyrene
TP-10	2	45	0		3800	2	Chrysene Benzo (a) pyrene
TP-11	3	32	0		9583	4	Chrysene Benzo (a) anthrecene Benzo (a) pyrene Dibenz (a,h) anthracene
TP-13	4	447	1	Acetone	39900	5	Benzo (a) anthrecene Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) pyrene
TP-15	3	1277	1	Acetone	3960	2	Benzo (a) anthrecene Benzo (a) pyrene
TO-B-1	8	1900	2	Acetone	5430	2	Chrysene Benzo (a) pyrene
TPO-1	8.5	0	0	Elevated detection limits	0	0	Elevated detection limits
TPO-5	9	570	1	Acetone	1097	1	Benzo (a) pyrene
TPO-7	6.5	742	1	Acetone	6560	3	Benzo (a) anthrecene Chrysene Benzo (a) pyrene
TPO-8	5.5	273	1	Acetone	27301	6	Benzo (a) anthrecene Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) pyrene Dibenz (a,h) anthracene
M-1 (TP-16)	3	213	0		5090	3	Chrysene Benzo (a) anthrecene Benzo (a) pyrene
M-2 (TP-18)	1	6	0		200	0	
M-3 (TP-19)	3	211	0		10500	3	Chrysene Benzo (a) anthrecene Benzo (a) pyrene
M-4 (TP-20)	3.5	116	0		9227	3	Chrysene Benzo (a) anthrecene Benzo (a) pyrene
M-6 (MW-1-04) (DUP)		15	0		39,350	5	Benzo (a) anthrecene Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) pyrene

TEST TRENCH LOCATION	SAMPLE DEPTH (FT)	TOTAL VOCs (ppb)	# OVER TAGM	SPECIFIC CONTAMINANTS EXCEEDING TAGM 4046 RSCOs	TOTAL SVOCs (ppb)	# OVER TAGM	SPECIFIC CONTAMINANTS EXCEEDING TAGM 4046 RSCOs
T-A-01	4	133	0		11987	4	Chrysene Benzo (a) anthrecene Benzo (a) pyrene Dibenz (a,h) anthracene
T-A-02	3	776	1	Acetone	2470	1	Benzo (a) pyrene
T-A-03	3	288	0		0	0	
T-B-01	3	15	0		2324	1	Benzo (a) pyrene
T-B-02	3	35	0		3710	2	Benzo (a) anthrecene Benzo (a) pyrene
T-B-03	5	523	1	Acetone	3038	2	Benzo (a) anthrecene Benzo (a) pyrene
T-C-01	4	553	0		26980	4	Chrysene Benzo (a) anthrecene Benzo (a) pyrene Dibenz (a,h) anthracene
T-C-02	4	1160	2	Acetone Benzene	15555	2	Benzo (a) anthrecene Benzo (a) pyrene
T-C-03	3	313	0		18418	3	Benzo (a) anthrecene Benzo (a) pyrene Dibenz (a,h) anthracene
T-D-01	3	1379	2	Acetone 2-Butanone	50140	8	Phenol 4-Methylphenol Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) anthrecene Benzo (a) pyrene Dibenz (a,h) anthracene
T-D-02	1	387	2	Acetone 2-Butanone	39170	7	Phenol Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) anthrecene Benzo (a) pyrene Dibenz (a,h) anthracene
T-D-03	3	6038	2	Acetone 2-Butanone	20800	3	Phenol 4-Methylphenol Chrysene
T-E-01	2	338	1	Acetone	15720	3	Chrysene Benzo (a) anthrecene Benzo (a) pyrene
T-E-02	4	144	0		29440	5	Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) anthrecene Benzo (a) pyrene
T-E-03	2	326	0		9260	3	Chrysene Benzo (a) anthrecene Benzo (a) pyrene
T-F-01	2.5	1081	2	Acetone 2-Butanone	5282	4	Phenol Chrysene Benzo (a) anthrecene Benzo (a) pyrene
T-F-02	4	478	1	2-Butanone	25640	7	Phenol Chrysene Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) anthrecene Benzo (a) pyrene Dibenz (a,h) anthracene
T-F-03	4	383	1	2-Butanone	13738	4	Chrysene Benzo (a) anthrecene Benzo (a) pyrene Dibenz (a,h) anthracene
T-G-01	6	423	1	Acetone	2270	0	
T-G-02	3	1938	2	Acetone 2-Butanone	3160	2	Phenol Benzo (a) pyrene
T-G-03	2	473	1	2-Butanone	5521	6	Phenol Chrysene Benzo (b) fluoranthene Benzo (a) anthrecene Benzo (a) pyrene Dibenz (a,h) anthracene
T-H-01	7	663	1	Acetone	8850	3	Chrysene Benzo (a) anthrecene Benzo (a) pyrene
T-H-02	7	400	1	Acetone	2500	0	Phenol
T-H-03	3	88	0		1639	1	Benzo (a) pyrene
T-I-01	7.5	142	0		6390	3	Chrysene Benzo (a) anthrecene Benzo (a) pyrene
T-I-02	8	246	1	Acetone	5600	3	Chrysene Benzo (a) anthrecene Benzo (a) pyrene
T-I-03	1	0	0		3824	2	Benzo (a) anthrecene Benzo (a) pyrene

OFFSITE BORING LOCATION	SAMPLE DEPTH (FT)	TOTAL VOCs (ppb)	# OVER TAGM	SPECIFIC CONTAMINANTS EXCEEDING TAGM 4046 RSCOs	TOTAL SVOCs (ppb)	# OVER TAGM	SPECIFIC CONTAMINANTS EXCEEDING TAGM 4046 RSCOs
B-1-04	8-14	19	0		10540	3	Benzo (a) anthrecene Chrysene Benzo (a) pyrene
B-2-04 (DUP)	8-12	797	2	Methylene Chloride Benzene	2210	1	Chrysene
B-3-04	8-12	120	0		370	0	–
B-4-04	8-14	0	0		474	0	–

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SITE INVESTIGATION REPORT

CITY CROSSROADS PARK
341 PEAT STREET
SYRACUSE, NEW YORK

REVISED BY:
DATE:
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SUBSURFACE SOIL VOC/SVOC CONTAMINANT CONCENTRATION MAP

Project Number: 02850	Designed By: MDK
Drawn By: FJS	Reviewed By: *

NO	REVISION DESCRIPTION	BY	DATE
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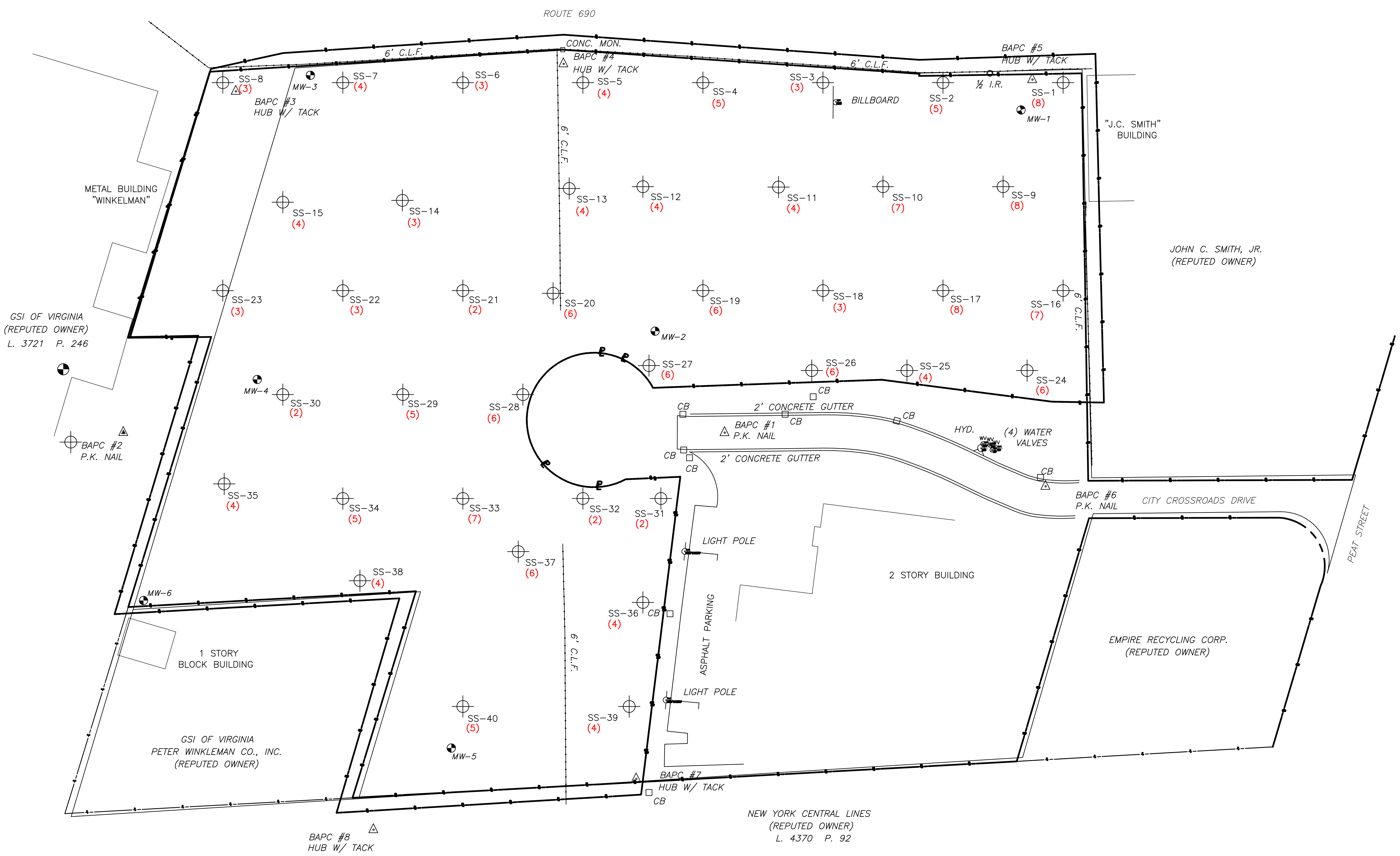
Drawing Number

FIG-6

of



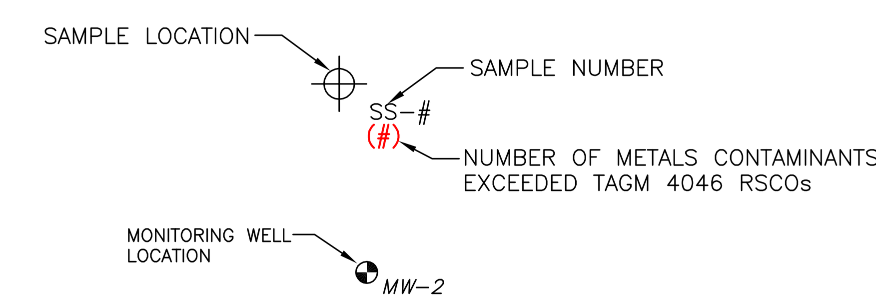
SURFACE SOIL METALS CONTAMINANT CONCENTRATION MAP

SCALE: 1"=50'

SCHEDULE

TEST LOCATION	# OVER TAGM	TAGM CONTAMINANT
SS-1	8	"As, Ca, Cd, Cu, Mg, Ni, Zn, Hg"
SS-2	5	"Cd, Ca, Mg, Ni, Zn"
SS-3	3	"Ca, Mg, Zn"
SS-4	5	"As, Ca, Mg, Zn, Hg"
SS-5	4	"Ca, Mg, Ni, Zn"
SS-6	3	"Ca, Mg, Zn"
SS-7	4	"Ca, Cr, Mg, Zn"
SS-8	3	"Ca, Mg, Zn"
SS-9	8	"Cd, Ca, Cr, Cu, Mg, Ni, Zn, Hg"
SS-10	7	"Ca, Cr, Cu, Mg, Ni, Se, Zn"
SS-11	4	"Ca, Cr, Mg, Zn"
SS-12	4	"Ca, Mg, Ni, Zn"
SS-13	4	"Ca, Mg, Ni, Zn"
SS-14	3	"Ca, Mg, Zn"
SS-15	4	"Ca, Mg, Zn, Hg"
SS-16	7	"Ca, Cr, Cu, Mg, Ni, Zn, Hg"
SS-17	8	"As, Ca, Cr, Cu, Mg, Ni, Zn, Hg"
SS-18	3	"Ca, Mg, Zn"
SS-19	6	"Ca, Cr, Mg, Ni, Zn, Hg"
SS-20	6	"Ca, Cr, Cu, Mg, Ni, Zn "
SS-21	2	"Ca, Mg"
SS-22	3	"Ca, Mg, Zn"
SS-23	3	"Ca, Mg, Zn"
SS-24	6	"Ca, Cr, Cu, Mg, Ni, Zn"
SS-25	4	"Ca, Mg, Ni, Zn"
SS-26	6	"Ca, Cr, Cu, Mg, Ni, Zn"
SS-27	6	"Ca, Cr, Cu, Mg, Ni, Zn"
SS-28	6	"Ca, Cr, Cu, Mg, Ni, Zn"
SS-29	5	"Ca, Cr, Mg, Ni, Zn"
SS-30	2	"Zn, Hg"
SS-31	2	"Ca, Mg"
SS-32	2	"Ca, Mg"
SS-33	7	"As, Ca, Cr, Cu, Mg, Ni, Zn "
SS-34	5	"Ca, Cu, Mg, Ni, Zn"
SS-35	4	"Ca, Mg, Ni, Zn"
SS-36	4	"Ca, Mg, Ni, Zn"
SS-37	6	"Ca, Cr, Cu, Mg, Ni, Zn"
SS-38	4	"Ca, Mg, Ni, Zn"
SS-39	4	"Ca, Mg, Ni, Zn"
SS-40	5	"Ca, Cu, Mg, Ni, Zn"

SAMPLE LEGEND



SCALE IN FEET

50 0 25 50 100 200

1" = 50'

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SITE INVESTIGATION REPORT

CITY CROSSROADS PARK
341 PEAT STREET
SYRACUSE, NEW YORK

SURFACE SOIL METALS CONTAMINANT CONCENTRATION MAP

Project Number: 02850	Designed By: MDK
Drawn By: FJS	Reviewed By: *

NO	REVISION DESCRIPTION	BY	DATE
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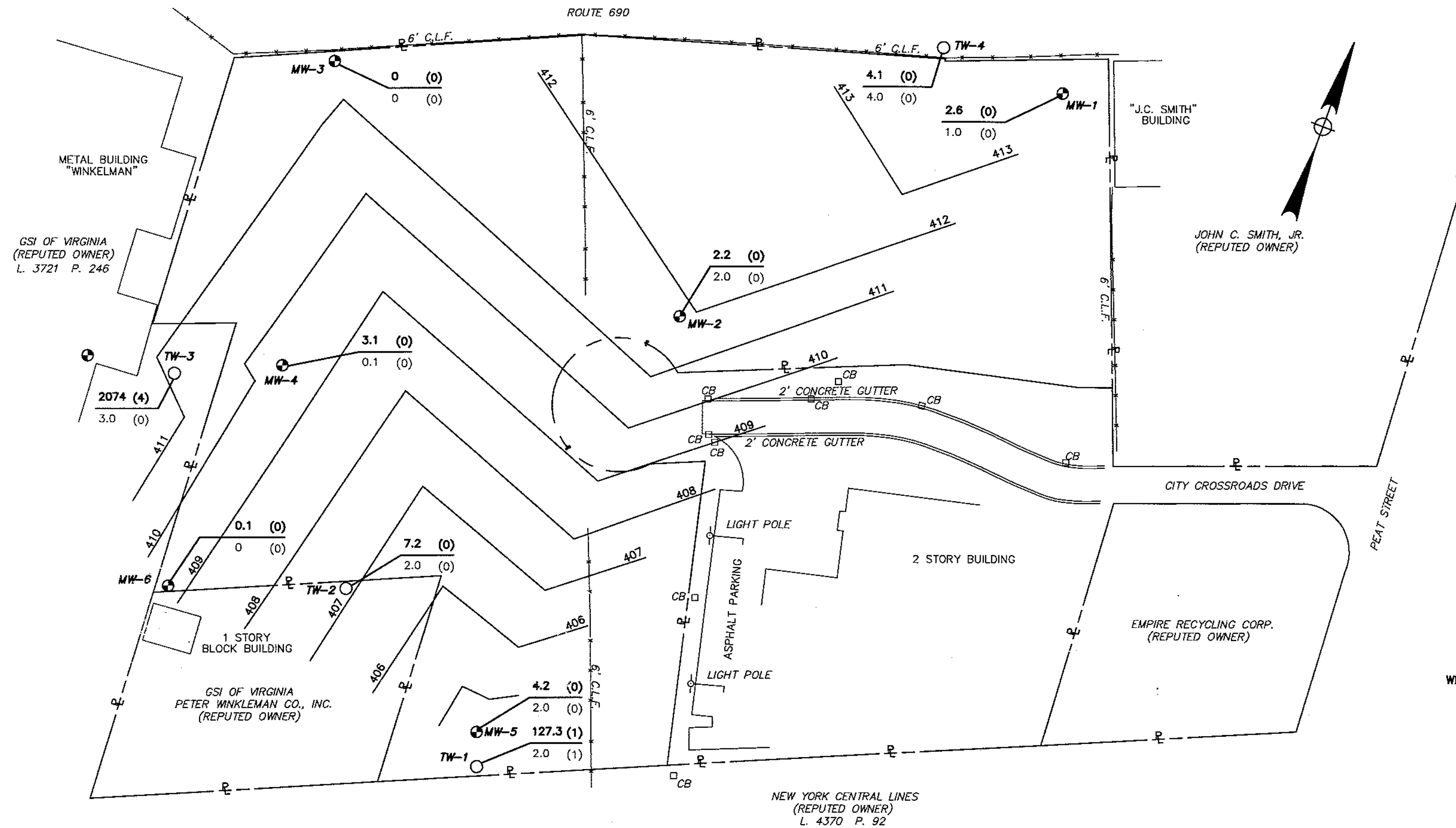
–	–	–	–
0	ISSUED TO BIDDERS	–	–

Date: UNSTAMPED

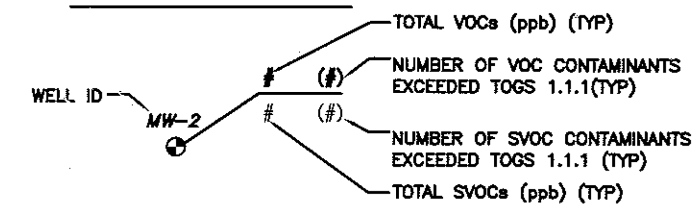
Drawing Number

FIG-7

of



SAMPLE LEGEND



SCHEDULE

TEST WELL ID	TOTAL VOCs	# OF VOC CONTAMINANTS OVER TOGS 1.1.1	SPECIFIC CONTAMINANTS	TOTAL SVOCs	# OF SVOC CONTAMINANTS OVER TOGS 1.1.1	SPECIFIC CONTAMINANTS
MW-1	2.6	0	–	1	0	–
MW-2	2.2	0	–	2	0	–
MW-3	0	0	–	0	0	–
MW-4	3.1	0	–	0.1	0	–
MW-5	4.2	0	–	2	0	–
MW-6	0.1	0	–	0	0	–
TW-1	127.3	1	ACETONE	2	1	PHENOL
TW-2	7.2	0	–	2	0	–
TW-3	2074	5	VINYL CHLORIDE CHLOROETHANE TRANS-1,2, DICHLOROETHENE 1,1-DICHLOROETHANE CIS-1,2-DICHLOROETHANE	3	0	–
TW-4	4.1	0	–	4	0	–

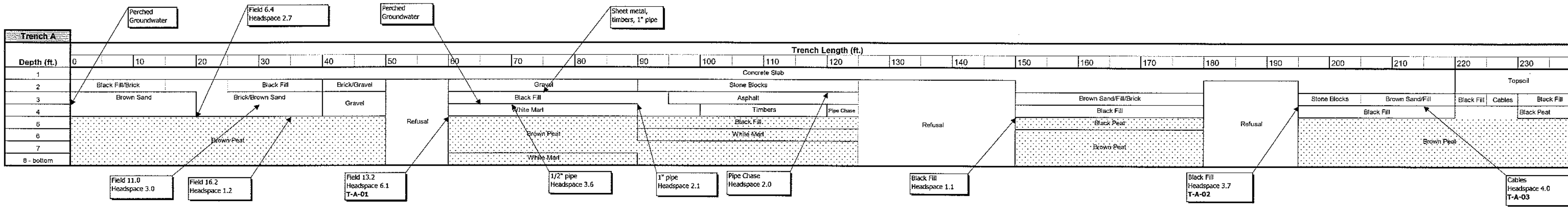
FIGURE 8 - GROUNDWATER CONTOUR / CONTAMINANT CONCENTRATION MAP

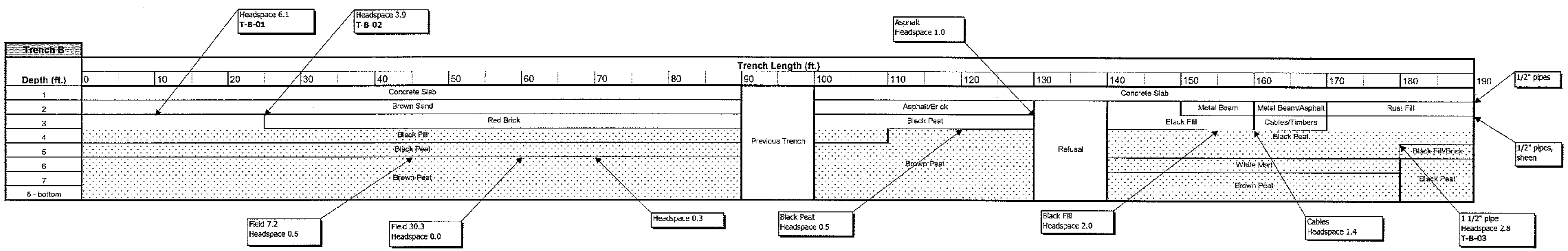
CITY CROSSROADS PARK
341 PEAT STREET
SYRACUSE, NEW YORK

SITE INVESTIGATION REPORT

GROUNDWATER CONTOURS FROM DECEMBER 2004 MEASUREMENTS

Scale: 1" = 100'


Trench A
Trench Length (ft.)
Depth (ft.)
1
2
3
4
5
6
7
8 - bottom
Concrete Slab
Black Fill/Brick
Brown Sand
Black Fill
Brick/Brown Sand
Brick/Gravel
Gravel
Refusal
Gravel
Black Fill
White Marl
Brown Peat
White Marl
Stone Blocks
Asphalt
Timbers
Pipe Chase
Black Fill
White Marl
Refusal
Brown Sand/Fill/Brick
Black Fill
Black Peat
Brown Peat
Refusal
Stone Blocks
Brown Sand/Fill
Black Fill
Topsoil
Black Fill
Cables
Black Peat
Perched Groundwater
Field 6.4 Headspace 2.7
Perched Groundwater
Sheet metal, timbers, 1" pipe
Field 11.0 Headspace 3.0
Field 16.2 Headspace 1.2
Field 13.2 Headspace 6.1 T-A-01
1/2" pipe Headspace 3.6
1" pipe Headspace 2.1
Pipe Chase Headspace 2.0
Black Fill Headspace 1.1
Black Fill Headspace 3.7 T-A-02
Cables Headspace 4.0 T-A-03


Trench B
Trench Length (ft.)
Depth (ft.)
Concrete Slab
Brown Sand
Red Brick
Black Fill
Black Peat
Brown Peat
Previous Trench
Asphalt/Brick
Black Peat
Brown Peat
Refusal
Concrete Slab
Metal Beam
Metal Beam/Asphalt
Rust Fill
Black Fill
Cables/Timbers
Black Peat
White Marl
Brown Peat
Black Fill/Brick
Black Peat
Headspace 6.1 T-B-01
Headspace 3.9 T-B-02
Asphalt Headspace 1.0
1/2" pipes
1/2" pipes, sheen
Field 7.2 Headspace 0.6
Field 30.3 Headspace 0.0
Headspace 0.3
Black Peat Headspace 0.5
Black Fill Headspace 2.0
Cables Headspace 1.4
1 1/2" pipe Headspace 2.8 T-B-03

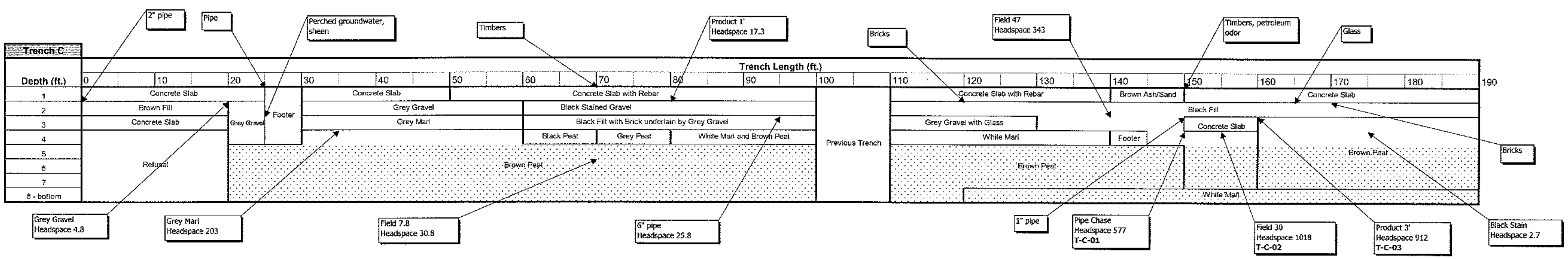

Trench C
Trench Length (ft.)
Depth (ft.)
Concrete Slab
Brown Fill
Concrete Slab
Refusal
Grey Gravel
Footer
Concrete Slab
Grey Gravel
Grey Marl
Brown Peat
Concrete Slab with Rebar
Black Stained Gravel
Black Fill with Brick underlain by Grey Gravel
Black Peat
Grey Peat
White Marl and Brown Peat
Previous Trench
Concrete Slab with Rebar
Grey Gravel with Glass
White Marl
Footer
Brown Peat
Brown Ash/Sand
Black Fill
Concrete Slab
Concrete Slab
Brown Peat
White Marl
2" pipe
Pipe
Perched groundwater, sheen
Timbers
Product 1' Headspace 17.3
Bricks
Field 47 Headspace 343
Timbers, petroleum odor
Glass
Bricks
Grey Gravel Headspace 4.8
Grey Marl Headspace 203
Field 7.8 Headspace 30.8
6" pipe Headspace 25.8
1" pipe
Pipe Chase Headspace 577 T-C-01
Field 30 Headspace 1018 T-C-02
Product 3' Headspace 912 T-C-03
Black Stain Headspace 2.7

FIGURE 9
TEST TRENCH PID LOGS

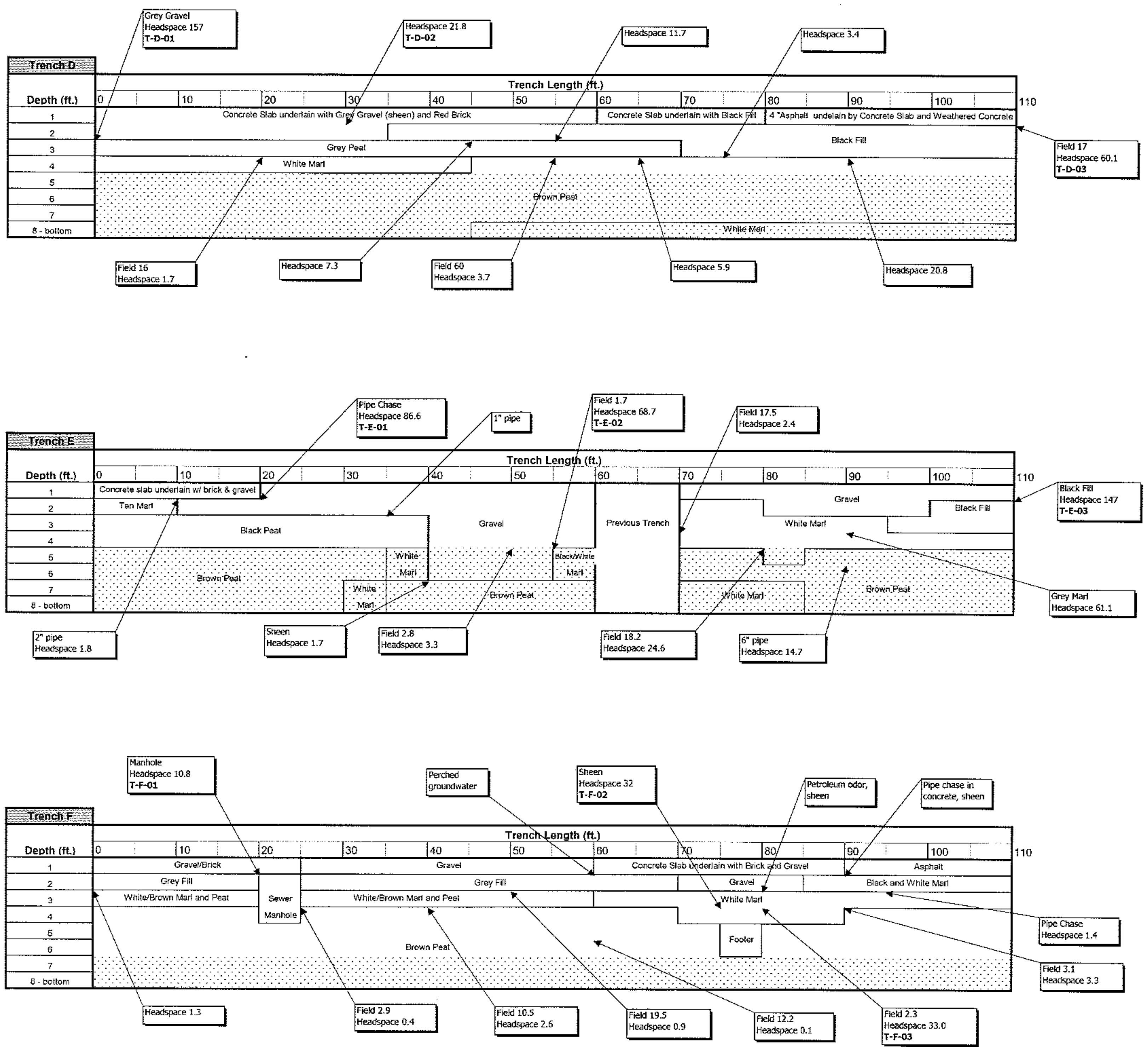
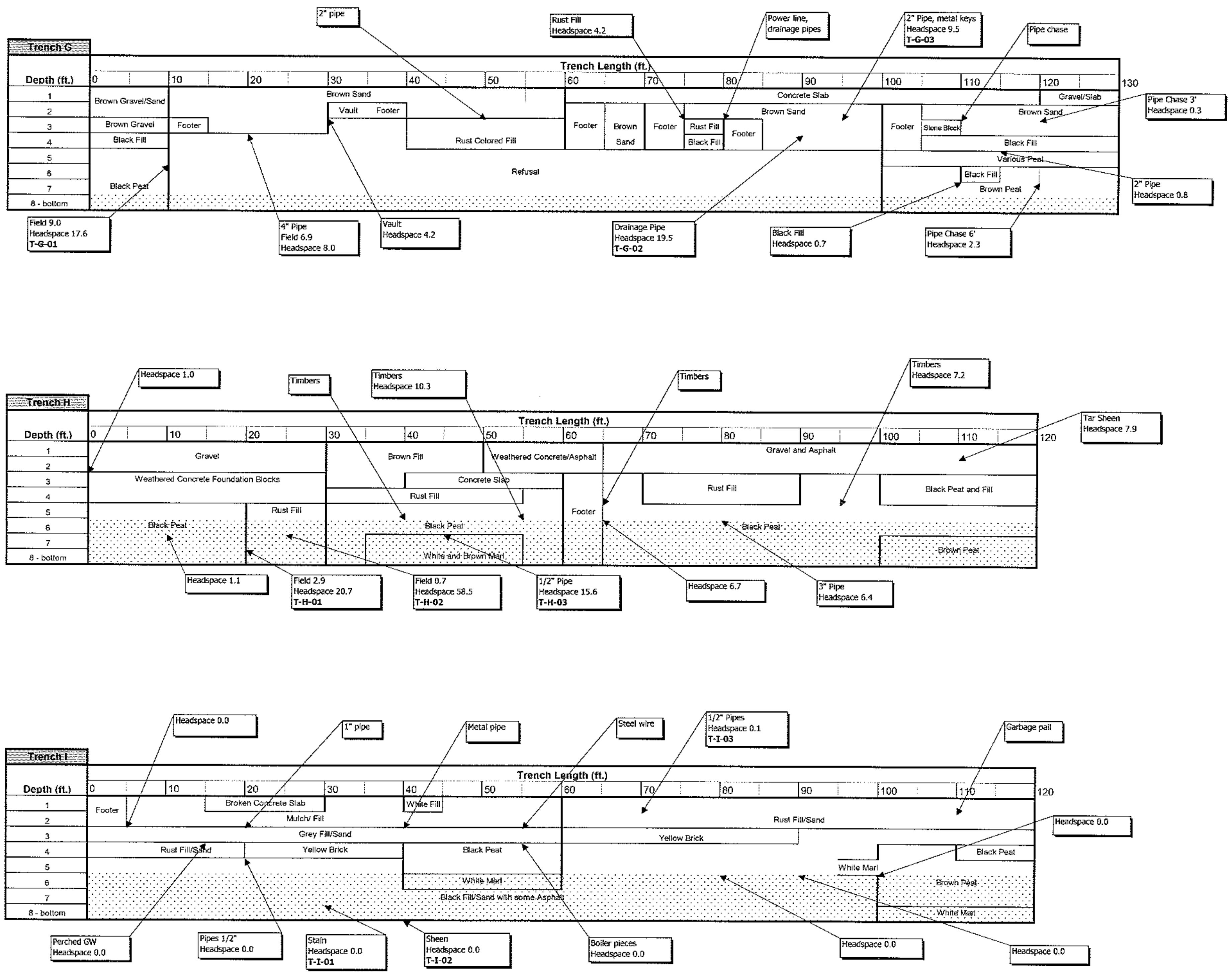


FIGURE 9
TEST TRENCH PID LOGS



Test Pit 1: May 19, 2003

Depth (ft.)	
1	Mulch
2	
3	Mixed Fill (sandy)
4 - bottom	Brown Sand / Fill Materials
5	Concrete Slab

tire, crushed paint can; headspace 0.9

Test Pit 2: May 19, 2003

Depth (ft.)	
1	Topsoil
2	Tan Fill
3	Rust Fill
4	
5	
6	Black Fill
7	
8 - bottom	

2" pipe

petroleum odor, possible product headspace 37.8 TP-2 (5')

Test Pit 3: May 19, 2003

Depth (ft.)	
1	
2	Black Fill
3	
4	
5	
6	Brown Peat
7	
8 - bottom	White Peat

petroleum odor, headspace 7.0 TP-3 (3')

Test Pit 4: May 19, 2003

Depth (ft.)	
1	
2	Topsoil/Bricks
3	
4	
5	
6	Brown Sandy Soil
7	
8 - bottom	

wood blocks headspace 0.8

utility line

Test Pit 5: May 19, 2003

Depth (ft.)	
1	
2	
3	Brown Fill
4	Black Fill
5	White Marl
6	
7	
8 - bottom	Brown Peat

headspace 0.4

Test Pit 6: May 19, 2003

Depth (ft.)	
1	
2	Brown Fill
3	
4	Black Fill
5	White Marl
6	
7	
8 - bottom	Brown Peat

headspace 1.7 TP-6 (3')

clay drainage pipe

Test Pit 7: May 19, 2003

Depth (ft.)	
1	Concrete Slab
2	Grey Fill
3	
4	
5	Rust Fill
6	Black Peat
7	
8 - bottom	Brown Peat

struck buried monitoring well from past investigations

headspace 0.1

Test Pit 8: May 19, 2003

Depth (ft.)	
1	Concrete Slab
2	Black Fill
3	
4	
5	
6	White Marl
7	
8 - bottom	Brown Peat

headspace 6.6 TP-8 (2')

Test Pit 9: May 19,2003

Depth (ft.)	
1	
2	Brown Fill
3	
4	Black Fill
5	
6	
7	
8 - bottom	Brown Peat

electric line

headspace 0.7

Test Pit 10: May 19, 2003

Depth (ft.)	
1	Brown Fill/Asphalt
2	Tan Fill
3 - bottom	Grey Fill
4	Concrete Slab

headspace 12.3 TP-10 (2')

Test Pit 11: May 20, 2003

Depth (ft.)	
1	Concrete Slab
2	
3	
4	Black Fill
5	
6	
7	
8 - bottom	Brown Peat

headspace 23.1
TP-11 (3')

Test Pit 12: May 20, 2003

Depth (ft.)	
1	Crushed Stone/ Concrete Slab
2	Brown/Grey Fill
3	
4	Grey/Black Fill
5	White Marl
6	
7	
8 - bottom	Brown Peat

headspace 2.5

Test Pit 13: May 20, 2003

Depth (ft.)	
1	Concrete Slab
2	
3	
4	Black Fill / Brick
5	White Marl
6	
7	
8 - bottom	Brown Peat

steel chain
P-3
headspace 3.6
TP-13 (4')

Test Pit 14: May 20, 2003

Depth (ft.)	
1	Brown Fill
2	Concrete
3	Brown Fill
4	Grey/Black Fill/ Asphalt
5	Black Fill
6	
7	
8 - bottom	Brown Peat

headspace 1.0

Test Pit 15: May 20, 2003

Depth (ft.)	
1	Concrete/Asphalt
2	Brown Fill
3	Black Fill
4	White Marl
5	
6	
7	
8 - bottom	Brown Peat

steel cable

headspace 3.0
TP-15 (3')

Test Pit 16: May 20, 2003

Depth (ft.)	
1	
2	
3	Brown/Black Fill
4	White Marl
5	
6	
7	
8 - bottom	Brown Peat

headspace 2.2
M-1

Test Pit 17: May 20, 2003

Depth (ft.)	
1	Brown Fill
2	
3	Black Fill/ Brick
4	
5	Brown Fill
6	
7	
8 - bottom	White Marl

4" pipe
headspace 0.2

Test Pit 18: May 20, 2003

Depth (ft.)	
1	
2	Grey/Black Fill
3	White Marl
4	
5	
6	
7	
8 - bottom	Brown Peat

P-4
headspace 0.8
M-2

Test Pit 19: May 20, 2003

Depth (ft.)	
1	Brown Fill
2	Black Fill/ Brick
3	Dark Brown Peat
4	
5	
6	
7	
8 - bottom	Brown Peat

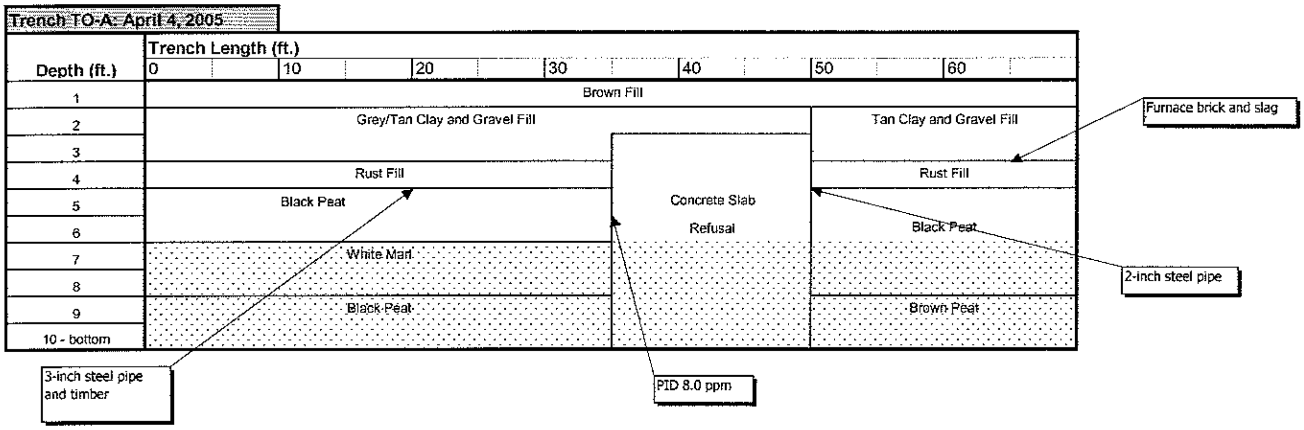
headspace 0.4
M-3

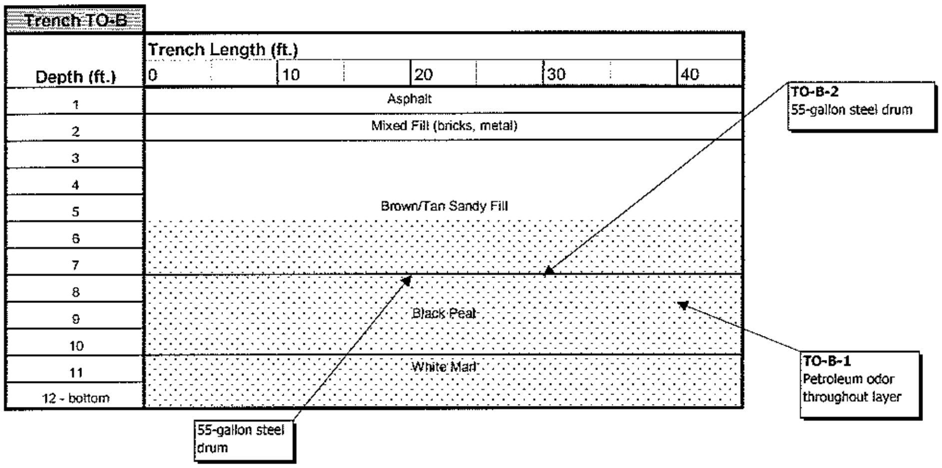
Test Pit 20: May 20, 2003

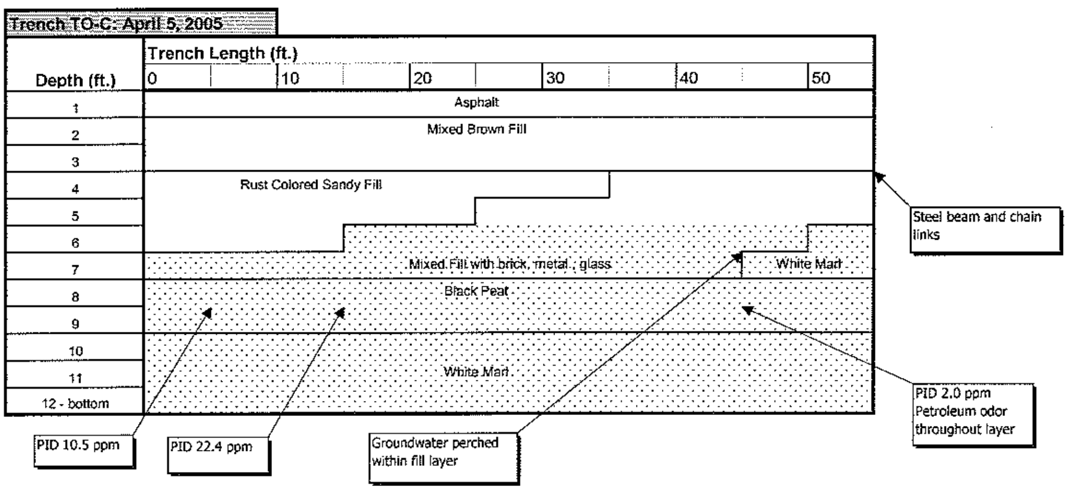
Depth (ft.)	
1	
2	Brown Fill
3	Black Fill
4	
5	
6	
7	
8 - bottom	Brown Peat

P-5
headspace 2.2
M-4

FIGURE - 11
SUPPLEMENTAL INVESTIGATON
TEST TRENCH LOGS







Test Pit TPO-1: April 5, 2005

Depth (ft.)	
1	Asphalt
2	Mixed Fill with cloth
3	
4	
5	Rust Colored Sandy Fill
6	
7	
8	Black Peat
9	
10	
11	White Marl
12 - bottom	

TPO-1
Petroleum Odor
PID 25.0 ppm

Test Pit TPO-2: April 5, 2005

Depth (ft.)	
1	Asphalt
2	Mixed Fill
3	
4	
5	Rust Colored Sandy Fill
6	
7	
8	Black Peat
9	
10	
11	White Marl
12 - bottom	

Petroleum Odor

Test Pit TPO-3: April 6, 2005

Depth (ft.)	
1	Mulch and Tan Clay/Gravel
2	
3	
4	Brown/Gray/Green Fill
5	
6	
7	
8	Black Peat
9	
10	Brown Peat
11-bottom	

Cinders and slag

Slight Petroleum Odor

Test Pit TPO-4: April 6, 2005

Depth (ft.)	
1	Mulch
2	
3	
4	Brown Peat
5	
6	
7	
8	Black Peat
9	
10	White Marl
11-bottom	

Petroleum Odor
PID 15.5 ppm

Test Pit TPO-5: April 6, 2005

Depth (ft.)	
1	Mulch and Tan Clay/Gravel
2	Brown Peat
3	Rust Colored Fill
4	
5	
6	Brown Peat
7	
8	
9	
10	White Marl
11 - bottom	

TPO-5
Slight staining and petroleum odor at top of marl

Test Pit TPO-6: April 6, 2005

Depth (ft.)	
1	Mulch
2	
3	Rust Colored Sandy Fill
4	Brown Fill
5	
6	
7	Mixed Fill with brick
8	
9	Black/Brown Peat
10 - bottom	

Petroleum Odor

Test Pit TPO-7: April 6, 2005

Depth (ft.)	
1	
2	Grey/Brown Fill with gravel and bricks
3	
4	
5	
6	Black/Brown Fill
7	
8	
9	Brown Peat
10 - bottom	

Three 2-inch pipes

TPO-7
Slight petroleum odor

Test Pit TPO-8: April 6, 2005

Depth (ft.)	
1	Mulch/Brown Fill
2	Grey Fill with gravel and concrete
3	
4	
5	
6	Mixed Black Gravel Fill
7	
8	
9	Brown Peat
10	
11	White Marl
12 - bottom	

TPO-8
Petroleum Odor, bricks
PID 2.0 ppm

Boring	Depth	Characteristics	Depth to Water	PID Reading (ppm)*
MW-1-03	0.0 - 1.0	Brown topsoil		0.0
	1.0 - 2.0	Black fill		2.9
	2.5 - 2.5	White Peat		1.0
	2.5 - 3.5	Brown Peat		1.9
	3.5 - 4.0	Brown Peat		2.1
	4.0 - 6.0	Brown/White Peat		0.9
	6.0 - 7.0	Grey Peat/ fill		0.0
	7.0 - 7.5	White Peat		0.3
	7.5 - 8.0	Brown Peat		0.5
	8.0 - 10.0	Brown/White Peat		0.0
	10.0 - 12.0	Brown Peat		0.9
	12.0 - 13.5	Brown Peat		0.3
	13.5 - 14.0	Grey Clay		0.0
	14.0 - 16.0	Grey Clay		0.0
	16.0 - 18.0	Grey Clay		0.3
MW-2-03	0.0 - 0.5	Concrete		0.0
	0.5 - 3.0	Black Gravel fill		0.1
	3.0 - 4.0	Black Gravel fill		0.1
	4.0 - 6.0	Black Gravel fill		0.4
	6.0 - 7.0	Black fill	6'	2.1
	7.0 - 8.0	Brown Peat/Wood		2.0
	8.0 - 9.0	Brown Peat		0.0
	9.0 - 10.0	White Peat		0.1
	10.0 - 12.0	White/Grey Peat/Wood		0.4
	12.0 - 13.5	Grey Peat		0.0
	13.5 - 14.0	Grey Clay		0.0
	14.0 - 16.0	Grey Clay		0.0
	16.0 - 18.0	Grey Clay		0.0
MW-3-03	0.0 - 0.5	Topsoil/Fill		0.0
	0.5 - 2.0	Black fill with concrete/brick		0.8
	2.0 - 3.0	Crushed stone/concrete		0.0
	3.0 - 4.0	Brown Sand Gravel		0.1
	4.0 - 6.0	Brown Peat		2.1
	6.0 - 8.0	Brown Peat		0.2
	8.0 - 10.0	Brown Peat		1.0
	10.0 - 11.0	Brown Peat		0.3
	11.0 - 12.0	Grey Clay		1.0
	12.0 - 14.0	Grey Clay		0.0
	14.0 - 16.0	Grey Clay		0.0
	16.0 - 17.5	Grey Clay		0.0
	17.5 - 18.0	Grey Clay		0.0
MW-4-03	0.0 - 0.3	Mulch		--
	0.3 - 1.0	Concrete slab (7-inches)		--
	1.0 - 2.0	Brown Sand/Gravel fill		--
	2.0 - 4.0	Brown Sand/Gravel fill		1.8
	4.0 - 4.5	Brown fill white Brick		0.3
	4.5 - 6.0	Rust Sandy fill with Brick		0.9
	6.0 - 8.0	Rust Fill/Wood/Brown Peat	7.2'	--
	8.0 - 10.0	Brown Peat/Wood		0.3
	10.0 - 12.0	Brown Peat		0.0
	12.0 - 14.0	White Peat		0.0
	14.0 - 14.5	White Peat		0.0
	14.5 - 16.0	Grey Clay		0.0
	16.0 - 18.0	Grey Clay		0.0
MW-5-03	0.0 - 1.0	Mulch/Wood		0.0
	1.0 - 2.0	Brown Sandy gravel		0.0
	2.0 - 4.0	Fine Sand (light brown rust)		0.0
	4.0 - 6.0	Fine Sand (light brown rust)		0.0
	6.0	Dark grey Cinder		0.4
	6.0 - 8.0	Black Peat (petro odor)		4.6
	8.0 - 10.0	Black Peat (petro odor)		1.6
	10.0 - 12.0	Black/Brown Peat		0.4
	12.0 - 14.0	No recovery in spoon (grey Clay and Peat cuttings)		--
	14.0 - 16.0	No recovery in spoon (grey Clay and Peat cuttings)		--
	16.0 - 19.0	Grey Clay	16'	0.0
	19.0 - 21.0	Grey Sand and Gravel		0.0
MW-3-04	0.0 - 0.5	Asphalt		2.0
	0.5 - 1.5	Mixed grey brown fill		2.0
	1.5	Concrete		2.0
	1.5 - 2.5	Mixed grey brown fill		0.0
	2.5 - 4.5	Brown Peat		0.0
	4.5 - 6.0	Brown Peat		0.0
	6.0 - 8.0	Brown Peat		1.4
	8.0 - 11.0	Brown Peat		0.0
	11.0 - 17.0	Grey Clay		0.0
	17.0 - 18.0	Grey Clay		0.0

* PID readings above background levels may be due to naturally occuring sulfur gasses present in peat/marl soils

FIGURE - 14
OFFSITE INVESTIGATION
SOIL BORING LOGS

Site Investigation Report
Former Syracuse Rigging Property
NYSDEC Brownfields Project No. B-00146-7
341 Peat Street
City of Syracuse, New York

Boring	Depth	Characteristics	Depth to Water	PID Reading (ppm)*
B-1-04	0 - 0.5	Asphalt tailings		2.9
	0.5 - 3.5	Brown fill with glass, clay, and gravel		3.0
	3.5 - 4.5	Black fill with coal		4.6
	4.5 - 7.0	Grey sandy Clay		4.6
	7.0 - 8.0	Black Peat		1.6
	8.0 - 9.0	Gravel		2.0
	9.0 - 14.0	Brown Peat with petroleum odor	12'	5.3
	14.0 - 20.0	Grey sandy Clay		3.0
		composite soil sample collected from 8'-14'		
B-2-04	0 - 0.5	Brown mulch		1.7
	0.5 - 1.5	Asphalt		1.7
	1.5 - 3.0	Brown fill with gravel		1.7
	3.0 - 5.0	Dark Brown fill with gravel		1.2
	5.0 - 5.5	White solid granular material		1.2
	5.5 - 9.5	Black Peat with petroleum odor	6'	17.8
	9.5 - 15.5	Brown Peat with sulfur odor		16.1
	15.5 - 16.0	Grey sandy Clay		1.3
		composite soil sample collected from 8'-12'		
B-3-04	0 - 0.5	Asphalt tailings		1.2
	0.5 - 3.0	Black fill with brick		3.4
	3.0 - 3.8	Brown Peat		3.4
	3.8 - 6.0	Black fill with cinders	5'	1.0
	6.0 - 11.0	Brown Peat		1.0
	11.0 - 12.0	White Marl		2.0
	12.0 - 14.0	Brown Peat		2.6
	14.0 - 16.0	White Marl with sulfur odor		24.0
	16.0 - 19.0	White/grey sandy Silt		3.2
	19.0 - 20.0	Grey sandy Clay		3.1
		composite soil sample collected from 8'-12'		
B-4-04	0 - 4.0	Brown sandy Clay with some gravel		1.3
	4.0 - 7.0	Grey Gravel	4'	1.0
	7.0 - 14.0	Brown Peat with sulfur odor		21.0
	14.0 - 20.0	No Recovery		--
		composite soil sample collected from 8'-14'		

* PID readings above background levels may be due to naturally occuring sulfur gasses present in peat/marl soils