SITE CHARACTERIZATION/IRM STUDY REPORT
for the
Fort Edward, NY (Canal Street)
Former MGP Site

Prepared for:

National Grid
300 Erie Boulevard West
Syracuse, New York 13202

Prepared by:

MWH Americas, Inc
10 Airline Drive, Suite 200
Albany, New York 12205

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ABBREVIATIONS

ASP	Analytical Services Protocol
BDL	Below detectable limits
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylene
COCs	contaminants of concern
DUSR	Data Usability Summary Report
ft/ft	feet per foot
FSP	Field Sampling Plan
ft^3	cubic foot
HASP	Health and Safety Plan
HSA	hollow stem auger
I.D.	inside diameter
IP	Interface Probe
IRM	interim remedial measure
MGP	manufactured gas plant
mg/kg	milligrams per kilogram (equivalent to parts per million)
ND	not detected
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenols
PID	photoionization detector
PVC	polyvinyl chloride
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
SVOCs	Semivolatile Organic Compounds
TAGM	Technical and Administrative Guidance Memorandum
ug/kg	micrograms per kilogram (equivalent to parts per billion)
ug/l	micrograms per liter (equivalent to parts per billion)
USCS	Unified Soil Classification System
VOCs	volatile organic compounds

1.0 INTRODUCTION

1.1 PROJECT OVERVIEW

In July 2001, National Grid (formerly Niagara Mohawk) and the New York State Department of Environmental Conservation (NYSDEC) entered into a Voluntary Cleanup Agreement (Index Number DO-0001-0011) to investigate and, as necessary, remediate, 24 locations that may at one time have been the locations of former manufactured gas plant (MGP) sites. The Fort Edward (Canal Street) site ("the Site") was identified as one of these locations. National Grid completed a series of site investigations and activities in order to comply with the agreement.

1.2 OBJECTIVES

The overall objective of the November 2002, Site Specific Work Plan (the Work Plan) for Site was to complete the preliminary characterization of the site with respect to establishing the nature and extent of any potential MGP-related residuals. Specific objectives of this Site Characterization/Interim Remedial Measure (SC/IRM) Report are to describe the site characterization activities conducted to date, and to present the data collected and the associated conclusions and recommendations based on the interpretation of that data.

The objectives for performing the field tasks were identified in the Work Plan, and included:

- delineation of the quality of groundwater in the shallow aquifer;
- delineation of the horizontal and vertical extent of any potential MGP-related impacts to subsurface soil; and
- determination as to whether or not MGP related impacts to surface soils exist on or around the Site

Although specific field tasks were proposed in the Work Plan to achieve these objectives, the strategy of the field investigation was to be flexible enough to incorporate field observations in to the investigation activities.

1.3 SITE BACKGROUND

The 1.6 acre Site is located in the Village of Fort Edward, Washington County, New York (Figure 1-1, Site Location Map). Based on the information provided in the Work Plan, MGP operations were conducted by the United Gas & Electric Light Co. for approximately 24 years (from approximately 1900 to 1924). Sanborn insurance maps were used to collect information regarding the Site's history. The 1895 Sanborn map did not depict the presence of a gas plant at the Site; however, the 1900 Sanborn map indicated that a single 33,000 cubic foot (ft^3) gasometer (gas holder) and a gas building were present. The 1924 Sanborn map indicated that the gas building was used for "storage" and the gasometer still existed. The Sanborn map dated 1932 indicated that the building was vacant and the gasometer was no longer present.

National Grid purchased the Site in October 2001. Prior to 2001, the Site was utilized as a private residence. Information indicating when the MGP building was first utilized as a residence was not available. One existing aboveground structure, the former MGP building that had been converted into the residence was demolished in August 2004 along with an in-ground pool formerly located at the rear of the house in the vicinity of the former 33,000-ft^3 gasometer.

1.3.1 SUMMARY OF PREVIOUS INVESTIGATIONS

No previous environmental investigations were conducted at the Site.

2.0 FIELD INVESTIGATION

The SC/IRM field investigation activities conducted at the Site consisted of the following tasks:

- Reconnaissance Visit
- Surface Soil Sampling
- Test Pit Installation
- Soil Boring/Monitoring Well Installation
- Subsurface Soil Sampling
- Groundwater Sampling (shallow and intermediate aquifers)
- Survey of the Study Area

A summary description of these field investigation tasks is presented below. All samples collected for laboratory analysis were sent to CHEM Tech Environmental, Inc.

2.1 RECONNAISSANCE VISIT

Prior to initiating fieldwork, a site reconnaissance/kick-off meeting was conducted at the Site on June 2, 2003. Attendees included Mr. Steven Stucker from National Grid, Mr. Scott Deyette of the New York State Department of Environmental Conservation (NYSDEC), Ms. Deanna Ripstein and several additional representatives from the New York State Department of Health (NYSDOH), Mr. Joe Miranda from Aquifer Drilling & Testing, Inc, (the drilling subcontractor) and Mr. Bruce Ahrens and Mr. John Santacroce from MWH Americas, Inc.

During this reconnaissance visit/kick-off meeting, the following activities were completed:

- An overview of the site-specific *Health & Safety Plan* (HASP) was presented and health and safety issues were discussed
- Markouts of underground utilities were examined

- Soil boring, monitoring well, and test pit locations were selected
- Surface soil sampling locations were selected (on-site and off-site, background locations)
- Access for the drill rig to the proposed soil boring and monitoring well locations was evaluated
- Locations for equipment and materials staging areas and the decontamination pad were determined

In addition, areas of the Site that required clearing and grubbing were identified and a survey/ inspection of the inside of the former MGP building was performed. Both the interior and exterior of the building were photo-documented. Photographs of the building are on file at National Grid's Syracuse office.

As a result of the site reconnaissance, three additional tasks were added to the scope of work. These tasks included:

- Installation of two additional test pits
- Survey and marking of the property boundaries
- Clearing and grubbing of brush to access the selected sampling locations

2.2 SURFACE SOIL SAMPLING

The Work Plan required the collection and laboratory analysis of a total of 16 surface soil samples. Approximate locations for collection of these samples were provided in the Work Plan. During the reconnaissance Visit conducted on June 2, 2003 the specific locations for sample collection were selected based on collaboration between the NYSDEC, NYSDOH, and National Grid. Thirteen on-site locations (SS-01 through SS-13) and three off-site locations (SS-14, SS-15, and SS-16) were selected.

Three off-site points were selected in the State Street Cemetery (property owned by the Town of Fort Edward). National Grid submitted a request for access to the cemetery property and a National Grid representative attended two meetings of the Town Board. Permission to access the cemetery property was not granted by the Board; therefore the off-site surface soil samples were not collected.

The on-site surface soil samples were collected during the period from June 3, 2003 through June 11, 2003. The locations of the sampling points are presented on **Figure 2-1**. The samples were collected consistent with National Grid's generic *Field Sampling Plan* (FSP) and NYSDEC protocols. The surface soil samples were analyzed for semivolatile organic compounds (SVOCs), metals and total organic carbon (TOC).

2.3 TEST PIT INSTALLATION

A total of eight test pits were excavated at the Site (TP-01 to TP-08). The first four test pits (TP-01 through TP-04) were completed during June 2003. Four additional test pits (TP-05 through TP-08) were proposed as part of a supplemental work plan, dated October 6, 2004, and were completed on January 10, 2005. Soil samples were collected from TP-5, TP-6, TP-7, and TP-8 to characterize the fill material.

- TP-1, TP-2 and TP-3 were excavated in the vicinity of the former gas holder to determine the dimensions, construction, and the presence or absence of MGP related impacts to the extent possible.

- TP-4, TP-5, TP-6, and TP-7 were excavated in the fill slope located southeast of the former MGP facility to explore the nature and extent of MGP related impacts.

- TP-8 was excavated to investigate the southeast corner of the building foundation, which was an area where odors characteristic of MGP related residual material were identified during the demolition of the MGP facility.

The excavated soils were handled in accordance with the FSP. Excavated soil was placed on plastic sheeting and returned to the excavation upon completion. The test pit locations are presented on **Figure 2-1**. Test pit logs are included as **Appendix A**.

2.4 SOIL BORING INSTALLATION

Eleven soil borings (SB-01 to SB-11) were installed between June 4, 2003 and June 11, 2003. The locations of the soil borings are presented on **Figure 2-1**. Soil borings were installed with a drill rig using hollow stem auger (HSA) drilling techniques. Soil samples were continuously collected at 2 foot long intervals using a split-spoon sampler. The split-spoons were decontaminated between each sampling interval to avoid cross contamination. All samples were screened for volatile organic compounds (VOCs) using a field photoionization detector (PID). The soil samples were described by the field geologist using the Unified Soil Classification System (USCS). Moisture content, color, consolidation, lithology, grain size distribution, and any visual or olfactory evidence of MGP related impacts, along with the PID reading, were recorded on field Drilling Logs. The soil boring located to investigate the former gas holder pad (SB-08) was installed to a depth of 5 feet below the top of the concrete pad which was visible at the ground surface. Soil borings used to investigate the subsurface geology were installed to depths ranging from 30 to 42 feet bgs, depending on subsurface conditions and geology encountered. These soil borings were predominantly installed to the top of a clay confining unit. Copies of the Drilling Logs are included in **Appendix B**.

The HSA drilling equipment was decontaminated between each borehole. A sequential rinse series of Liquinox/potable water wash, potable water rinse, followed by a distilled water rinse was used in accordance with the Generic *Quality Assurance Project Plan* (QAPP) and FSP. Soil cuttings were stored in properly labeled 55 gallon steel drums and staged near the temporary decontamination pad.

Ambient air and perimeter air monitoring for VOCs and dust was conducted during each stage of the field work using a PID (VOCs) and aerosol monitor (dust) in accordance with the HASP and QAPP. Monitoring data was recorded in the field logbook. No exceedances of the HASP worker safety guidance levels or the perimeter air monitoring limits occurred during any of the soil boring activities.

2.4.1 MONITORING WELL INSTALLATION

Four of the soil borings were completed as 2-inch inside diameter (I.D.) Schedule 40 PVC monitoring wells with 0.010 inch (10) slot screen as described in the Work Plan. The wells (MW-1 to MW-4) were installed to depths of 30 to 42 feet below ground surface (bgs) and constructed as described in the FSP. In addition;

- MW-3, located adjacent to the former holder was installed to detect any impacts to the groundwater related to the former MGP structure.
- MW-1, MW-2, and MW-4 were located hydraulically downgradient from the former MGP structures to verify that no MGP impacts were present at the property boundaries.

Each well was secured with a locking gripper cap and a steel stick up casing. Upon completion, all wells were developed by the drilling subcontractor using a centrifugal Whale® pump to remove fine sediments from the well and the sand pack, and to improve hydraulic connection between the well and the surrounding aquifer. The development water was stored in labeled 55 gallon steel drums and staged on-site.

2.4.2 SUBSURFACE SOIL SAMPLING

Approximately 6-7 soil samples were collected for laboratory analysis from each of the 11 borings installed (total of 69 samples). The samples were sent to the laboratory for analysis of Polycyclic Aromatic Hydrocarbons (PAHs), Benzene, Ethylbenzene, Toluene, and Xylenes (BTEX), and Cyanide (total and amenable). Approximately 10 percent of the total sample volume was selected for Target Compound List/Target Analyte List (TCL/TAL) analysis. Additionally, one soil sample was collected from each soil boring and analyzed for Total Organic Carbon TOC. Quality Assurance/Quality Control (QA/QC) samples were collected in accordance with the Work Plan and the QAPP.

Shelby Tube samples were collected at SB-10 and SB-11 and sent to the laboratory for analysis of “Geotechnical Parameters”. These parameters include: porosity, permeability, bulk density, grain size, Atterberg Limits, percent moisture, and specific gravity.

2.5 GROUNDWATER SAMPLING

Two groundwater gauging and sampling events were conducted approximately two months apart (June 23 and September 9, 2003). Groundwater samples were collected and sent for analysis of Volatile Organic Chemicals (VOCs), Semivolatile Organic Chemicals (SVOCs), TAL Metals, and Natural Attenuation Parameters. QA/QC samples were collected in accordance with the Work Plan and the QAPP.

2.6 CLOSURE OF SWIMMING POOL AND MGP STRUCTURES

An in-ground swimming pool that was located in the back yard (i.e. east) of the former residence / MGP structure was closed in place by National Grid. The pool was closed to eliminate a potential safety hazard to trespassers at the Site, and to remove a potential breeding place for insects. Holes were made in the bottom of the pool, and the pool filled to grade with a self-compacting material.

In addition, an underground brick structure was discovered southeast of the swimming pool. The structure appeared to be cylindrical, approximately 6 feet in diameter, and constructed of brick. Standing water was present within the structure at approximately 4 feet bgs. National Grid used a backhoe to remove the cover and investigate the structure's interior; no visual or olfactory evidence of MGP impacts were detected. The structure was closed in place to eliminate a potential safety hazard to trespassers at the site. The structure was photo-documented prior to closure; photographs of the structure are maintained on file at National Grid's Syracuse, New York office. The origin of the structure and the purpose are unknown.

The MGP building was demolished in August 2004 by SLC, a firm contracted by National Grid. Following the completion of the demolition the foundation was covered with topsoil and seeded. A report titled *Final Reporting of Field Activities, Demolition of Former MGP Structure, Fort Edward, New York* was prepared by SLC to document the demolition activities. Prior to demolition activities, a letter was received by the New York State Office of Parks, Recreation and Historic Preservation, which indicated that the brick MGP building demolition would have no impact upon cultural resources in or eligible for inclusion in the State and National Registries of Historic Places.

2.7 SITE SURVEY

At the completion of the field investigation activities, a New York State licensed surveyor surveyed the coordinates and grade elevations at all the soil boring, monitoring well, test pit, and surface soil sampling locations. Top of casing elevations were also collected at each of the monitoring well locations. This survey information was used to create the figures included in this report.

2.8 DISPOSAL SAMPLING

All investigation derived wastes (including soil cuttings, wash water associated with decontamination of the equipment, well development and purge water, and personal protective clothing) were containerized in 55-gallon drums and staged near the temporary decontamination pad until the investigation activities were completed. Once the field activities were completed the wastes were sampled for characterization as specified in the Work Plan, and then properly disposed by National Grid.

2.9 RESIDENTIAL WELL SAMPLING

A visual survey of adjacent properties for water supply wells was completed during the site reconnaissance visit. At the request of the NYSDOH/NYSDEC a sample was collected on August 20, 2003 from an irrigation well (Chase-01) located at 24 Notre Dame Street which utilized shallow groundwater as a source. The approximate location of the well is presented on **Figure 2-1**. The well was sampled from a spigot attached directly to the well pump. The sample was sent to the laboratory for analysis for BTEX and PAHs, and the results indicated no analytes were detected in the sample. The results of the laboratory analysis are presented in **Table 2-1.**

3.0 ANALYTICAL PROGRAM

3.1 ENVIRONMENTAL SAMPLE ANALYSES

Samples of various media at the Site were collected and submitted to Chemtech Laboratories in Mountainside, New Jersey. The following laboratory sample analyses were performed consistent with the Work Plan:

Surface soil samples were analyzed for SVOCs by EPA method 8270C, TAL Metals by EPA Method 6010, Mercury by EPA Method 7470, and Total Organic Carbon (TOC) by SW 9060.

Subsurface soil samples were analyzed for TCL VOCs or BTEX by EPA Method 8260B, TCL SVOCs or PAHs by EPA Method 8270C, TAL Metals by EPA Method 6010, Mercury by EPA Method 7470, TOC by SW 9060 and Cyanide by EPA Method 9014. In addition to the chemical analytes; two shelby tube samples were analyzed for geotechnical parameters including; porosity, permeability, bulk density, grain size, Atterberg Limits, percent moisture, and specific gravity.

Groundwater samples were analyzed for TCL VOCs by EPA Method 8260B, TCL SVOCs by EPA Method 8270C, TAL Metals by EPA Method 6010, and Mercury by EPA Method 7471. Natural attenuation parameters analyzed included ferrous iron, ferric iron, dissolved methane, total dissolved solids, chloride, chemical oxygen demand, biological oxygen demand, dissolved CO_2, total and amenable cyanide, standard plate count, alkalinity, orthophosphate, ammonia, sulfate, nitrate, and TOC.

3.2 DATA VALIDATION

Data validation was performed on the laboratory data received from Chemtech to determine the usability of the data for the purposes of the investigation. The DUSRs were completed in accordance with NYSDEC Analytical Services Protocol (ASP). Three DUSRs are attached to this report as **Appendix C**, including the DUSR for data collected during the initial field investigation, the residential well sampling, and the supplemental test pit sampling. The DUSRs contain a detailed discussion of the data usability, including qualified and rejected

data. The data are considered of sufficient quality to make informed decisions regarding the Site. The analytical summary tables, which are included in the ***Tables*** appendix, include the validated analytical data with all pertinent data qualifiers.

4.0 PHYSICAL CHARACTERISTICS

4.1 GEOLOGY

Soil boring and test pit observations indicate that fill material consisting of silty sand with some brick, ash and slag, exists where the MGP facility was located, but not across the entire site. The fill is underlain by brown silty sand which is approximately 4 to 5 feet in thickness where undisturbed. The silty sand is underlain by fine brown gray sand which is underlain by a gray-green medium to coarse sand with some rounded gravel. The gray-green sand grades to silty clay and to clay at 25 to 28 feet bgs. The clay has a high plasticity and some fine sand lenses were observed in the top of the clay. A cross section of the soil lithology at the Site is presented on **Figure 4-1,** and shown in plan view on **Figure 2-1**.

4.2 HYDROGEOLOGY

Monitoring well gauging data indicates groundwater flow across the Site is south towards Bond Creek. The groundwater potentiometric surface is presented on **Figure 4-2**. Groundwater was encountered at 5 to 7 feet bgs in the soil borings. A clay aquitard confines the aquifer at approximately 25 to 28 feet bgs.

4.3 GROUNDWATER USAGE IN SITE VICINITY

During the site reconnaissance visit, a visual survey was conducted of adjacent properties for water supply wells. A property located adjacent to the Site (24 Notre Dame Street) on its northern property boundary does have a well point which is used for the watering of gardens and grass on this adjacent property. This property is located hydraulically upgradient from the Site. At the request of the NYSDOH/NYSDEC, a sample was collected from this well and the data was reported to the NYSDEC, NYSDOH, and the homeowner. The sample was analyzed for EPA Method 8021 for BTEX and EPA Method 8270 for PAHs, and the results were below detection limits for all analytes.

5.0 NATURE AND EXTENT OF IMPACTS

5.1 SURFACE SOILS

All surface soil samples were analyzed for SVOCs, TAL metals, and TOC. The laboratory results from the SVOC analyses for the 13 on-site surface soil samples are summarized in **Table 5-1**. The results from the SVOC analyses are also presented on **Figure 5-1**. As shown on **Figure 5-1**, total SVOCs ranged from BDL (4 samples) to 1.84 mg/kg with the exception of SS-06 which was collected adjacent to a former burn pit. The total concentration of PAHs that the NYSDEC and NYSDOH recognize as being potentially carcinogenic PAHs (cPAHs) ranged from BDL to less than 0.4 mg/kg, with the exception of SS-06. The benzo(a)pyrene B(a)P toxicity equivalencies (TEQs) are also presented in **Table 5-1,** and on **Figure 5-1a**. Only one sample SS-06; exceeds the NYSDEC/NYSDOH one part per million B(a)P TEQ for cPAHs. Note that for soil samples where no detectable cPAH analytes were detected, the TEQ is reported as "below detectable limits".

Results from the TAL metals analyses are summarized in **Table 5-2**. All metals were within typical New York State average background concentrations as defined in Appendix A, Table 4 of NYSDEC Technical Administrative Guidance Memorandum (TAGM) 4046. No individual soil sample exhibited an elevated concentration of any of the metals reported.

The results from the TOC analyses are summarized in **Table 5-3**. TOC values in the surface soil samples ranged from 2,700 – 5,800 mg/kg.

5.2 SUBSURFACE SOILS

5.2.1 VOLATILE COMPOUNDS

The results from the TCL VOC and BTEX analyses of subsurface soil from soil borings are provided in **Table 5-4** and **Table 5-5**, respectively. The results are summarized on **Figure 5-2**. No volatile analytes were detected in soil samples collected from 10 of the 11 soil borings. At one soil boring (SB-04), some VOC analytes were detected but their total was below 1 mg/kg. No VOCs were detected over TAGM 4046 RSCOs in any of the subsurface soil

samples collected. These samples were collected at depths ranging from 12-22 feet below ground surface (bgs).

5.2.2 SVOCs

The results from the TCL SVOC and PAH analyses of subsurface soils are provided in **Table 5-6** (SVOCs in soil boring samples), **Table 5-7** (PAHs in soil boring samples), and **Table 5-7a** (PAHs in test pit samples). These results are summarized on **Figure 5-3** for soil borings and **Figure 5-4** for test pit samples. When the results for phthalate compounds are removed (plasticizers associated with sampling and/or laboratory artifacts), no SVOC or PAH analytes were detected in any of the soil samples collected from 7 of the 11 soil borings (SB-02, SB-04, SB-05, SB-06, SB-07, SB-08, and SB-11). At SB-03, one soil sample collected from 28-30 feet bgs contained fluorene at a concentration of 0.046 mg/kg (well below its NYSDEC RSCO of 50 mg/kg). Similarly, at SB-01, a sample collected at 4 to 6 feet bgs, contained pyrene at a concentration of 0.041 mg/kg, well below its RSCO of 50 mg/kg. At SB-10, the sample collected from 10-12 feet bgs contained benzo(a)pyrene at a concentration of 0.085 mg/kg (slightly exceeding its RSCO of 0.061 mg/kg). Only one soil sample (collected from SB-09 at 0-2 feet bgs) possessed more than one PAH that slightly exceeded its respective RSCOs (for four PAH analytes). The four PAHs that were detected in this shallow sample were the same analytes that were typically found in surface soils from the site.

Subsurface soil samples were also collected from test pits TP-5, TP-6, TP-7, and TP-8. These samples were analyzed for PAHs by EPA Method 8270. The results indicate that there are PAHs present above NYSDEC TAGM 4046 levels in subsurface soils in the fill slope south of the former gas building. The total PAHs range from BDL (TP-06 composite) to 78 mg/kg (TP-05 7 to 8 feet bgs). Possible MGP residual material was observed in this area during the installation of these test pits and TP-04.

5.2.3 METALS, CYANIDE, AND TOC

The results from the analyses for TAL Metals are presented in **Table 5-8**, and the results for cyanide in **Table 5-8a**. The concentrations of most metals were within typical background levels. Iron was present in all of the samples at concentrations higher than published typical

background levels published in TAGM 4046, however, the highest concentrations of iron were generally detected in samples collected from the deepest depths (i.e. from 26-32 feet bgs). This suggests that these levels of iron detected in undisturbed soil are naturally occurring. TOC data is presented in **Table 5-8b**.

5.2.4 GEOTECHNICAL PARAMETERS

Two Shelby Tube samples were collected near the top of the clay layer. Results give the unit a USCS classification of Sandy Clay. The geotechnical results are presented on **Table 5-9**.

5.3 GROUNDWATER

No VOCs were detected in samples collected from any of the monitoring wells during either sampling event. Groundwater VOC results are presented in **Table 5-10,** and summarized on **Table 5-5**. With the exception of Phenol, no SVOCs were detected in groundwater samples. Groundwater results are presented in **Table 5-11,** and summarized on **Figure 5-6.** Phenol was detected at trace levels, nominally exceeding the Groundwater Standard of 1 ug/L, in samples collected from two of the monitoring wells, MW-1 (7.1 ug/L) and MW-4 (7.6 ug/L).

Metals detected above NYSDEC Groundwater Standard included aluminum, iron, manganese, and sodium. These metals were present in subsurface soil, are believed to reflect naturally occurring conditions, and are not attributable to MGP operations at the Site. Dissolved metals are reported on **Table 5-12**.

Natural attenuation parameters for groundwater are presented in T**able 5-13.**

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 SITE SOIL AND GROUNDWATER QUALITY

During the SC/IRM Study, various substances of natural and anthropogenic origin were detected at the Site. These included PAHs (in soil) and metals (in soil and groundwater) at several sampling locations. PAHs, although potentially associated with MGP operations, are also a normal byproduct of combustion. During this SC/IRM Study, the only surface soil sample containing cPAH concentrations exceeding the NYSDEC /NYSDOH guideline based on B(a)P toxic equivalency was a sample collected adjacent to a burn pit used by the former resident at the Site. Metals are also a potential byproduct of MGP operations, however their detection at highest concentrations in the deepest subsurface soils sampled during the SC/IRM investigation suggest that their occurrence at the Site is associated with the ambient soil characteristics.

Trace concentrations of VOCs were also detected in soil; however these constituents did not exceed their respective TAGM 4046 RSCOs.

Similarly, groundwater quality at the Site also bore no impacts from the former MGP operation. Aside from trace level detections of phenol in two groundwater samples, no volatile or semivolatile organic compounds were detected in groundwater samples. Certain metals including aluminum, iron, manganese, and sodium were detected in groundwater, but because these same metals were detected in soils that were not impacted by MGP operations, it appears that the metals are naturally occurring in the subsurface environment.

The only residual material at the Site bearing any appearance or chemical characteristics indicative of MGP origin were detected beneath several feet of soil cover, in the area of Test Pits TP-4 and TP-5. Therefore, the nature and extent of MGP related residuals are adequately characterized within the context of the current usage of the Site.

6.2 SITE STRUCTURES AND EXPOSURE PATHWAYS

Currently, the Site is vacant, and no structures remain. During the course of the SC/IRM Study, the former brick house / MGP building was demolished. An in-ground swimming

pool in the back yard of the former MGP structure was also closed in place by National Grid, as was a cylindrical underground brick structure which was discovered southeast of the swimming pool.

No pathways for human exposure to any MGP related constituents, at the Site were observed during the SC/IRM Study with the exception of dried tar-patties in the surface soil near TP-4. The small volume of hardened tar detected at the ground surface poses a potential exposure scenario for trespassers or on-site workers. The potential for future exposures to substances at the Site can effectively be managed by controlling the use of the Site through administrative or engineering controls.

6.3 INTERIM REMEDIAL MEASURE EVALUATION

To evaluate if an IRM is appropriate for the Site, a review of the evaluation criteria included in the NYSDEC's guidance documents was conducted, specifically, TAGM #4042, titled *Interim Remedial Measures,* and TAGM #4048 titled *Interim Remedial Measures – Procedures*. In addition, a review of Niagara Mohawk's Voluntary Order on Consent was completed with respect to these criteria.

The seven factors to be considered when evaluating the necessity of an IRM at a Site are presented in TAGM 4048. These factors are presented below followed by an evaluation of each as it relates to the Site:

1. *Actual or potential exposure to nearby human or wildlife populations from site contamination or hazardous wastes;*

   Currently no structures exist at the Site. Although access to the Site is not restricted, it is vegetated with grasses, trees, and other flora and no evidence of regular access or trespass of the Site was noted. No evidence of MGP waste was detected in surface soil during the SC/IRM Study, with the exception of some tar-patties near the surface in TP-4.

2. *Actual or potential contamination of drinking water supplies or sensitive ecosystems;*

During the SC/IRM Study, the closest water supply well to the Site was sampled (an irrigation well, not a potable water supply source) and the results indicated that the well did not contain MGP impacts. No sensitive ecosystems were identified on or adjacent to the site.

3. *The presence of hazardous waste in drums, barrels, tanks, piles, or other bulk storage containers that may pose a threat of release;*

   Based on visual observations during numerous site visits conducted as part of the SC/IRM investigation, there are no MGP-related drums, tanks, or bulk storage containers present at the site.

4. *High levels of hazardous substances, pollutants, or contaminants in soil, at or near the surface, that may migrate;*

   High levels of hazardous substances that may migrate were not observed during the SC/IRM Study near or at the ground surface.

5. *Weather conditions that may cause a release or migration of contaminants or hazardous substances;*

   Based on the absence of hazardous substances detected in the subsurface and nature and age of impacts detected at the surface, it is unlikely that weather conditions will cause any significant migration.

6. *Threat of fire or explosion;*

   During the subsurface investigation program, a combustible gas meter was used to monitor the explosive potential of any vapors that may have been present during completion of the subsurface investigation (test pit and soil boring installation). No gas meter readings over the lower explosive limit were detected during the course of this monitoring. Based on these observations, there is no threat of fire or explosion as a result of the former MGP operations at the Site.

7. Other situations or factors that may pose threat to public health and/or welfare or the environment;

No conditions or situations related to the Site were observed that pose a short-term threat to human health or the environment. Any conditions that were observed during the SC/IRM Study that could potentially have provided a route of constituent exposure to humans (presence of a residential structure, presence of an in-ground pool and an underground brick structure) were addressed by removal or permanent closure of these structures during the SC/IRM investigation activities.

In summary of the foregoing analysis, no criteria indicating the necessity of an IRM at the Site were present during the SC/IRM Study.

6.4 RECOMMENDATIONS

Based on the results of the Site Characterization, National Grid proposes implementation of an IRM to further delineate the extent of soils containing potential MGP residuals adjacent to previous test pit locations TP-4, TP-5, and TP-6. This objective will be achieved through the collection and analysis of soil samples from soil borings adjacent to TP-4, TP-5, and TP-6, enabling the precise delineation of the extent of soils requiring redress. As such, National Grid proposes to address this material through development of Remedial Action Work Plan (RAWP) which will be developed in accordance with Section II.G.2 of Order on Consent Index Number DO-0001-0011.

The results of the investigation will be presented to the NYSDEC in an IRM Report. The IRM Report will provide a recommendation for an excavation remedy to achieve the Part 375-6.8(a) unrestricted use soil cleanup objective, or a partial (upper four feet of surface soil) soil removal and replacement in conjunction with a containment remedy (emplacement of a demarcation liner) and administrative use limitation, to achieve the Part 375-6.8(b) restricted use soil cleanup criteria. In either case, the samples collected would provide such extensive delineation of the soil that additional endpoint sampling would not be necessary during the implementation of the IRM remedy. Any soil removal activities will then be presented to the NYSDEC in a RAWP.

National Grid has evaluated other areas with PAH concentrations above the NYS RSCO, including the test pits TP-5 and TP-8 (see **Figure 5-4**). TP-5 identified low levels of total PAHs (less than 78 mg/kg) below the water table from seven to eight feet below grade. Likewise, TP-8 identified low levels of total PAHs (less than 4 mg/kg) at depths greater than two feet below grade. There are no completed exposure pathways apparent for either of these areas.

In addition, National Grid proposes to abandon all of the ground water monitoring wells which remain on-site given that no groundwater issues have been identified.

The proposed remedial action, in concert with National Grid's current ownership of the Site and the non-residential Contemplated Use, should be sufficient to address any issues related to the former MGP operations.

7.0 REFERENCES

New York State Technical and Administration Guidance Memorandum *Determination of Soil Cleanup Objectives and Cleanup Levels* (TAGM 4046). January 24, 1994. (see also NYSDEC memos dated December 20, 2000; April 10, 2001; and July 10, 2001).

New York State Department of Environmental Conservation Division of Water, Technical and Operation Guidance Series, *Ambient Water Quality Standards and Guidance Values* (TOGS 1.1.1). Reissue date June 1998.

New York State Technical and Administration Guidance Memorandum *Interim Remedial Measures-Procedures* (TAGM 4048). December 9, 1992.

New York State Technical and Administration Guidance Memorandum *Interim Remedial Measures* (TAGM 4042). June 1, 1992.

Appendix A
Test Pit Logs

MWH

MWH TEST PIT LOG

PROJECT NAME: Niagara Mohawk- Former MGP **LOCATION:** Canal St.- Fort Edward, NY **TEST PIT ID:** TP-1

GEOLOGIST/ENGINEER: John Santacroce **DATE:** 6/3/03

DRILLERS NAME/COMPANY: ADT **SHEET** 1 of 1

EQUPMENT USED: Bobcat Excavator

EXCAVATION METHOD: Trench

LONGITUDE: _____ **LATITUDE:** _____ **WATER:** **DEPTH:** _____ **TIME:** _____

CHECKED BY: _____ **NOT ENCOUNTERED** ☑

DEPTH (FT.)	PID (ppm)	USCS	DESCRIPTION
	0		**Test pit located North-west of holder foundation.** 0-6" Topsoil
	0		2-4' Fill SAND with some ash and brick. Holder foundation is aproximately 1' thick concrete with limestone fotters extending to 2.3' bgs.
2	0		2-4' Tan SILTY SAND, tight, trace clay, dry
4	0		4-6' Coarse moist SAND, some medium sand
6			
8			
10			

MWH

MWH TEST PIT LOG

PROJECT NAME: Niagara Mohawk- Former MGP **LOCATION:** Canal St.- Fort Edward, NY **TEST PIT ID:** TP-2

GEOLOGIST/ENGINEER: John Santacroce **DATE:** 6/3/03

DRILLERS NAME/COMPANY: ADT **SHEET** 1 of 1

EQUPMENT USED: Bobcat Excavator

EXCAVATION METHOD: 4' x 4' Trench

LONGITUDE: _____ **LATITUDE:** _____ **WATER:** **DEPTH:** _____ **TIME:** _____

NOT ENCOUNTERED ☑

CHECKED BY: _____

DEPTH (FT.)	PID (ppm)	USCS	DESCRIPTION
	0		**Test pit located South-east of holder foundation.** 0-1' Topsoil, black, organic
2	0		1-4' Tan medium to coarse SAND FILL, wet, orange mottling, brick and shingles 0-3' bgs. Excavation stopped due to cast iron pipe found at 3' bgs. Holder foundation is approximately 1' thick concrete with limestone footers extending to 2' bgs
4			
6			
8			
10			

MWH

MWH TEST PIT LOG

PROJECT NAME: Niagara Mohawk- Former MGP **LOCATION:** Canal St.- Fort Edward, NY **TEST PIT ID:** TP-3

GEOLOGIST/ENGINEER: John Santacroce **DATE:** 6/3/03

DRILLERS NAME/COMPANY: ADT **SHEET** 1 of 1

EQUPMENT USED: Bobcat Excavator

EXCAVATION METHOD: 4' x 4' Trench

LONGITUDE: _____ **LATITUDE:** _____ **WATER:** **DEPTH:** _____ **TIME:** _____

NOT ENCOUNTERED ☑

CHECKED BY: _____

DEPTH (FT.)	PID (ppm)	USCS	DESCRIPTION
2	0		**Test pit located near apparent former structure, east of holder foundation.** 0-3' Black SANDY FILL with brick, bottles and assorted debris. Wall is made of concrete and brick, possibly a footer for a former unknown structure.
4			
6			
8			
10			

MWH

MWH TEST PIT LOG

PROJECT NAME: Niagara Mohawk- Former MGP **LOCATION:** Canal St.- Fort Edward, NY **TEST PIT ID:** TP-4

GEOLOGIST/ENGINEER: John Santacroce **DATE:** 6/3/03

DRILLERS NAME/COMPANY: ADT **SHEET** 1 of 1

EQUPMENT USED: Bobcat Excavator

EXCAVATION METHOD: 4' x 4' Trench

LONGITUDE: _____ **LATITUDE:** _____ **WATER:** **DEPTH:** 6' **TIME:** _____

NOT ENCOUNTERED ☐

CHECKED BY: _____

DEPTH (FT.)	PID (ppm)	USCS	DESCRIPTION
0	0		**Test pit located in fill slope south of house.**
			0-3' FILL with mostly slag, some ash, 4" clay pipe found at 3' bgs part of fill material.
			3-5' Tan SILTY SAND FILL, some brick, concrete, and other debris, some black staining.
6	0		5-6' SILTY SAND stained blue-green
	0		6-7.5' Coarse SAND, heavy blue-green stain, wet
10			

MWH TEST PIT LOG

PROJECT NAME: Former MGP Fort Edward **TEST PIT:** TP-05

STATE : New York

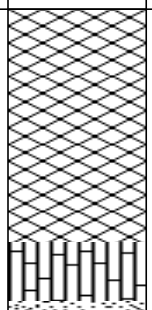
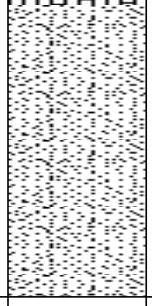
CLIENT: National Grid

GEOLOGIST: JS **EXCAVATOR/COMPANY:** MC Environmental

EQUPMENT USED: Rubber Backhoe

DATE: 1/10/05 **WATER:** Y **DEPTH:** 10 **TIME:** 9:00 AM **DATE:** 1/10/05

CHECKED BY: RH **NOT ENCOUNTERED** ☐

DEPTH (FT.)	Sample ID	LITHOLOGY	PID (ppm)	DESCRIPTION
0–4				**Fill** Fill consisting of dry tar like material, brick and stone in a sand matrix. The fill is 4 feet in thickness at the top of the slope and 1 foot in thickness at the base.
4–6	grab			**Brown Sand** Brown medium to coarse sand with some silt
6–10				**Gray Sand** Gray medium to coarse sand, saturated at 10 feet bgs. Some blue green staining 7 to 8 feet bgs. Grab sample collected 7 to 8 feet.
10–20				

NOTE: DRAW STRATIFICATION LINES AT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES FOR THIS BORING

MWH TEST PIT LOG

PROJECT NAME: Former MGP Fort Edward **TEST PIT:** TP-06

STATE : New York

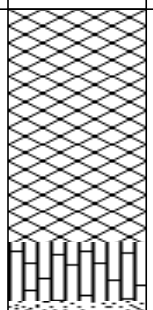
CLIENT: National Grid

GEOLOGIST: JS **EXCAVATOR/COMPANY:** MC Environmental

EQUPMENT USED: Rubber Backhoe

DATE: 1/10/05 **WATER:** Y **DEPTH:** 10 **TIME:** 9:45 AM **DATE:** 1/10/05

CHECKED BY: RH **NOT ENCOUNTERED** ☐

DEPTH (FT.)	Sample ID	LITHOLOGY	PID (ppm)	DESCRIPTION
0 – 4				**Fill** Extended North and South of TP-05. Fill consisting of dry tar like material, brick and stone in a sand matrix. The fill is 4 feet in thickness at the top of the slope and 1 foot in thickness at the base.
4 – 6				**Brown Sand** Brown medium to coarse sand with some silt
6 – 12	composite			**Gray Sand** Gray medium to coarse sand, saturated at 10 feet bgs. Some blue green staining 7 to 8 feet bgs.
12 – 20				

NOTE: DRAW STRATIFICATION LINES AT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES FOR THIS BORING

MWH TEST PIT LOG

PROJECT NAME: Former MGP Fort Edward **TEST PIT:** TP-07

STATE : New York

CLIENT: National Grid

GEOLOGIST: JS **EXCAVATOR/COMPANY:** MC Environmental

EQUPMENT USED: Rubber Backhoe

DATE: 1/10/05 **WATER:** 10 **DEPTH:** **TIME:** 8:45 AM **DATE:** 1/10/05

NOT ENCOUNTERED ☐

CHECKED BY: RH

DEPTH (FT.)	Sample ID	LITHOLOGY	PID (ppm)	DESCRIPTION
0				**Fill** Fill consisting of brown sand with brick pieces, stone, and slate.
4	composite			**Sand** Brown medium to corse sand with some silt. Saturated at 10-feet bgs. Test pit complete at 10.5 feet bgs.
10				
20				

NOTE: DRAW STRATIFICATION LINES AT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES FOR THIS BORING

MWH TEST PIT LOG

PROJECT NAME: Former MGP Fort Edward **TEST PIT:** TP-08

STATE : New York

CLIENT: National Grid

GEOLOGIST: JS **EXCAVATOR/COMPANY:** MC Environmental

EQUPMENT USED: Rubber Backhoe

DATE: 1/10/05 **WATER:** Y **DEPTH:** 10 **TIME:** 11:30 AM **DATE:** 1/10/05

CHECKED BY: RH **NOT ENCOUNTERED** ☐

DEPTH (FT.)	Sample ID	LITHOLOGY	PID (ppm)	DESCRIPTION
0				**Sand** Excavated on south wall of former MGP structure. Slab at 3.5 feet bgs. Brown and gray sand are present under the slab. No MGP impacts noted in test pit.
2				
4	composite			
6				
8				
10				
12				
14				
16				
18				
20				

NOTE: DRAW STRATIFICATION LINES AT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES FOR THIS BORING

Appendix B
Drilling Logs

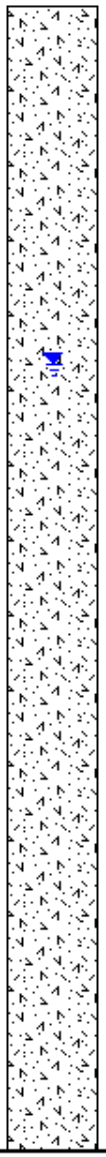
Boring / Well ID: SB01 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

MWH Americas
10 Airline Drive Suite 200
Albany, NY 12205

SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
		Ground Surface							
0-1		Poor recovery, 2" Top soil, sand and fine gravel		SS	14,38,16,14	2	0		Boring backfilled with betonite grout mix.
2-3		No recovery, pushed limestone cobble		SS	18,19,10,10	0	0		
4-5		Brown tan medium to fine sand and silt		SS	8,7,6,6	12	0		
6-7		Brown tan medium to fine sand and silt grading to medium to corse sand, with some medium to fine gravel, wet		SS	7,5,10,14	16	0		
8-9		Brown gray fine sand and silt, some clay, wet, mottled, corse sand seam, saturated		SS	6,6,5,5	18	0		
10-11		Poor recovery, gray silt and corse to fine sand		SS	4,4,6,7	6	0		
12-13		Saturated green gray medium sand and poorly sorted gravel		SS	6,5,5,5	18	0		
14-15		Green gray medium to corse sand		SS	5,5,15,17	6	0		
16-17		Green gray fine to medium sand, some silt		SS	16,11,13,13	10	0		
18-19		Saturated fine to medium sand, some silt, some medium to fine rounded gravel.		SS	19,17,8,9	6	0		
20-21		Green gray medium to fine sand, some silt, grading to fine sand and silt.		SS	8,14,14,21	12	0		
22									



Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

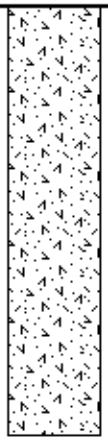
Drill Date: 6/4/03 | Sheet: 1 of 2

Boring / Well ID: SB01 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

MWH Americas
10 Airline Drive Suite 200
Albany, NY 12205

SUBSURFACE PROFILE			SAMPLE					Well Construction	Remarks
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)		
23		No recovery, refusal at 22.5' bgs. Augered to 24' bgs		SS	50 5'	0	0		
24									
25		Gray fine to corse sand, little silt, some round gravel, shale cobbles		SS	16,5,6,6	18	0		
26									
27		Gray corse to fine sand, little silt and gravel, saturated		SS	5,6,16,16	18	0		
28									
29		Gray green fine to corse sand, little silt and gravel; silt content increases with depth.		SS	3,8,10,12	14	0		
30									
31		End of Borehole							
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/4/03 | Sheet: 2 of 2

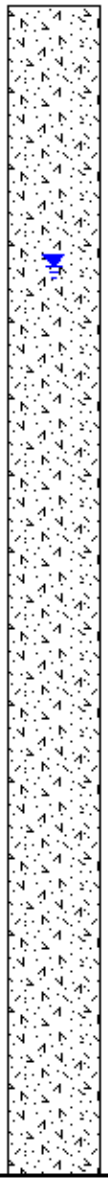
Boring / Well ID: SB02 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

MWH Americas
10 Airline Drive Suite 200
Albany, NY 12205

SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
		Ground Surface							
0-1		12" Organinc top soil 4" orange fine to medium sand and silt, mottled		SS	2,6,2,3	16	0		Boring backfilled with betonite grout
2-3		Orange fine to medium sand, some silt, mottled moist last 3"	1	SS	3,7,8,12	20	0		
4-5		10" Orange fine to medium sand some silt, mottled 6" fine to meduim sand, saturated at 5' bgs		SS	5,8,9,10	16	0		
6-7		Orange brown fine to medium sand , little silt	2	SS	12,8,9,8	13	0		
8-9		Gray fine sand , some silt		SS	2,1,1,3	24	0		
10-11		Green gray fine to medium sand, some fine to medium round gravel.		SS	4,5,7,6	6	0		
12-13		Green gray fine to corse sand, some gravel and shale cobbles.		SS	2,3,8,10	8	0		
14-15		Green gray fine to corse sand, some round gravel, little silt	3	SS	14,2,5,4	8	0		
16-17		Green gray fine to corse sand, some round gravel, little silt		SS	7,9,9,13	12	0		
18-19		Green gray fine to corse sand, some round gravel, little silt		SS	2,7,8,5	6	0		
20-21		Gray fine sand, some silt and clay	4	SS	3,3,6,9	24	0		
22									



Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

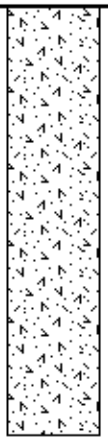
Drill Date: 6/4/03 | Sheet: 1 of 2

Boring / Well ID: SB02 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

MWH Americas
10 Airline Drive Suite 200
Albany, NY 12205

SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
23		Gray fine sand, some silt and clay. clay seam at 3"		SS	6,6,12,14	24	0		
24									
25		Gray fine sand, some silt and clay. clay seam at 6" and 13"	5	SS	6,5,9,11	18	0		
26									
27		Gray fine sand and silt grading to clayey silt		SS	3,5,9,9	24	0		
28									
29		Gray fine sand and silty clay, clay decreses with depth	6	SS	1,3,9,7	24	0		
30		End of Borehole							
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/4/03 | Sheet: 2 of 2

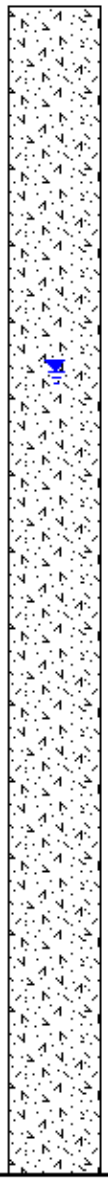
Boring / Well ID: SB03 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

MWH Americas
10 Airline Drive Suite 200
Albany, NY 12205

SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
		Ground Surface							
0		6" Organic top soil, 18" Brown silty sand		SS	3,3,6,7	24	0		Boring backfilled with betonite grout mix.
2		Orange fine sand and silt, mottled moist	1	SS	7,8,7,9	24	0		
4		8" Orange fine sand and silt 4" fine to medium orange brown sand, some silt		SS	7,9,8,7	12	0		
6		12" Orange brown sand and silt, wet 12" Gray fine to medium sand, little silt, saturated	2	SS	9,9,6,3	24	0		
8		Gray fine to medium sand, some silt, seam fine sand	3	SS	3,2,2,4	17	0		
10		Poor recovery, gray silt and corse to fine sand, sluff		SS	1,2,1,4	3	0		
12		Saturated green gray medium sand and poorly sorted grave, little silt, shale cobblesl		SS	2,3,4,3	7	0		
14		Green gray fine to corse sand and fine to medium rounded gravel, little silt		SS	3,3,4,5	14	0		
16		Green gray fine to corse sand and fine to medium rounded gravel, little silt		SS	5,5,5,5	8	0		
18		Green gray fine to corse sand and fine to medium rounded gravel, little silt	5	SS	6,3,9,10	14	0		
20		Gray fine sand, some silty clay		SS	2,4,5,7	13	0		
22									



Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

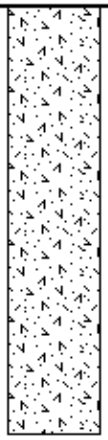
Drill Date: 6/5/03 | Sheet: 1 of 2

Boring / Well ID: SB03 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

MWH Americas
10 Airline Drive Suite 200
Albany, NY 12205

SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
23		Gray fine sand, some silt, trace clay, clay seam at 3"		SS	7,9,11,8	12	0		
24									
25		Freen gray corse to fine sand and gravel, grading to fine sand and silty clay	6	SS	4,12,13,19	18	0		
26									
27		Gray fine sand, some silt, seams of clay		SS	5,9,12,16	12	0		
28									
29		Gray fine sand, some silt, seams of clay	7	SS	6,6,8,9	12	0		
30		End of Borehole							
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/5/03 | Sheet: 2 of 2

Boring / Well ID: SB04/MW01 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
		Ground Surface							
0		16" Organic dark brown topsoil							
1		4" Gray tan silty clay, mottled		SS	3,6,6,5	22	0		
2		12" Silty sand, mottled							
3		6" Gray medium to fine sand and silt, wet	1	SS	5,5,6,4	18	0		Bentonite/ grout backfill
4		Brown gray fine to medium sand, some silt, saturated							
5				SS	6,6,3,2	15	0		
6		Gray corse to fine sand, some silt clay							
7		seam botom 1" , saturated		SS	1,2,H,5	16	0		2" Sch. 40 PVC Riser
8		Gray corse to fine sand some silt,							
9		saturated	2	SS	4,2,3,5	12	0		
10		Gray corse to fine sand some silt,							
11		saturated		SS	1,2,7,5	8	0		
12		Gray corse to fine sand some silt,							
13		saturated, trace round fine to medium gravel.	3	SS	8,8,9,8	16	0		
14		Poor recovery, pushed shale cobble.							00-Sand
15				SS	3,6,8,7	3	0		Bentonite
16		Green gray fine to corse sand some							
17		rounded gravel, little silt	4	SS	8,8,9,6	12	0		00-Sand
18		Green gray fine to corse sand some							
19		rounded gravel, little silt		SS	4,4,7,10	8	0		0-Sand
20		Green gray fine to corse sand some							
21		rounded gravel, little silt	5	SS	5,6,8,8	6	0		
22									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/12/03 | Sheet: 1 of 2

Boring / Well ID: SB04/MW01 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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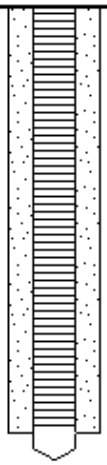
SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
23		Green gray fine to corse sand some rounded gravel, little silt		SS	2,12,22,33	9	0		0.010" Slotted PVC Screen
24		10" Green gray fine to corse sand and some round gravel, trace silt. 3" Gray fine sand and silty clay, saturated	6	SS	10,9,8,12	13	0		
25									
26		Gray fine sand sand grading to silty clay	7	SS	1,1,H,3	24	0		
27									
28		Saturated soft gray clay with 1/4" Fine sand seams.		SS	1,1,1,H	24	0		
29									
30		End of Borehole							
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/12/03 | Sheet: 2 of 2

Boring / Well ID: SB05/MW02 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
0		Ground Surface							
0		7" Top soil, 7" Brown fine sand and silt		SS	2,4,6,8	14	0		
2		18" Brown gray fine sand and silt, mottled 2" Green gray fine sand, some silt, wet	1	SS	7,9,9,9	20	0		Bentonite grout backfill
4		Gray green fine sand with decreaseing downward silt content, saturated at 5' bgs		SS	7,7,8,9	24	0		
6		Gray green fine to medium sand, little silt		SS	1,8,3,5	19	0		2" Sch 40 PVC Riser
8		Green gray corse to fine sand, trace silt, fine sand, silt eam at 2"	2	SS	1,H,6,9	12	0		
10		Green gray fine to corse sand, little silt		SS	3,4,5,5	6	0		
12		Green gray fine to corse sand, little silt, trace shale cobble	3	SS	5,8,9,10	14	0		
14		Green gray fine to corse sand, trace silt and shale		SS	6,5,6,6	12	0		00-sand Bentonite
16		Green gray fine to corse sand some shale cobbles	4	SS	5,6,10,10	16	0		00-sand
18		Green gray fine to medium sand some round fine to medium gravel		SS	2,7,9,10	12	0		0-sand
20		Green gray fine to medium sand some round fine to medium gravel	5	SS	3,2,8,9	18	0		
22									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/9/03 | Sheet: 1 of 2

Boring / Well ID: SB05/MW02 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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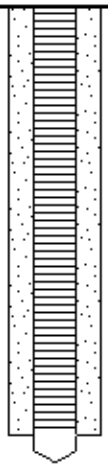
SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
23		Green gray fine to corse sand, little silt, grading to fine sand and silt, bottom 3" clayey silt		SS	3,4,5,10	16	0		0.010" Sloted PVC screen
24									
25		Gray silty sand	6	SS	5,8,9,10	12	0		
26									
27		Gray silty clay, occasional fine to mediumsand lens	7	SS	2,4,6,5	24	0		
28									
29		Gray clay occasional fine sand seam		SS	3,3,2,3	24	0		
30		End of Borehole							
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/9/03 | Sheet: 2 of 2

Boring / Well ID: SB06 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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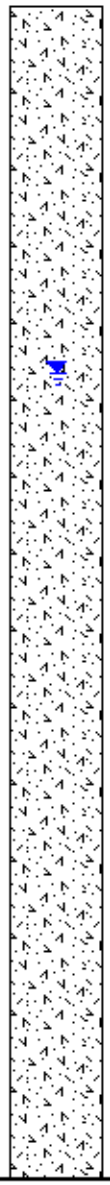
SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
		Ground Surface							Boring backfilled with betonite grout mix.
0		7" Brown, organic top soil, 13" Orange sily sand, mottled		SS	2,2,5,4	20	0		
2		6" Orange silty sand, moist, mottled 6" Brown gray fine sand, some silt, mottled, moist	1	SS	5,10,12,17	22	0		
4		Brown gray fine sand, some sil, corsening with depth		SS	7,7,6,9	20	0		
6		Brown gray fine to medium sand, some silt, saturated at 7' bgs	2	SS	6,6,6,8	18	0		
8		Green gray fine to medium sand, trace silt, saturated, shale cobbles		SS	3,3,6,6	24	0		
10		Green gray fine to corse sand, some fine to medium round gravel, little silt	3	SS	1,1,2,2	24	0		
12		Green gray fine to corse sand, some fine to medium round gravel, little silt		SS	4,4,66,7	10	0		
14		Green gray fine to corse sand, some fine to medium round gravel, little silt		SS	3,4,4,6	12	0		
16		Green gray fine to corse sand, some fine to medium round gravel, little silt	4	SS	5,7,9,11	2	0		
18		Poor recovery, pushed cobble		SS	5,8,10,11	3	0		
20		Green gray fine to corse sand, some round gravel, little shale, trace silt		SS	10,8,10,12	6	0		
22									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/9/03 | Sheet: 1 of 2

Boring / Well ID: SB06 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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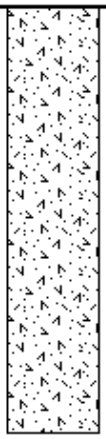
SUBSURFACE PROFILE			SAMPLE					Well Construction	Remarks
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)		
23		6" Green gray fine to carse sand, little silt 6" Gray fine sand and silt	5	SS	7,9,9,8	12	0		
24 25		Gray fine sand, some silt; clay seam at 12"		SS	5,10,11,10	24	0		
26 27		Gray fine sand, some silt, seams of clay	6	SS	3,6,2,6	20	0		
28 29 30		Intervals of silty clay and fine sand seams.	7	SS	2,3,6,7	20	0		
31		End of Borehole							
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/9/03 | Sheet: 2 of 2

Boring / Well ID: SB07 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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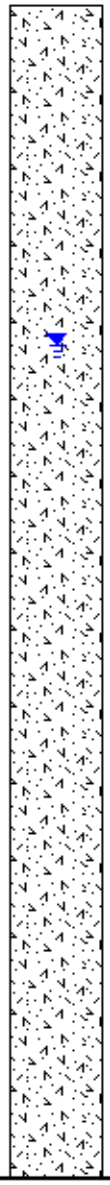
SUBSURFACE PROFILE			SAMPLE					Well Construction	Remarks
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)		
		Ground Surface							Boring backfilled with betonite grout mix.
0-2		6" Brown, organic top soil, 6" Orange sily sand fill with brick and two inches white ash.		SS	4,4,3,6	12	0		
2-4		Orange silty sand, mottled moist. Last 4" brown gray fine sand, wet.		SS	5,8,11,11	20	0		
4-6		Brown gray fine sand, some silt, saturated at 6.5' bgs	1	SS	7,5,6,5	12	0		
6-8		Saturated brown gray fine sand, some silt, phrite		SS	4,3,4,4	14	0		
8-10		saturated green gray fine to corse sand, trace silt, some gravel, garnet and pyrite		SS	3,3,4,3	12	0		
10-12		Green gray fine to corse sand and fine gravel, trace shale	2	SS	4,3,4,7	14	0		
12-14		Green gray fine to corse sand and fine gravel, trace shale		SS	3,4,6,3	13	0		
14-16		Green gray fine to corse sand, some fine to medium round gravel, some shale	3	SS	2,4,4,5	8	0		
16-18		Green gray fine to corse sand, some gravel, clay seam at bottom of sample		SS	2,4,3,6	13	0		
18-20		Green gray fine to corse sand, some fine gravel, wood (root) at 6"	4	SS	2,4,4,5	10	0		
20-22		Green gray fine sand, some silt, trace fine gravel, round		SS	7,9,3,4	12	0		

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/10/03 | Sheet: 1 of 2

Boring / Well ID: SB07 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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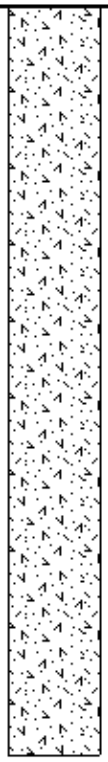
SUBSURFACE PROFILE			SAMPLE					Well Construction	Remarks
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)		
23		Green gray fine sand , some silt, trace fine round gravel, clay seam at 6"		SS	2,2,2,4	17	0		
24									
25		Green gray fine sand , some silt, trace fine round gravel, clay seam at 6" and 11"	5	SS	1,4,5,5	16	0		
26									
27		Gray medium to fine sand, saturated		SS	3,5,8,11	10	0		
28									
29		Gray medium to fine sand, clay seam at 3"	6	SS	5,6,13,19	14	0		
30									
31		Gray medium to fine sand, and silt, clay layer 2-10"		SS	3,3,7,6	18	0		
32									
33		16" Clayey silt 4" Gray fine sand and silt	7	SS	1,2,3,5	24	0		
34									
35		Gray clay, fine sand seams at 2", and 16"		SS	2,2,3,5	24	0		
36									
		End of Borehole							
37									
38									
39									
40									
41									
42									
43									
44									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/10/03 | Sheet: 2 of 2

Boring / Well ID: SB08 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
		Ground Surface							
0		Holder concrete		AG	NA	NA	NA		Boring backfilled with betonite grout
1									
2		8" fill consisting of limestone and brick, 7" fine sand and silt mottled. 7" Brown fine sand, some silt, mottled, pyrite, wet	1	SS	4,6,6,9	22	0		
3									
4		Brown fine sand and silt, mottled, pyrite, wet		SS	10,11,10,13	10	0		
5									
6		Green gray fine to medium sand, trace silt	2	SS	6,5,5,7	20	0		
7									
8		End of Borehole							
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/10/03 | Sheet: 1 of 1

Boring / Well ID: SB09/MW03 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
0		Ground Surface							
0		6" Top soil, remainder fill consistion of 2" black ash, silty sand with brick and angular corse gravel and cobbles	1	SS	4,5,4,3	18	0		
2		3" Black ash and slag fill. 15" Brown fine silty sand (virgin soil) mottled.		SS	5,6,7,6	18	0		Bentonite grout backfill
4		Brown gray fine sand and silt, wet		SS	5,5,4,6	16	0		
6		10" Brown gray fine sand and silt. 7" Green gray sand and silt, some fine rounded gravel, mottled.	2	SS	5,5,4,6	17	0		
8		Green gray fine sand and some silt, some fine rounded gravel. Satureated at 8.5' bgs.		SS	5,5,4,6	14	0		Sch 40 PVC riser
10		Gray fine sand, some silt, some fine rounded gravel, trace shale cobbles.		SS	5,5,5,4	13	0		
12		Green gray fine to medium sand, some fine-medium gravel, little silt.	3	SS	7,9,7,7	12	0		
14		Green gray fine to medium sand, some fine-medium gravel, little silt.		SS	6,7,8,8	8	0		
16		Green gray fine to corse sand some shale cobbles	4	SS	6,6,7,11	10	0		
18		Green gray fine to medium sand, some black shale, little silt		SS	7,9,9,11	12	0		00-sand
20		Green gray fine to medium sand, some black shale, little silt	5	SS	6,6,5,5	16	0		Bentonite
22									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/11/03 | Sheet: 1 of 2

Boring / Well ID: SB09/MW03 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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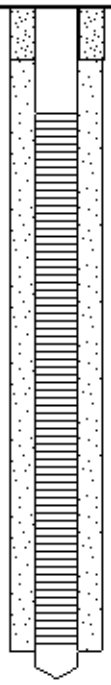
SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
23		Green gray fine to medium sand, some black shale, little silt		SS	6,5,6,4	13	0		00-sand
24									
25		Green gray fine to medium sand, some black shale, little silt		SS	6,5,7,4	12	0		0-sand
26									
27		Green gray fine to medium sand, some black shale, little silt		SS	6,5,7,6	12	0		
28									
29		Green gray fine to medium sand, some black shale, little silt		SS	7,8,9,11	16	0		0.010" Slotted PVC Screen
30									
31		gray fine to medium sand,silty clay seam at 3"	6	SS	6,10,8,8	12	0		
32									
33		Gray clayey silt, some medium corse sand lenses		SS	6,5,2,2	24	0		
34									
35		End of Borehole							
36									
37									
38									
39									
40									
41									
42									
43									
44									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/11/03 | Sheet: 2 of 2

Boring / Well ID: SB10 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
0		Ground Surface							
1		6" Top soil then fill consisting of ash, slag and brick.		SS	16, 11, 10, 3	16	0		
2		3" Brick, 6" White ash, 12" Virgin soil, brown orange fine sand and silt, moist	1	SS	5, 5, 5, 5	21	0		
4		Brown fine sand and silt, mottled	2	SS	3, 3, 2, 4	24	0		
6		Brown fine sand and silt, mottled, pyrite		SS	6, 4, 4, 7	16	0		
8		No recovery, pushed cobble		SS	9, 11, 13, 14	0	0		
10		Brown fine sand, some silt mottled, saturated	3	SS	2, 6, 8, 11	7	0		
12		No recovery		SS	6, 7, 8, 6	0	0		
14		Green gray fine to medium sand, little silt, saturated		SS	5, 5, 5, 9	3	0		
16		Green gray fine to corse sand, trace silt, some gravel	4	SS	12,8,9,13	12	0		
18		Green gray fine to corse sand, some shale cobbles, some fine to medium round gravel		SS	6,5,7,8	15	0		
20		Green gray fine to corse sand, some shale cobbles, some fine to medium round gravel		SS	4,6,7,7	6	0		
22									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/11/03 | Sheet: 1 of 2

Boring / Well ID: SB10 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
23		Green gray fine to corse sand, some shale cobbles, some fine to medium round gravel	5	SS	5,8,10,12	16	0		
24									
25		Green gray fine to corse sand, some shale cobbles, some fine to medium round gravel		SS	4,4,7,8	9	0		
26									
27		Green gray fine to corse sand, some shale cobbles, some fine to medium round gravel		SS	5,6,5,7	8	0		
28									
29		Green gray fine to corse sand, some shale cobbles, some fine to medium round gravel	6	SS	2,3,6,12	19	0		
30		Gray fine to medium sand , some silt, black shale and organics, clay seams at 6" and 12"	7	SS	2,3,6,16	18	0		
31									
32		6" Organic black sand and shale, some silt, no odor or sheen. 14" Clayey silt, wet	8	SS	SHELBY	24	NA		
33		Shelby tube							
34		End of Borehole							
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/11/03 | Sheet: 2 of 2

Boring / Well ID: SB11/MW04 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

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SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
		Ground Surface							
0		Hand dig for utility clearance. Soils are silty sand fill with brick and concrete.		Hand	NA	NA	0		
4		Orange tan silty sand fill with brick, some clay	1	SS	1,1,2,3	20	0		Bentonite Grout Backfill
6		Brown orange fine to medium sand and silt, mottled	2	SS	3,3,4,4	22	0		
8		Brown orange fine to corse sand, some silt, trace pyrite, wet last 2"		SS	5,5,7,8	12	0		
10		Gray fine to medium sand, little silt, some pyrite, saturated		SS	4,6,10,9	8	0		
12		Poor recovery, sluff		SS	11,12,11,8	1	0		Sch. 40 PVC Riser
14		Green gray fine to medium sand, trace silt, some fine to medium round gravel, saturated.	3	SS	8,6,6,6	10	0		
16		Green gray fine to medium sand, trace silt, some fine to medium round gravel, saturate		SS	6,8,9,11	7	0		
18		Green Gray medium to corse sand, little shale, saturated	4	SS	10,9,13,11	15	0		
20		Green Gray medium to corse sand, little shale, saturated		SS	8,8,3,9	7	0		
22									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/12/03 | Sheet: 1 of 2

Boring / Well ID: SB11/MW04 | *Client:* Niagara Mohawk

Project Name: Former MGP Site | *Site Location:* Canal St., Fort Edward

Project Number: 4260146 | *Geologist:* John Santacroce

MWH Americas
10 Airline Drive Suite 200
Albany, NY 12205

SUBSURFACE PROFILE			SAMPLE						
Depth	USCS	Description	Number	Type	Blows/6in	Recovery	PID (ppm)	Well Construction	Remarks
23		Green Gray medium to corse sand, some black shale.	5	SS	5,6,8,8	12	0		
24		Green Gray fine to corse sand with fine to medium gravel and black shale.		SS	15,12,9,10	6	0		00-sand
25									
26		Green Gray fine to corse sand with fine to medium gravel and black shale. Clay seam at 3".		SS	14,10,9,8	6	0		Bentonite
27									00-Sand
28		Green Gray medium to fine sand, some silt, clay seam at 3"		SS	15,10,9,11	24	0		0-Sand
29									
30		No recovery pushed cobble		SS	7,9,10,8	0	NA		0.010 Slot PVC Screen
31									
32		Green gray fine to medium sand and silt,6" gray clay at bottom of sample.	6	SS	14,13,7,8	17	0		
33									
34		Green gray fine to medium sand amd silt, 2" clay seams at 5" and 12"		SS	10,12,11,1	20	0		
35									
36		6" Gray Green fine to medium sand and silt 6" Gray silty clay, wet		SS	9,6,6,5	12	0		
37									
38		Gray clay, moist, soft, trace fine sand seams	7	SS	1,1,1,1	24	0		
39									
40		Shelby Tube	8	SS	NA	24	NA		
41									
42		End of Borehole							
43									
44									

Contractor: ADT | Hole Size: 6.5

Drill Method: HSA, 4.25-inch ID Augers

Drill Date: 6/12/03 | Sheet: 2 of 2

Appendix C
Data Usability Summary Report

Data Usability Summary Report
Niagra Mohawk
Fort Edward, New York
Analytical Laboratory: CHEMTECH

Sample Delivery Groups
R2820, R2822, R2864, R2865, R2866, R2876, R3003, R4061

Analytical results for 13 surficial soil samples, 71 soil boring samples and four (4) groundwater samples with associated blind field duplicates, matrix QC, equipment blanks and trip blanks (as applicable) collected during the Site Characterization/Interim Remedial Measure Investigation (SC/IRM Investigation) for the Niagara Mohawk site located in Fort Edward, New York were reviewed to evaluate the data quality and usability. Data were assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) **Analytical Services Protocol** (10/95), the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (October 1999 Revision), USEPA **Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis** (February 1994 Revision) and the USEPA Region II documents **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision 12, March 2001) and **Evaluation of Metals Data for the CLP Program** (SOP No. HW-2, Revision 11, January 1992), where applicable. This data usability summary report (DUSR) pertains to the following samples collected by MWH personnel at the Site:

Surficial Soil Samples

SS01-01	**SS07-01**	**SS12-01**
SS02-01	**SS08-01**	**SS13-01**
SS03-01	**SS09-01**	**SS13-01FD**
SS04-01	**SS10-01**	**FB060903-01-SS**
SS05-01	**SS11-01**	
SS06-01	**SS11-01-FD**	

Soil Boring Samples

		SB04-07-26-28
SB01-01-4-6	**SB03-02-6-8**	**SB04-07-26-28FD**
SB01-02-8-10	**SB03-03-8-10**	
SB01-03-14-16	**SB03-04-14-16**	**SB05-01-2-4**
SB01-04-20-22	**SB03-05-18-20**	**SB05-02-6-8**
SB01-05-24-26	**SB03-06-24-26**	**SB05-03-10-12**
SB01-06-28-30	**SB03-07-28-30**	**SB05-04-14-16**
SB02-01-4-6	**SB04-01-2-4**	**SB05-05-20-22**
SB02-02-8-10	**SB04-02-8-10**	**SB05-05-20-22-FD**
SB02-03-12-14	**SB04-03-12-14**	**SB05-06-26-28**
SB02-04-16-18	**SB04-04-16-18**	**SB05-07-28-30**
SB02-05-20-22	**SB04-05-20-22**	**SB06-01-0-2**
SB02-06-26-28	**SB04-06-24-26**	**SB06-02-6-8**
SB03-01-2-4		**SB06-03-10-12**

SB06-04-16-18	**SB08-02-5.5-7.5**	**SB10-6-28-30**
SB06-05-22-24	**SB08-02-5.5-7.5FD**	**SB10-07-30-32**
SB06-05-28-30	**SB09-01-0-2**	**SB10-08-32-34**
FB061203-03-SB	**SB09-02-6-8**	**SB11-03-14-16**
FB061003-01-SB	**SB09-03-12-14**	**SB11-04-18-20**
FB061103-02-SB	**SB09-04-16-18**	**SB11-01-4-6**
SB07-01-4-6	**SB09-05-22-24**	**SB11-02-6-8**
SB07-02-10-12	**SB09-06-30-32**	**SB11-05-22-24**
SB07-03-14-16	**SB09-07-32-34**	**SB11-06-32-34**
SB07-04-18-20	**SB10-01-2-4**	**SB11-07-38-40**
SB07-05-24-26	**SB10-02-4-6**	**SB11-07-38-40-FD**
SB07-06-28-30	**SB10-03-10-12**	**SB11-08-42-44**
SB07-07-32-34	**SB10-04-16-18**	
SB08-01-1.5-3.5	**SB10-05-22-24**	

Groundwater Samples

MW01-01	**MW03-01**	**MW04-01**
MW02-01	**MW03-01-FD**	**FB062303**

In accordance with NYSDEC guidance, the following questions were considered for the analysis of each fraction in order to prepare this summary report:

- Is the data package provided complete as defined under the requirements for the NYSDEC ASP Category B deliverables?
- Have all applicable holding times been met?
- Does all of the associated quality control data (*i.e.*, blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries , spike recoveries, replicate analyses, laboratory controls and raw sample data) fall within the required limits and specifications?
- Have all of the data been generated using established and agreed upon analytical protocols?
- Does an evaluation of the raw data confirm the results provided on the data summary sheets and quality control verification forms?
- Have the correct data qualifiers been used?

DELIVERABLE REQUIREMENTS

The following samples were submitted for analysis using the EPA Contract Laboratory Program (CLP) methods (*i.e.*, OLM04.2 for VOCs and SVOCs and ILM04.2 for metals and cyanide):

SB01-01-4-6	SB02-04-16-18	SS-11-01
SB01-02-8-10	SB02-04-16-18RE	SS12-01
SB01-03-14-16	SB02-05-20-22	SS-13-01
SB01-04-20-22	SB02-06-26-28	SS-13-01FD
SB01-05-24-26	SB03-02-6-8	FB060903-01-SS
SB01-06-28-30	SB04-07-26-28	FB061003-01-SB
SB01-06-28-30RE	SB04-07-26-28FD	SB11-06-32-34

SB02-01-4-6	SS08-01	SB09-06-30-32
SB02-02-8-10	SS09-01	SB07-07-32-34
SB02-03-12-14	SS-11-01-FD	SB10-01-2-4
SB05-07-28-30		

MW01-01	MW03-01	MW04-01
MW02-01	MW03-01-FD	FB062303

The following samples were analyzed for BTEX (*i.e.*, benzene, toluene, ethylene and xylenes) by EPA Method 8260B and PAHs (polycyclic aromatic hydrocarbons) by EPA Method 8270C:

SS01-01	SB05-03-10-12	SB09-01-0-2
SS02-01	SB05-04-14-16	SB09-02-6-8
SS03-01	SB05-05-20-22	SB09-03-12-14
SS04-01	SB05-05-20-22-FD	SB09-04-16-18
SS05-01	SB05-06-26-28	SB09-05-22-24
SS06-01	SB06-01-0-2	SB09-07-32-34
SS07-01	SB06-02-6-8	FB061003-01-SB
SS10-01	SB06-03-10-12	FB061103-02-SB
SB03-03-8-10	SB06-04-16-18	SB10-02-4-6
SB03-04-14-16	SB06-05-22-24	SB10-03-10-12
SB03-05-18-20	SB06-05-28-30	SB10-04-16-18
SB03-06-24-26	FB061206-03-SB	SB10-05-22-24
SB03-07-28-30	SB07-01-4-6	SB10-06-28-30
SB04-01-2-4	SB07-02-10-12	SB10-07-30-32
SB04-02-8-10	SB07-03-14-16	SB11-01-4-6
SB04-03-12-14	SB07-04-18-20	SB11-02-6-8
SB04-04-16-18	SB07-05-24-26	SB11-03-14-16
SB04-05-20-22	SB07-06-28-30	SB11-04-18-20
SB04-06-24-26	SB08-02-5.5-7.5	SB11-05-22-24
SB05-01-2-4	SB08-02-5.5-7.5-FD	SB11-07-38-40
SB05-02-6-8	SB09-01-2-4	SB11-07-38-40-FD

The following samples were analyzed for volatile dissolved gases (methane) by EPA Method 3810:

MW01-01	MW03-01	MW04-01
MW02-01	MW03-01-FD	FB062303

Blind Field Duplicate Data

Although there are no established QC limits for field duplicate relative percent difference (RPD) data, USEPA Region II considers RPD values of 50% or less for aqueous samples and 100% or less for soil samples an indication of acceptable sampling and analytical precision. Generally speaking, the blind field duplicate data reported are considered indicative of acceptable sampling and analytical precision.

VOLATILE ANALYSIS

The volatile analysis data have been reviewed to answer the above questions, and each of the above items was in compliance with both method and NYSDEC ASP laboratory QC criteria with the exception of the items discussed in the following text.

Surrogate Recoveries

All surrogate recoveries met applicable QC criteria with the following exceptions:

Sample ID	Surrogate Compound	%R	QC Limits
SB01-06-28-30	Dibromofluoromethane	121	80 – 120
	4-Bromofluorobenzene	61	74 – 121
SB01-06-28-30RE	Dibromofluoromethane	133	80 – 120
SB02-04-16-18	4-Bromofluorobenzene	62	74 – 121
SB02-04-16-18RE	1,2-Dichloroethane-d4	130	70 – 121
	Dibromofluoromethane	167	80 – 120
	4-Bromofluorobenzene	37	74 – 121
SB02-06-26-28	Dibromofluoromethane	127	80 – 120
SB02-06-26-28RE	4-Bromofluorobenzene	69	74 – 121
SB11-07-38-40	Dibromofluoromethane	122	80 – 120
	4-Bromofluorobenzene	55	74 – 121
SB11-07-38-40RE	4-Bromofluorobenzene	65	74 – 121
SB11-07-38-40-FD	4-Bromofluorobenzene	54	74 – 121
SB11-07-38-40-FDRE	4-Bromofluorobenzene	60	74 – 121

In accordance with EPA data validation criteria, the data for the reanalyses (designated RE) have been rejected and the results of the original analyses have been flagged with a “V” and are considered estimated due to variance from QC criteria, as they confirmed matrix interference. The exception to this is SB11-07-38-40-FDRE, where the original analysis (SB11-07-38-40-FD) has been rejected and is considered unusable due the Instrument Performance Check (see below); therefore the results of the reanalysis have been reported and are considered estimated. It should be noted, however, that rejection of the reanalyses does not effect the usability of the data as valid and usable data for each sample has been reported.

Instrument Performance Check

Sample SB11-07-38-40-FD was analyzed at 01:06 on 06/19/03, which is more than 12 hours following the injection of the Volatile Organic Instrument Performance Check Standard (Bromofluorobenzene, or BFB) at 12:24 on 06/18/03. Consequently, the sample results for SB11-07-38-40FD have been rejected and are considered unusable.

Initial Calibration Data

Although the ASP specifies a maximum percent relative standard deviation (%RSD) of 20.5% for selected semivolatile compounds, it also allows for up to two of these compounds to exceed the 20.5%RSD as long as they meet the minimum relative response factor (RRF) criteria and the %RSD does not exceed 40.0%. All of the initial calibration data reported for the semivolatile data packages meets the acceptance criteria outlined in the ASP with the following exceptions:

- The compounds bromomethane (32.0), chloroethane (32.0), acetone (24.6) and methylene chloride (21.1) in the initial calibration analyzed on 09/08/03 for instrument MSVOAG.

In accordance with EPA validation criteria, the associated bromomethane, chloroethane, acetone and methylene chloride results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

Continuing Calibration Data

The percent difference (%D) between the average relative response factor (RRF) from the initial calibration and the RRF for the continuing calibration standard analyzed at 10:57 on 06/17/03 for instrument ID MSVOAH for the compounds acetone (28.9) and bromoform (39.9) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA validation criteria, the associated acetone and bromoform results have each been flagged with a "V" and are considered estimated due to variance from QC criteria. In addition, the %D for the surrogate compound 1,2-dichloroethane-d4 (30.4) in this standard also exceeded the EPA technical criteria of 25.0%D. No data have been qualified based upon this nonconformance, however, since the sample surrogate recoveries met all applicable QC criteria.

The %D between the average RRF from the initial calibration and the RRF for the continuing calibration standard analyzed at 12:37 on 06/18/03 for instrument ID MSVOAH for the surrogate compound 1,2-dichloroethane-d4 (25.2) exceeded the EPA technical criteria of 25.0%D. No data have been qualified based upon this nonconformance, however, since the sample surrogate recoveries met all applicable QC criteria.

The %D between the average RRF from the initial calibration and the RRF for the continuing calibration standard analyzed at 13:10 on 06/11/03 for instrument ID MSVOAH for acetone (40.5) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA validation criteria, the associated acetone results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

Internal Standard Area Evaluation

The internal standard areas met applicable QC criteria with the following exceptions:

Sample ID	Internal Standard	Area	QC Limits
SB01-06-28-30	1,4-Dichlorobenzene-d4	881317	1371385 – 5485540
SB02-04-16-18	1,4-Dichlorobenzene-d4	889089	1371385 – 5485540
SB02-04-16-18RE	Pentafluorobenzene	1951202	1978438 - 7913750
	1,4-Difluorobenzene	2280948	2390415 - 9561658

	Chlorobenzene-d5	1387480	1876949 - 7507796
	1,4-Dichlorobenzene-d4	273903	1266655 – 5066620
SB02-06-26-28RE	1,4-Dichlorobenzene-d4	1338121	1346865 – 5387460
SB11-07-38-40	1,4-Dichlorobenzene-d4	2620535	2694305 – 10777220
	Chlorobenzene-d5	1644596	2068374 – 8273496
	1,4-Dichlorobenzene-d4	713771	1414093 - 5656372
SB11-07-38-40-FD	Chlorobenzene-d5	1921086	2068374 – 8273496
	1,4-Dichlorobenzene-d4	755689	1414093 - 5656372

In accordance with EPA data validation criteria, the data for the reanalyses (designated RE) have been rejected and the results of the original analyses have been flagged with a "V" and are considered estimated due to variance from QC criteria, as they confirmed matrix interference. The exception to this is SB11-07-38-40-FDRE, where the original analysis (SB11-07-38-40-FD) has been rejected and is considered unusable due the Instrument Performance Check (see above); therefore the results of the reanalysis have been reported and are considered estimated. It should be noted, however, that rejection of the reanalyses does not effect the usability of the data as valid and usable data for each sample has been reported.

SEMIVOLATILE ANALYSIS

The semivolatile analysis data have been reviewed to answer the above questions, and each of the above items was in compliance with both method and NYSDEC ASP laboratory QC criteria with the exception of the items discussed in the following text.

Surrogate Recoveries

All surrogate recoveries met applicable QC criteria with the following exceptions:

Sample ID	Surrogate Compound	%R	QC Limits
MW02-02	2-Fluorophenol	19	21-100
	Terphenyl-d14	28	33 – 141
MW02-02-FD	1,2-Dichlorobenzene-d4	23	33 – 110
	2-Fluorobiphenyl	32	43 – 116
	Terphenyl-d14	26	33 – 141
MW01-02	1,2-Dichlorobenzene-d4	29	33 – 110
	2-Fluorobiphenyl	37	43 – 116
	Terphenyl-d14	21	33 – 141

Sample ID	Surrogate Compound	%R	QC Limits
MW04-02	2-Fluorophenol	20	21-100
	1,2-Dichlorobenzene-d4	28	33 – 110
	2-Fluorobiphenyl	38	43 – 116
	Terphenyl-d14	20	33 – 141
MW04-02-EB	2-Fluorophenol	20	21-100
	1,2-Dichlorobenzene-d4	20	33 – 110
	2-Fluorobiphenyl	32	43 – 116
	Terphenyl-d14	27	33 – 141
MW01-02MS	Nitrobenzene-d5	117	43 - 166
MW01-02MSD	2-Fluorophenol	19	21-100
	1,2-Dichlorobenzene-d4	22	33 – 110
	2-Fluorobiphenyl	31	43 – 116
	Terphenyl-d14	21	33 – 141
SB03-02-6-8	Terphenyl-d14	157	18 – 137
SS09-01	Terphenyl-d14	171	18 – 137
SB11-06-32-34MS	Terphenyl-d14	148	18 – 137

In accordance with EPA validation criteria, the associated sample results have each been flagged with a "V" and are considered estimated.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Data

All applicable matrix QC criteria for the semivolatile MS/MSD analyses were met with the following exceptions:

Sample MW01-01

				QC Limits	
Compound	**MS%R**	**MSD%R**	**RPD**	**RPD**	**%R**
Acenaphthene	102	82	22*	19	46-118
2,4-Dinitrotoluene	110*	92	18	47	24-96

* *Indicates a value outside of the acceptable QC limits*
RPD: 1 out of 9 outside limits
Spike Recoveries: 1 out of 18 outside limits

Sample MW01-02

				QC Limits	
Compound	**MS%R**	**MSD%R**	**RPD**	**RPD**	**%R**
Phenol	19	9*	71*	35	12-110

* *Indicates a value outside of the acceptable QC limits*
RPD: 1 out of 9 outside limits
Spike Recoveries: 1 out of 18 outside limits

Sample SB01-01-4-6

				QC Limits	
Compound	**MS%R**	**MSD%R**	**RPD**	**RPD**	**%R**
Benzo(k)fluoranthene	120	155*	25	50	20-150

* *Indicates a value outside of the acceptable QC limits*
RPD: 0 out of 16 outside limits
Spike Recoveries: 1 out of 32 outside limits

Sample SB03-02-6-8

				QC Limits	
Compound	**MS%R**	**MSD%R**	**RPD**	**RPD**	**%R**
2,4-Dinitrotoluene	90*	86	5	47	28-89

* *Indicates a value outside of the acceptable QC limits*
RPD: 0 out of 9 outside limits
Spike Recoveries: 1 out of 18 outside limits

Sample SB10-05-22-24

				QC Limits	
Compound	**MS%R**	**MSD%R**	**RPD**	**RPD**	**%R**
Indeno(1,2,3,-cd)pyrene	21	19*	10	50	20-150

* *Indicates a value outside of the acceptable QC limits*
RPD: 0 out of 16 outside limits
Spike Recoveries: 1 out of 32 outside limits

Sample SB11-06-32-34

				QC Limits	
Compound	**MS%R**	**MSD%R**	**RPD**	**RPD**	**%R**
4-Nitrophenol	131*	116*	12	50	11-114
2,4-Dinitrotoluene	95*	90*	5	47	28-89

* *Indicates a value outside of the acceptable QC limits*
RPD: 0 out of 9 outside limits
Spike Recoveries: 4 out of 18 outside limits

In accordance with EPA data validation criteria, no data are qualified on MS/MSD data alone, and other data reviewed does not indicate the need for qualification of the sample results.

Initial Calibration Data

Although the ASP specifies a maximum %RSD of 20.5% for selected semivolatile compounds, it also allows for up to two of these compounds to exceed the 20.5%RSD as long as they meet the minimum relative response factor (RRF) criteria and the %RSD does not exceed 40.0%. All of the initial calibration data reported for the semivolatile data packages meets the acceptance criteria

outlined in the ASP with the following exceptions:

- The compounds acenaphthene (20.8), fluorene (27.6), benzo(k)fluoranthene (24.1) and 2-fluorobiphenyl (25.1) in the initial calibration analyzed on 06/03/03 for instrument BNAC.
- The compounds acenaphthene (23.3), anthracene (21.8) and benzo(k)fluoranthene (24.8) in the initial calibration analyzed on 06/04/03 for instrument BNAB.
- The compound 2,4-dinitrophenol (50.3) in the initial calibration analyzed on 06/06/03 for instrument BNAA.
- The compounds hexachlorocyclopentadiene (52.6), 2,4-dinitrophenol (60.6) and 4,6-dinitro-2-methylphenol (44.9) in the initial calibration analyzed 06/10/03 for instrument BNAE.
- The compound 2,4-dinitrophenol (46.0) in the initial calibration analyzed on 06/20/03 for instrument BNAE.

In accordance with EPA validation criteria, the associated results for the above-listed compounds have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

Continuing Calibration Data

The %D between the average RRF from the initial calibration on 06/20/03 and the RRF from the continuing calibration standard analyzed on 06/26/03 for the compound hexachlorocyclopentadiene (25.8) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated hexachlorocyclopentadiene results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

The %D between the average RRF from the initial calibration on 06/06/03 and the RRF from the continuing calibration standard analyzed on 06/18/03 for the compound 4-nitrophenol (33.7) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated 4-nitophenol results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

The %D between the average RRF from the initial calibration on 06/06/03 and the RRF from the continuing calibration standard analyzed on 06/19/03 for the compound 4-nitrophenol (25.2) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated 4-nitrophenol results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

The %D between the average RRF from the initial calibration on 06/10/03 and the RRF from the continuing calibration standard analyzed on 06/16/03 for the compound 4,6-dinitro-2-methylphenol (43.2) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated 4,6-dinitro-2-methylphenol results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

The %D between the average RRF from the initial calibration on 06/06/03 and the RRF from the continuing calibration standard analyzed on 06/19/03 for the compounds hexachlorobutadiene (34.3), 4-nitrophenol (55.8), hexachlorobenzene (27.9) and 2,4,6-tribromophenol (38.0) exceeded

the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated hexachlorobutadiene, 4-nitrophenol, hexachlorobenzene, and 2,4,6-tribromophenol results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

The %D between the average RRF from the initial calibration on 06/06/03 and the RRF from the continuing calibration standard analyzed on 06/20/03 for the compounds 2,4-dinitrophenol (69.4), 4-nitrophenol (33.7), 4-nitroaniline (28.4), 4,6-dinitro-2-methylphenol (39.9), bis(2-ethylhexyl)phthalate (26.2) and 2,4,6-tribromophenol (27.8) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated 2,4-dinitrophenol, 4-nitrophenol, 4-nitroaniline, 4,6-dinitro-2-methylphenol, bis(2-ethylhexyl)phthalate and 2,4,6-tribromophenol results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

The %D between the average RRF from the initial calibration on 06/06/03 and the RRF from the continuing calibration standard analyzed on 06/22/03 for the compounds benzaldehyde (38.7), hexachlorobutadiene (26.4), 4-nitrophenol (81.6), hexachlorobenzene (26.4) and 2,4,6-tribromophenol (40.0) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated 2,4-dinitrophenol, 4-nitrophenol, 4-nitroaniline, 4,6-dinitro-2-methylphenol, bis(2-ethylhexyl)phthalate and 2,4,6-tribromophenol results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

The %D between the average RRF from the initial calibration on 06/10/03 and the RRF from the continuing calibration standard analyzed on 06/13/03 for the compound hexachlorocyclopentadiene (26.9) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated hexachlorocyclopentadiene results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

The %D between the average RRF from the initial calibration on 06/10/03 and the RRF from the continuing calibration standard analyzed on 06/16/03 for the compounds bis(2-chloroethyl)ether (34.8), hexachlorocyclopentadiene (83.3), 2,4-dinitrophenol (74.7), and 4,6-dinitro-2-methylphenol (43.2) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated bis(2-chloroethyl)ether, hexachlorocyclopentadiene, 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

The %D between the average RRF from the initial calibration on 06/04/03 and the RRF from the continuing calibration standard analyzed on 06/12/03 for the compounds benzo(b)fluoranthene (66.2) and benzo(k)fluoranthene (67.3) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated benzo(b)fluoranthene and benzo(k)fluoranthene results have each been flagged with a "V" and are considered estimated due to variance from QC criteria.

Blank Data

Method blank SBLK01 for SDG R2864 (laboratory sample ID PB061703-15B) exhibited the common phthalate ester bis(2-ethylhexyl)phthalate at an estimated concentration of 24 micorgams per liter (ug/L, equivalent to parts per billion). In accordance with EPA validation criteria, associated bis(2-ethylhexyl)phthalate results less than 10 times the concentration of bis(2-ethylhexyl)phthalate in the method blank have been reported as non-detect and are considered to be laboratory-derived and not site related. No additional qualification of the data is required.

Internal Standard Area Evaluation

The internal standard areas met applicable QC criteria with the following exceptions:

Sample ID	Internal Standard	Area	QC Limits
SS13-01	Perylene-d12	254181	269056 – 1076222
SS13-01RE	Chrysene-d12	173117	175362 – 701448
	Perylene-d12	130767	149705 – 598820
SS13-01FD	Chrysene-d12	227927	227415 – 909658
	Perylene-d12	159519	184307 – 737226
SS13-01FDRE	Perylene-d12	139857	182207 – 728828
SB07-01-4-6	Perylene-d12	89958	264229 – 1056916
SB07-01-4-6RE	Perylene-d12	128185	177202 – 708080

In accordance with EPA data validation criteria, the data for the reanalyses (designated RE) have been rejected and the results of the original analyses have been flagged with a “V” and are considered estimated due to variance from QC criteria, as they confirmed matrix interference. The exception to this is SB11-07-38-40-FDRE, where the original analysis (SB11-07-38-40-FD) has been rejected and is considered unusable due the Instrument Performance Check (see below); therefore the results of the reanalysis have been reported and are considered estimated. It should be noted, however, that rejection of the reanalyses does not effect the usability of the data as valid and usable data for each sample has been reported.

METALS ANALYSES

The metals analysis data have been reviewed to answer the above questions, and each of the above items was in compliance with both method and NYSDEC ASP laboratory QC criteria with the exception of the items discussed in the following text.

Matrix Spike Data

All applicable matrix QC criteria for the metals matrix spike analyses were met with the following exceptions:

Sample ID	Analyte	%R	Control Limit
SS06-01	Silver	66.6	75-125
SB11-06-32-34	Antimony	64.4	75-125
	Lead	139.1	75-125
	Silver	55.8	75-125
SB03-02-6-8	Silver	55.2	75-125
MW01-01	Selenium	129.6	75-125
	Silver	67.6	75-125

In accordance with EPA data validation criteria, the following sample results have been flagged with a "V" and are considered estimated due to variance from QC criteria:

SS06-01	Silver
SB11-06-32-34	Antimony
	Lead
	Silver
SB03-02-6-8	Silver
MW01-01	Silver

Please note that the selenium result for MW01-01 has not been qualified because it was non-detect and the elevated spike recovery would be considered indicative of a potential high bias.

Serial Dilution Analysis

All of the serial dilution data reported for these SDGs meets the acceptance criteria outlined in the ASP with the following exceptions:

- Potassium for sample MW02-02, which exhibited a %D of 17.4 between the initial sample result and the serial dilution result and a concentration greater than 10 times the instrument detection limit (IDL) for potassium. In accordance with EPA validation criteria, the potassium result reported for MW02-02 has been flagged with a "V" and is considered estimated due to variance from QC criteria.
- Zinc for sample SS06-01, which exhibited a %D of 10.7 between the initial sample result and the serial dilution result and a concentration greater than 10 times the IDL for zinc. In accordance with EPA validation criteria, the zinc result reported for SS06-01 has been flagged with a "V" and is considered estimated due to variance from QC criteria.
- Potassium for sample SB11-06-32-34, which exhibited a %D of 12.7 between the initial sample result and the serial dilution result and a concentration greater than 10 times the IDL for potassium. In accordance with EPA validation criteria, the potassium result reported for SB11-06-32-34 has been flagged with a "V" and is considered estimated due to variance from QC criteria.
- Zinc for sample SB11-06-32-34, which exhibited a %D of 23.8 between the initial sample result and the serial dilution result and a concentration greater than 10 times the IDL for zinc. In accordance with EPA validation criteria, the zinc result reported for SB11-06-32-34 has been flagged with a "V" and is considered estimated due to variance from QC criteria.
- Magnesium for sample MW01-01, which exhibited a %D of 35.3 between the initial sample

result and the serial dilution result and a concentration greater than 10 times the IDL for magnesium. In accordance with EPA validation criteria, the magnesium result reported for MW01-01 has been flagged with a "V" and is considered estimated due to variance from QC criteria.

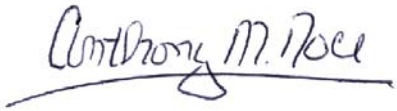
- Manganese for sample MW01-01, which exhibited a %D of 82.6 between the initial sample result and the serial dilution result and a concentration greater than 10 times the IDL for manganese. In accordance with EPA validation criteria, the manganese result reported for MW01-01 has been flagged with a "V" and is considered estimated due to variance from QC criteria.
- Potassium for sample MW01-01, which exhibited a %D of 18.4 between the initial sample result and the serial dilution result and a concentration greater than 10 times the IDL for potassium. In accordance with EPA validation criteria, the potassium result reported for MW01-01 has been flagged with a "V" and is considered estimated due to variance from QC criteria.

CYANIDE ANALYSES

The cyanide analysis was completed in accordance with EPA Method 9012 and the NYSDEC ASP. The data have been reviewed to answer the above questions, and each of the above items was in compliance with the method and NYSDEC ASP laboratory QC criteria.

SUMMARY

In summary, based on 4,838 sample data points, 241 of which were qualified as estimated, and five (5) qualified as unusable, and since estimated data are considered valid and usable, the usability of this data package is 96.4% and the data are considered of sufficient quality to make informed decisions regarding the soil and groundwater quality at the Niagra Mohawk Site in Fort Edward, New York.



Reviewed By
Anthony M. Noce

3 August 06
Date

Data Usability Summary Report
Niagara Mohawk – Fort Edward (Canal Street)
Fort Edward, New York
Analytical Laboratory: Chemtech

Sample Delivery Group R4106

Analytical results for a water sample collected in association with the investigation of the Niagara Mohawk/Fort Edward (Canal Street) site located in Fort Edward, New York were reviewed to evaluate the data quality and usability. Data were assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) **Analytical Services Protocol** (06/00), the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (October 1999 Revision), and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision 12, March 2001), where applicable. This Data Usability Summary Report (DUSR) pertains to the **CHASE01** sample collected by MWH personnel on September 3, 2003.

In accordance with NYSDEC guidance, the following questions were considered for the analysis of each fraction in order to prepare this summary report:

- Is the data package provided complete as defined under the requirements for the NYSDEC ASP Category B deliverables?
- Have all applicable holding times been met?
- Does all of the associated quality control data (*i.e.*, blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries , spike recoveries, replicate analyses, laboratory controls and raw sample data) fall within the required limits and specifications?
- Have all of the data been generated using established and agreed upon analytical protocols?
- Does an evaluation of the raw data confirm the results provided on the data summary sheets and quality control verification forms?
- Have the correct data qualifiers been used?

VOLATILE ANALYSIS - BTEX

The volatile analysis was completed for benzene, toluene, ethylbenzene and xylene (BTEX) in accordance with EPA Method 8260B. The data have been reviewed to answer the above questions, and each of the above items was in compliance with the method and NYSDEC ASP laboratory QC criteria.

SEMIVOLATILE ANALYSIS - PAHs

The semivolatile analysis was completed for polyaromatic hydrocarbons (PAHs) in accordance with EPA Method 8270C and the NYSDEC ASP. The data have been reviewed to answer the above questions, and each of the above items was in compliance with the method and NYSDEC ASP laboratory QC criteria with the exception of the items discussed in the following text.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Data

All applicable matrix QC criteria have been met for the semivolatile analyses with the following exceptions:

Sample R4143-02

				QC Limits	
Compound	**MS%R**	**MSD%R**	**RPD**	**RPD**	**%R**
Indeno(1,2,3-cd)pyrene	12*	78	147*	50	20-150

* *Indicates a value outside of the acceptable QC limits*
RPD: 1 out of 16 outside limits
Spike Recoveries: 1 out of 32 outside limits

In accordance with EPA data validation criteria, no data are qualified on MS/MSD data alone, and other data reviewed does not indicate the need for qualification of the sample results.

Continuing Calibration Data

The percent difference (%D) between the average relative response factor (RRF) from the initial calibration and the RRF from the continuing calibration standard analyzed on 09/14/03 for indeno(1,2,3-cd)pyrene (-27.1%D) exceeded the EPA technical criteria of 25.0%D. In accordance with EPA data validation criteria, the associated indeno(1,2,3-cd)pyrene result has been flagged with a "V" and is considered estimated due to variance from QC criteria.

SUMMARY

In summary, based on 21 sample data points, one (1) of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this data package is 100.0%.

_____ _____

Reviewed By — Date
Anthony M. Noce, CHMM

Data Usability Summary Report
Niagara Mohawk – Fort Edward (Canal Street)
Fort Edward, New York
Analytical Laboratory: CHEMTECH

Sample Delivery Group T1141

Analytical results for four (4) test pit soil samples with an associated blind field duplicate and matrix QC from the Niagra Mohawk site located in Fort Edward, New York were reviewed to evaluate the data quality and usability. Data were assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) **Analytical Services Protocol** (06/00), the United States Environmental Protection Agency (USEPA) **National Functional Guidelines for Organic Data Review** (October 1999 Revision), USEPA **Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analysis** (February 1994 Revision) and the USEPA Region II documents **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision 12, March 2001) and **Evaluation of Metals Data for the CLP Program** (SOP No. HW-2, Revision 11, January 1992), where applicable. This data usability summary report (DUSR) pertains to the following samples collected by MWH personnel at the Site:

TP-05 (7-8)
TP-06
TP-07
TP-08
TP-0800

In accordance with NYSDEC guidance, the following questions were considered for the analysis of each fraction in order to prepare this summary report:

- Is the data package provided complete as defined under the requirements for the NYSDEC ASP Category B deliverables?
- Have all applicable holding times been met?
- Does all of the associated quality control data (*i.e.*, blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries , spike recoveries, replicate analyses, laboratory controls and raw sample data) fall within the required limits and specifications?
- Have all of the data been generated using established and agreed upon analytical protocols?
- Does an evaluation of the raw data confirm the results provided on the data summary sheets and quality control verification forms?
- Have the correct data qualifiers been used?

SEMIVOLATILE ANALYSIS - PAHs

The semivolatile analysis was completed for polyaromatic hydrocarbons (PAHs) in accordance with EPA Method 8270C and the NYSDEC ASP. The data have been reviewed to answer the above questions, and each of the above items was in compliance with the method and NYSDEC ASP laboratory QC criteria with the exception of the items discussed in the following text.

Blind Field Duplicate Data

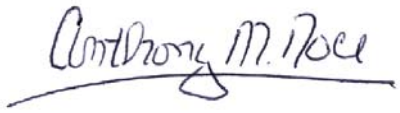
Sample TP-0800 is a blind field duplicate of sample TP-08. Although there are no established QC limits for field duplicate relative percent difference (RPD) data, USEPA Region II considers RPD values of 100% or less for soil samples an indication of acceptable sampling and analytical precision. Generally speaking, the blind field duplicate data reported are considered indicative of poor sampling and analytical precision, and the soil appears to be somewhat nonhomogeneous. In accordance with EPA data validation criteria, both the sample and duplicate results have been flagged with a "V" and are considered estimated due to variance from quality control criteria.

CYANIDE ANALYSES

The cyanide analysis was completed in accordance with EPA Method ILM04.1 and the NYSDEC ASP. The data have been reviewed to answer the above questions, and each of the above items was in compliance with the method and NYSDEC ASP laboratory QC criteria.

SUMMARY

In summary, based on 85 sample data points, 32 of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this data package is 100% and the data are considered of sufficient quality to make informed decisions regarding the soil and groundwater quality at the Niagra Mohawk Site in Fort Edward, New York.

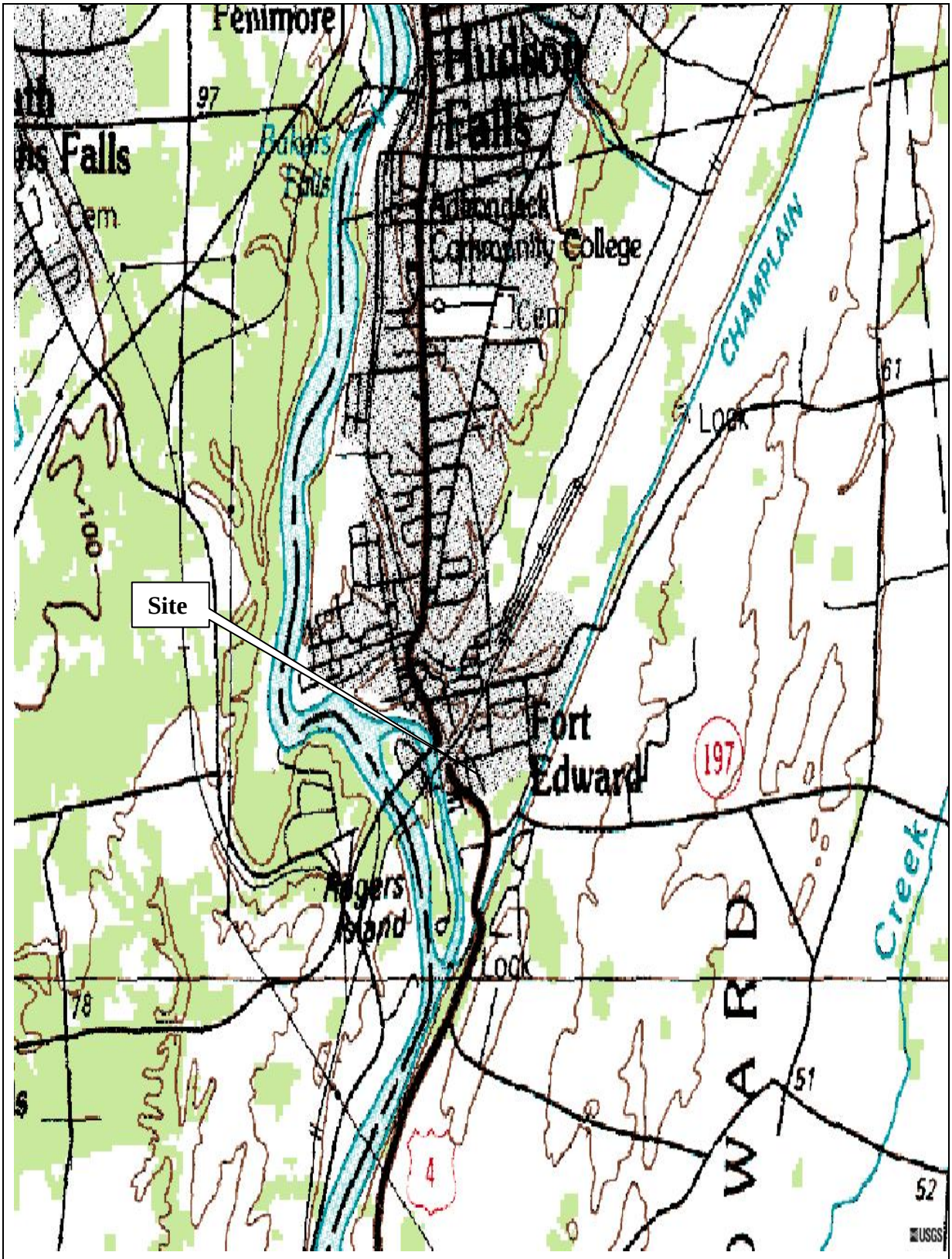


10 March 05

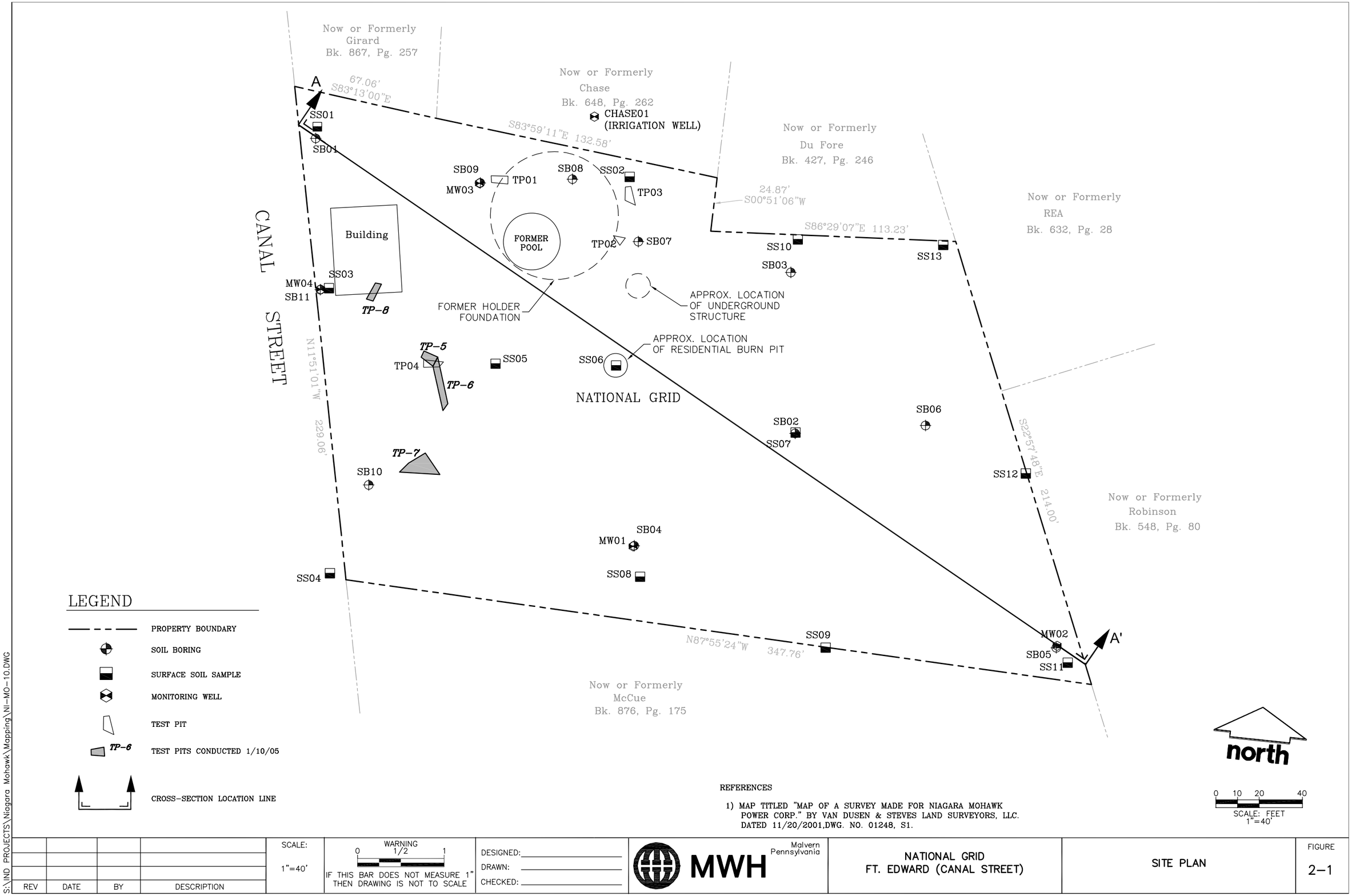
Reviewed By
Anthony M. Noce

Date

FIGURES



MWH	**National Grid** **Fort Edward, New York**	**Figure 1-1** **Site Location**



REFERENCES

1) MAP TITLED "MAP OF A SURVEY MADE FOR NIAGARA MOHAWK POWER CORP." BY VAN DUSEN & STEVES LAND SURVEYORS, LLC. DATED 11/20/2001,DWG. NO. 01248, S1.

REV	DATE	BY	DESCRIPTION

SCALE: 1"=40'

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED: _____
DRAWN: _____
CHECKED: _____

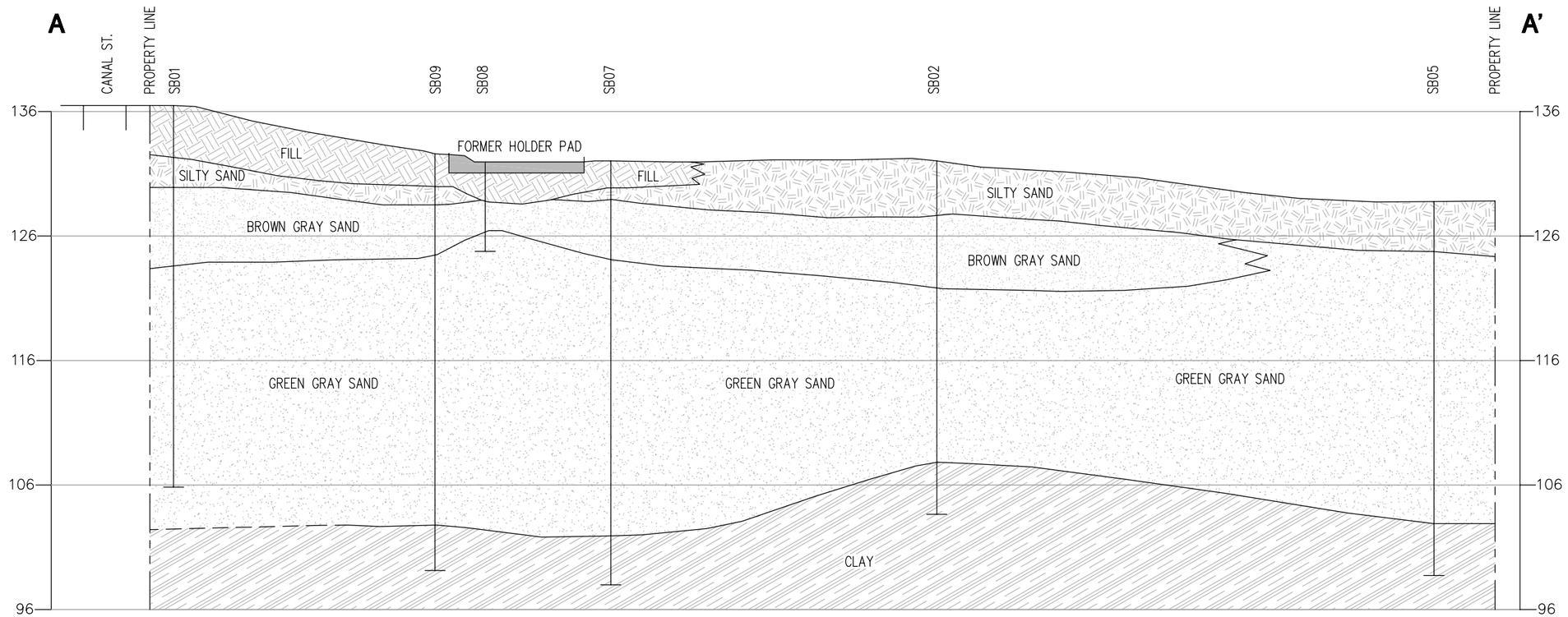
MWH Malvern Pennsylvania

NATIONAL GRID
FT. EDWARD (CANAL STREET)

SITE PLAN

FIGURE 2-1

S:\IND_PROJECTS\Niagara Mohawk\Mapping\NI-MO-10.DWG



0 10 20 40
SCALE: FEET
1"=40' HORZ

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2.5
5
10
SCALE: FEET
1"=10' VERT.

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SCALE: 1"=40'

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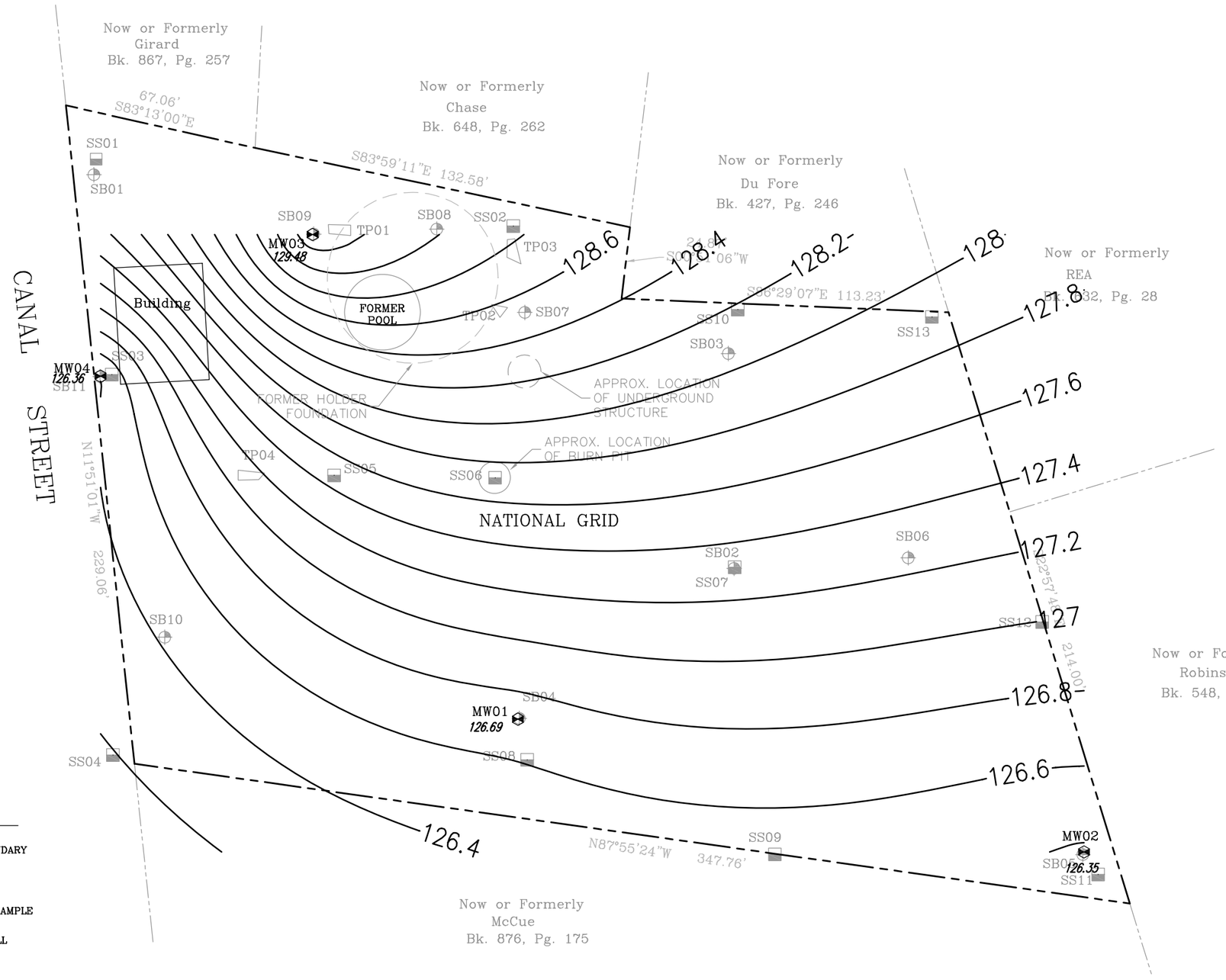
MWH Malvern Pennsylvania

NATIONAL GRID
FT. EDWARD (CANAL STREET)

CROSS-SECTION

FIGURE
4-1



LEGEND

- PROPERTY BOUNDARY
- SOIL BORING
- SURFACE SOIL SAMPLE
- MONITORING WELL
- TEST PIT
- 126.4 — GROUNDWATER CONTOUR (FT, MSL)
- 126.69 — GROUNDWATER ELEVATION (FT, MSL)

north

0 10 20 40
SCALE: FEET
1"=40'

REFERENCES

1) MAP TITLED "MAP OF A SURVEY MADE FOR NIAGARA MOHAWK POWER CORP." BY VAN DUSEN & STEVES LAND SURVEYORS, LLC. DATED 11/20/2001,DWG. NO. 01248, S1.

REV	DATE	BY	DESCRIPTION

SCALE: 1"=40'

WARNING
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

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DRAWN: _____
CHECKED: _____

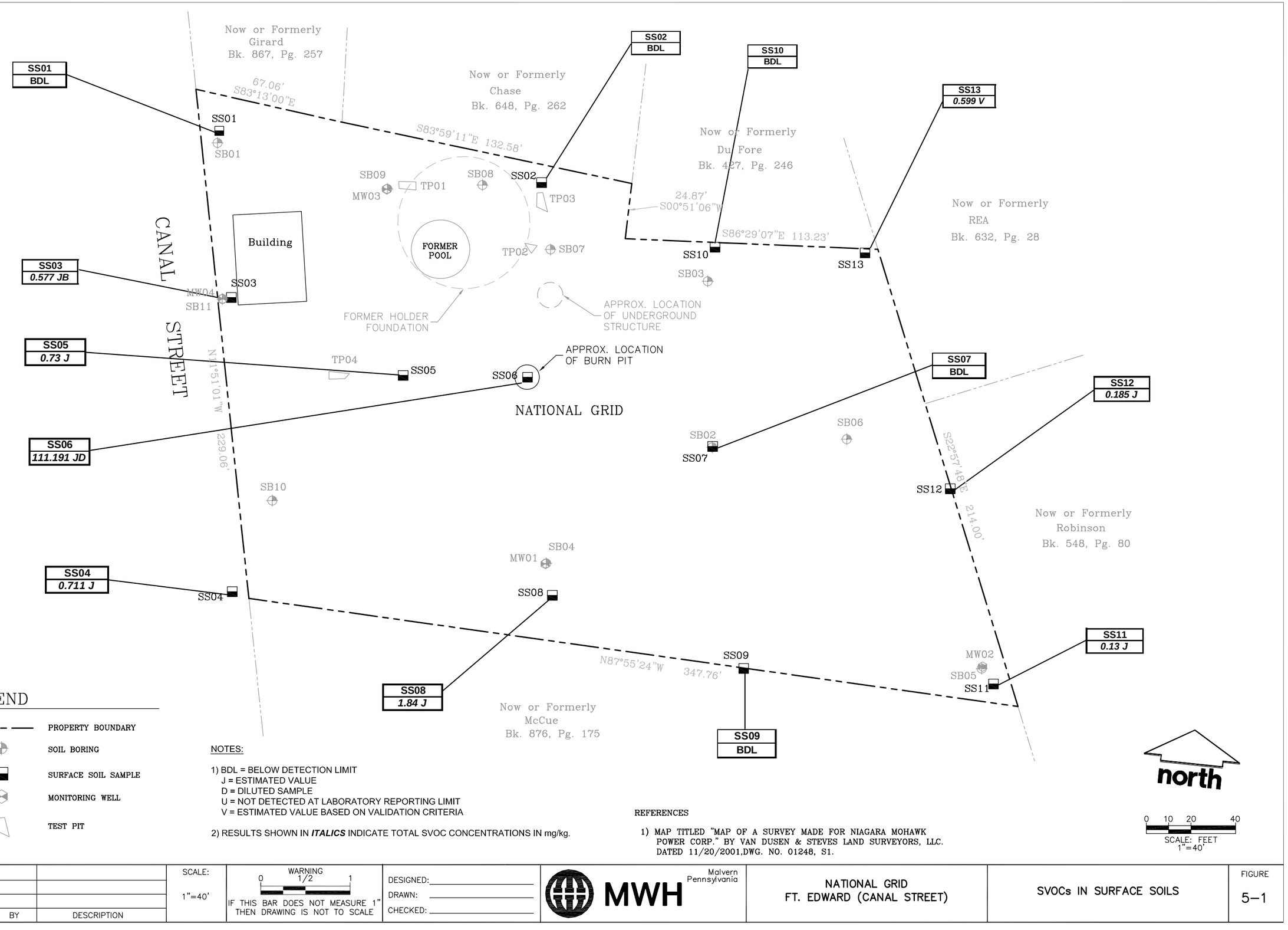
MWH Malvern Pennsylvania

NATIONAL GRID
FT. EDWARD (CANAL STREET)

POTENTIOMETRIC SURFACE
GROUNDWATER MAP
6/23/03

FIGURE
4-2

S:\IND PROJECTS\Niagara Mohawk\Mapping\NI-MO-06.DWG



LEGEND

- PROPERTY BOUNDARY
- SOIL BORING
- SURFACE SOIL SAMPLE
- MONITORING WELL
- TEST PIT

NOTES:

1) BDL = BELOW DETECTION LIMIT
   J = ESTIMATED VALUE
   D = DILUTED SAMPLE
   U = NOT DETECTED AT LABORATORY REPORTING LIMIT
   V = ESTIMATED VALUE BASED ON VALIDATION CRITERIA

2) RESULTS SHOWN IN ***ITALICS*** INDICATE TOTAL SVOC CONCENTRATIONS IN mg/kg.

REFERENCES

1) MAP TITLED "MAP OF A SURVEY MADE FOR NIAGARA MOHAWK POWER CORP." BY VAN DUSEN & STEVES LAND SURVEYORS, LLC. DATED 11/20/2001,DWG. NO. 01248, S1.

REV	DATE	BY	DESCRIPTION

SCALE: 1"=40'

WARNING
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

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CHECKED: _____

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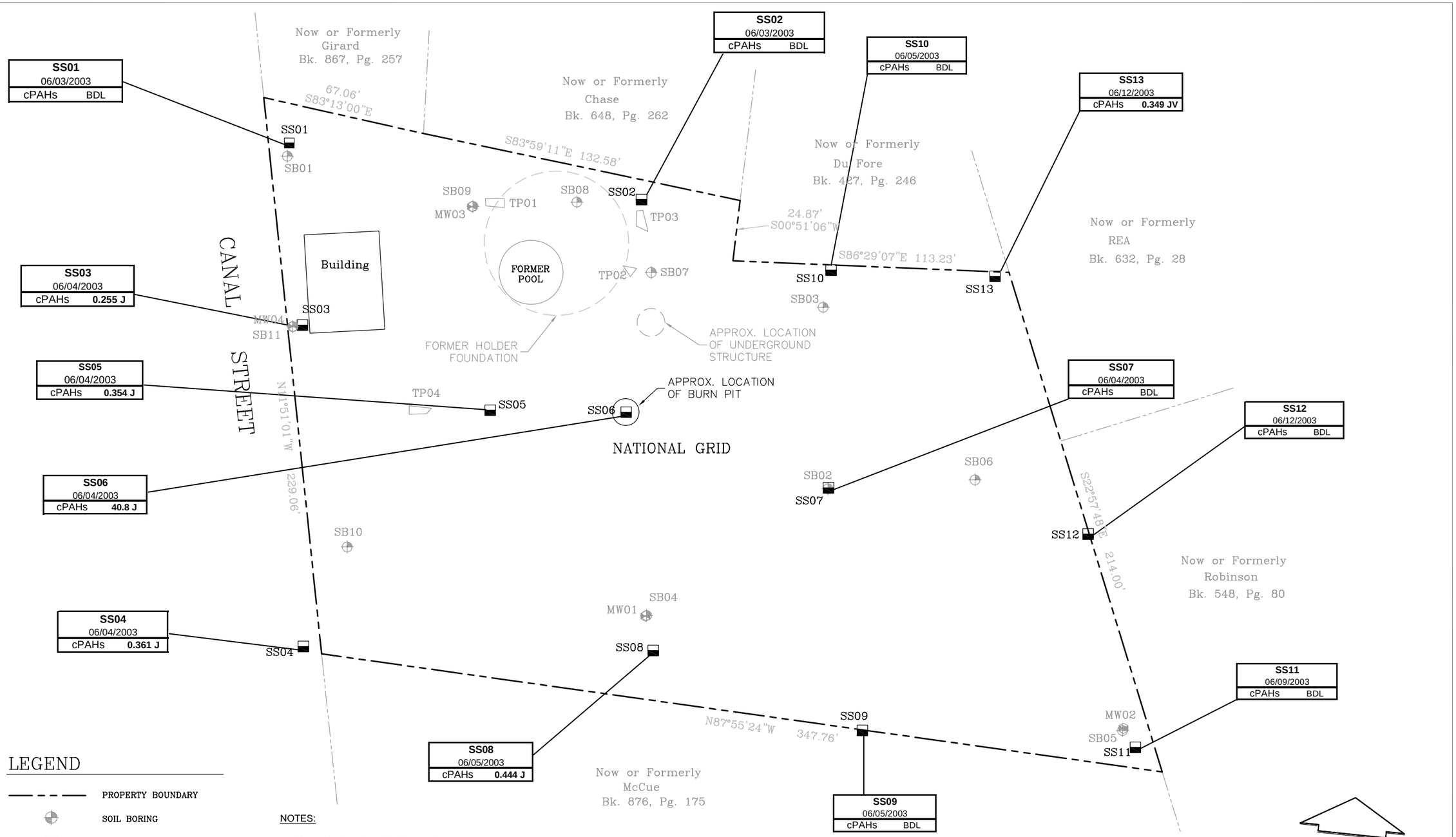
NATIONAL GRID
FT. EDWARD (CANAL STREET)

SVOCs IN SURFACE SOILS

FIGURE
5–1

S:\IND PROJECTS\Niagara Mohawk\Mapping\NI-MO-01.DWG



LEGEND

- PROPERTY BOUNDARY
- SOIL BORING
- SURFACE SOIL SAMPLE
- MONITORING WELL
- TEST PIT

NOTES:

1) BDL = BELOW DETECTION LIMIT
   J = ESTIMATED VALUE
   D = DILUTED SAMPLE
   U = NOT DETECTED AT LABORATORY REPORTING LIMIT
   V = ESTIMATED VALUE BASED ON VALIDATION CRITERIA

2) RESULTS SHOWN IN ***ITALICS*** INDICATE TOTAL SVOC CONCENTRATIONS IN mg/kg.

REFERENCES

1) MAP TITLED "MAP OF A SURVEY MADE FOR NIAGARA MOHAWK POWER CORP." BY VAN DUSEN & STEVES LAND SURVEYORS, LLC. DATED 11/20/2001,DWG. NO. 01248, S1.

north

0 10 20 40
SCALE: FEET
1"=40'

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REV	DATE	BY	DESCRIPTION

SCALE: 1"=40'

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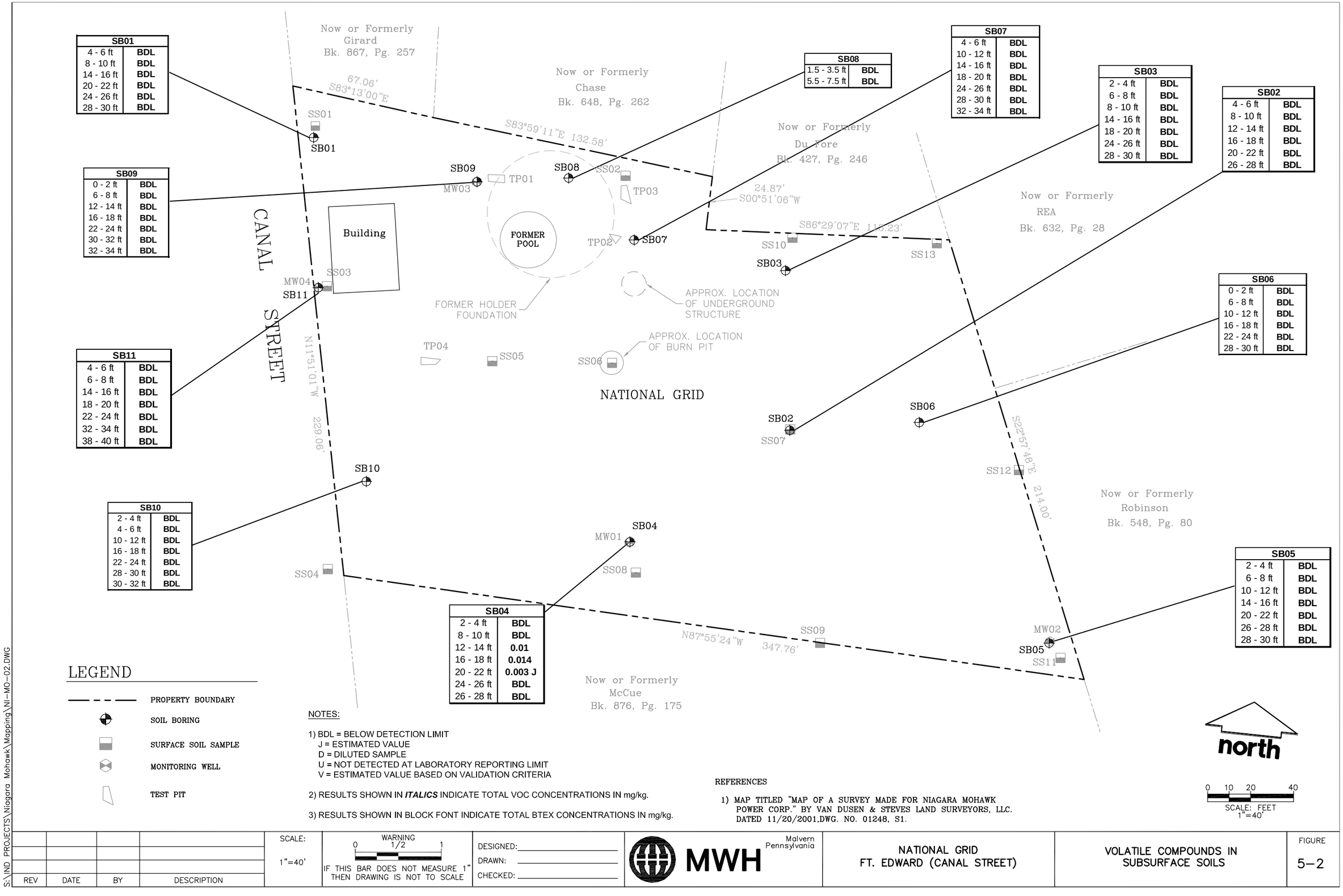
MWH Malvern Pennsylvania

NATIONAL GRID
FT. EDWARD (CANAL STREET)

TOTAL CARCINOGENIC PAHs IN SURFACE SOILS

FIGURE 5-1A



SB01	
4 - 6 ft	BDL
8 - 10 ft	BDL
14 - 16 ft	BDL
20 - 22 ft	BDL
24 - 26 ft	BDL
28 - 30 ft	BDL

SB09	
0 - 2 ft	BDL
6 - 8 ft	BDL
12 - 14 ft	BDL
16 - 18 ft	BDL
22 - 24 ft	BDL
30 - 32 ft	BDL
32 - 34 ft	BDL

SB11	
4 - 6 ft	BDL
6 - 8 ft	BDL
14 - 16 ft	BDL
18 - 20 ft	BDL
22 - 24 ft	BDL
32 - 34 ft	BDL
38 - 40 ft	BDL

SB10	
2 - 4 ft	BDL
4 - 6 ft	BDL
10 - 12 ft	BDL
16 - 18 ft	BDL
22 - 24 ft	BDL
28 - 30 ft	BDL
30 - 32 ft	BDL

SB04	
2 - 4 ft	BDL
8 - 10 ft	BDL
12 - 14 ft	0.01
16 - 18 ft	0.014
20 - 22 ft	0.003 J
24 - 26 ft	BDL
26 - 28 ft	BDL

SB08	
1.5 - 3.5 ft	BDL
5.5 - 7.5 ft	BDL

SB07	
4 - 6 ft	BDL
10 - 12 ft	BDL
14 - 16 ft	BDL
18 - 20 ft	BDL
24 - 26 ft	BDL
28 - 30 ft	BDL
32 - 34 ft	BDL

SB03	
2 - 4 ft	BDL
6 - 8 ft	BDL
8 - 10 ft	BDL
14 - 16 ft	BDL
18 - 20 ft	BDL
24 - 26 ft	BDL
28 - 30 ft	BDL

SB02	
4 - 6 ft	BDL
8 - 10 ft	BDL
12 - 14 ft	BDL
16 - 18 ft	BDL
20 - 22 ft	BDL
26 - 28 ft	BDL

SB06	
0 - 2 ft	BDL
6 - 8 ft	BDL
10 - 12 ft	BDL
16 - 18 ft	BDL
22 - 24 ft	BDL
28 - 30 ft	BDL

SB05	
2 - 4 ft	BDL
6 - 8 ft	BDL
10 - 12 ft	BDL
14 - 16 ft	BDL
20 - 22 ft	BDL
26 - 28 ft	BDL
28 - 30 ft	BDL

LEGEND

- PROPERTY BOUNDARY
- SOIL BORING
- SURFACE SOIL SAMPLE
- MONITORING WELL
- TEST PIT

NOTES:

1) BDL = BELOW DETECTION LIMIT
   J = ESTIMATED VALUE
   D = DILUTED SAMPLE
   U = NOT DETECTED AT LABORATORY REPORTING LIMIT
   V = ESTIMATED VALUE BASED ON VALIDATION CRITERIA

2) RESULTS SHOWN IN ***ITALICS*** INDICATE TOTAL VOC CONCENTRATIONS IN mg/kg.

3) RESULTS SHOWN IN BLOCK FONT INDICATE TOTAL BTEX CONCENTRATIONS IN mg/kg.

REFERENCES

1) MAP TITLED "MAP OF A SURVEY MADE FOR NIAGARA MOHAWK POWER CORP." BY VAN DUSEN & STEVES LAND SURVEYORS, LLC. DATED 11/20/2001,DWG. NO. 01248, S1.

REV	DATE	BY	DESCRIPTION

SCALE: 1"=40'

WARNING
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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED: _____
DRAWN: _____
CHECKED: _____

MWH Malvern Pennsylvania

NATIONAL GRID
FT. EDWARD (CANAL STREET)

VOLATILE COMPOUNDS IN SUBSURFACE SOILS

FIGURE
5-2

S:\IND_PROJECTS\Niagara Mohawk\Mapping\NI-MO-02.DWG

SB01	
4 - 6 ft	**0.041 J**
8 - 10 ft	**BDL**
14 - 16 ft	**BDL**
20 - 22 ft	**BDL**
24 - 26 ft	**BDL**
28 - 30 ft	**BDL**

SB09	
0 - 2 ft	**2.51 J**
6 - 8 ft	**BDL**
12 - 14 ft	**BDL**
16 - 18 ft	**BDL**
22 - 24 ft	**BDL**
30 - 32 ft	**BDL**
32 - 34 ft	**BDL**

SB11	
4 - 6 ft	**BDL**
6 - 8 ft	**BDL**
14 - 16 ft	**BDL**
18 - 20 ft	**BDL**
22 - 24 ft	**BDL**
32 - 34 ft	***0.058 J***
38 - 40 ft	**BDL**

SB10	
2 - 4 ft	**BDL**
4 - 6 ft	**BDL**
10 - 12 ft	**BDL**
16 - 18 ft	**BDL**
22 - 24 ft	**BDL**
28 - 30 ft	**BDL**
30 - 32 ft	**BDL**

SB08	
1.5 - 3.5 ft	***0.089 J***
5.5 - 7.5 ft	**BDL**

SB07	
4 - 6 ft	**BDL**
10 - 12 ft	**BDL**
14 - 16 ft	**BDL**
18 - 20 ft	**BDL**
24 - 26 ft	**BDL**
28 - 30 ft	**BDL**
32 - 34 ft	**BDL**

SB03	
2 - 4 ft	**BDL**
6 - 8 ft	***0.046 J***
8 - 10 ft	**BDL**
14 - 16 ft	**BDL**
18 - 20 ft	**BDL**
24 - 26 ft	**BDL**
28 - 30 ft	**BDL**

SB02	
4 - 6 ft	**BDL**
8 - 10 ft	**BDL**
12 - 14 ft	**BDL**
16 - 18 ft	**BDL**
20 - 22 ft	**BDL**
26 - 28 ft	**BDL**

SB06	
0 - 2 ft	**BDL**
6 - 8 ft	**BDL**
10 - 12 ft	**BDL**
16 - 18 ft	**BDL**
22 - 24 ft	**BDL**
28 - 30 ft	**BDL**

SB04	
2 - 4 ft	**BDL**
8 - 10 ft	**BDL**
12 - 14 ft	**BDL**
16 - 18 ft	**BDL**
20 - 22 ft	**BDL**
24 - 26 ft	**BDL**
26 - 28 ft	**BDL**

SB05	
2 - 4 ft	**BDL**
6 - 8 ft	**BDL**
10 - 12 ft	**BDL**
14 - 16 ft	**BDL**
20 - 22 ft	**BDL**
26 - 28 ft	**BDL**
28 - 30 ft	***0.059 J***

Now or Formerly
Girard
Bk. 867, Pg. 257

67.06'
S83°13'00"E

Now or Formerly
Chase
Bk. 648, Pg. 262

S83°59'11"E 132.58'

Now or Formerly
Du Fore
Bk. 427, Pg. 246

24.87'
S00°51'06"W

S86°29'07"E 113.23'

Now or Formerly
REA
Bk. 632, Pg. 28

Now or Formerly
Robinson
Bk. 548, Pg. 80

Now or Formerly
McCue
Bk. 876, Pg. 175

N87°55'24"W
347.76'

N11°51'01"W
229.06'

S22°57'48"E
214.00'

CANAL STREET

Building

FORMER POOL

FORMER HOLDER FOUNDATION

APPROX. LOCATION OF UNDERGROUND STRUCTURE

APPROX. LOCATION OF BURN PIT

NATIONAL GRID

SS01 SS02 SS03 SS04 SS05 SS06 SS07 SS08 SS09 SS10 SS11 SS12 SS13

SB01 SB02 SB03 SB04 SB05 SB06 SB07 SB08 SB09 SB10 SB11

MW01 MW02 MW03 MW04

TP01 TP02 TP03 TP04

LEGEND

- PROPERTY BOUNDARY
- SOIL BORING
- SURFACE SOIL SAMPLE
- MONITORING WELL
- TEST PIT

NOTES:

1) BDL = BELOW DETECTION LIMIT
   J = ESTIMATED VALUE
   D = DILUTED SAMPLE
   U = NOT DETECTED AT LABORATORY REPORTING LIMIT
   V = ESTIMATED VALUE BASED ON VALIDATION CRITERIA

2) RESULTS SHOWN IN ***ITALICS*** INDICATE TOTAL TCL SVOC CONCENTRATIONS IN mg/kg.

3) RESULTS SHOWN IN BLOCK FONT INDICATE TOTAL PAH CONCENTRATIONS IN mg/kg.

REFERENCES

1) MAP TITLED "MAP OF A SURVEY MADE FOR NIAGARA MOHAWK POWER CORP." BY VAN DUSEN & STEVES LAND SURVEYORS, LLC. DATED 11/20/2001,DWG. NO. 01248, S1.

north

0 10 20 40
SCALE: FEET
1"=40'

REV	DATE	BY	DESCRIPTION

SCALE: 1"=40'

WARNING 0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED: _____
DRAWN: _____
CHECKED: _____

MWH Malvern Pennsylvania

NATIONAL GRID
FT. EDWARD (CANAL STREET)

SEMI-VOLATILE COMPOUNDS IN SUBSURFACE SOILS

FIGURE 5-3

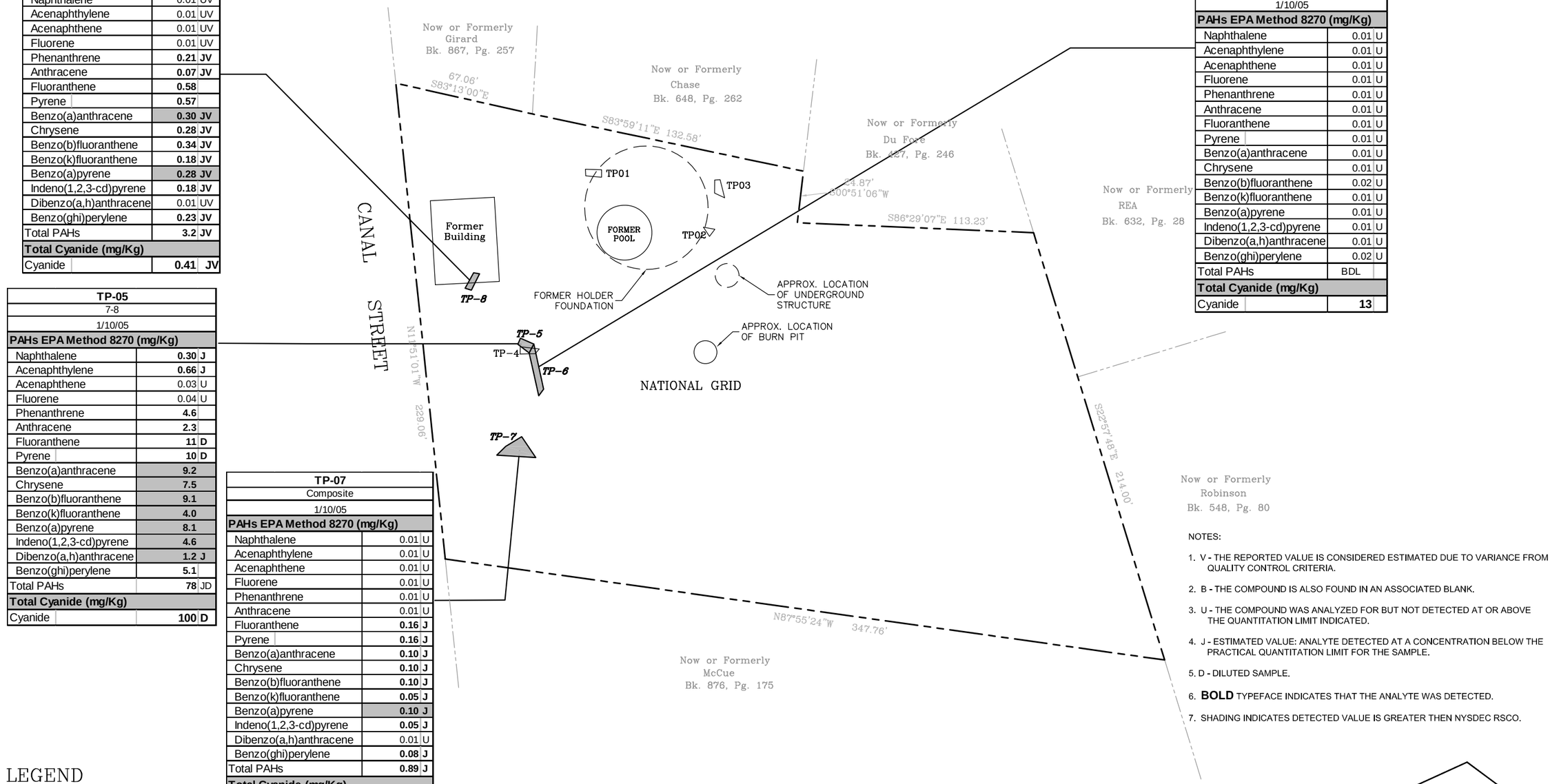
S:\IND PROJECTS\Niagara Mohawk\Mapping\NI-MO-03.DWG

TP-08		
Composite		
1/10/05		
PAHs EPA Method 8270 (mg/Kg)		
Naphthalene	0.01	UV
Acenaphthylene	0.01	UV
Acenaphthene	0.01	UV
Fluorene	0.01	UV
Phenanthrene	**0.21**	**JV**
Anthracene	**0.07**	**JV**
Fluoranthene	**0.58**	
Pyrene	**0.57**	
Benzo(a)anthracene	**0.30**	**JV**
Chrysene	**0.28**	**JV**
Benzo(b)fluoranthene	**0.34**	**JV**
Benzo(k)fluoranthene	**0.18**	**JV**
Benzo(a)pyrene	**0.28**	**JV**
Indeno(1,2,3-cd)pyrene	**0.18**	**JV**
Dibenzo(a,h)anthracene	0.01	UV
Benzo(ghi)perylene	**0.23**	**JV**
Total PAHs	**3.2**	**JV**
Total Cyanide (mg/Kg)		
Cyanide	**0.41**	**JV**

TP-05		
7-8		
1/10/05		
PAHs EPA Method 8270 (mg/Kg)		
Naphthalene	**0.30**	**J**
Acenaphthylene	**0.66**	**J**
Acenaphthene	0.03	U
Fluorene	0.04	U
Phenanthrene	**4.6**	
Anthracene	**2.3**	
Fluoranthene	**11**	**D**
Pyrene	**10**	**D**
Benzo(a)anthracene	**9.2**	
Chrysene	**7.5**	
Benzo(b)fluoranthene	**9.1**	
Benzo(k)fluoranthene	**4.0**	
Benzo(a)pyrene	**8.1**	
Indeno(1,2,3-cd)pyrene	**4.6**	
Dibenzo(a,h)anthracene	**1.2**	**J**
Benzo(ghi)perylene	**5.1**	
Total PAHs	**78**	JD
Total Cyanide (mg/Kg)		
Cyanide	**100**	**D**

TP-07		
Composite		
1/10/05		
PAHs EPA Method 8270 (mg/Kg)		
Naphthalene	0.01	U
Acenaphthylene	0.01	U
Acenaphthene	0.01	U
Fluorene	0.01	U
Phenanthrene	0.01	U
Anthracene	0.01	U
Fluoranthene	**0.16**	**J**
Pyrene	**0.16**	**J**
Benzo(a)anthracene	**0.10**	**J**
Chrysene	**0.10**	**J**
Benzo(b)fluoranthene	**0.10**	**J**
Benzo(k)fluoranthene	**0.05**	**J**
Benzo(a)pyrene	**0.10**	**J**
Indeno(1,2,3-cd)pyrene	**0.05**	**J**
Dibenzo(a,h)anthracene	0.01	U
Benzo(ghi)perylene	**0.08**	**J**
Total PAHs	**0.89**	**J**
Total Cyanide (mg/Kg)		
Cyanide	**1.1**	

TP-06		
Composite		
1/10/05		
PAHs EPA Method 8270 (mg/Kg)		
Naphthalene	0.01	U
Acenaphthylene	0.01	U
Acenaphthene	0.01	U
Fluorene	0.01	U
Phenanthrene	0.01	U
Anthracene	0.01	U
Fluoranthene	0.01	U
Pyrene	0.01	U
Benzo(a)anthracene	0.01	U
Chrysene	0.01	U
Benzo(b)fluoranthene	0.02	U
Benzo(k)fluoranthene	0.01	U
Benzo(a)pyrene	0.01	U
Indeno(1,2,3-cd)pyrene	0.01	U
Dibenzo(a,h)anthracene	0.01	U
Benzo(ghi)perylene	0.02	U
Total PAHs	BDL	
Total Cyanide (mg/Kg)		
Cyanide	**13**	



NOTES:

1. V - THE REPORTED VALUE IS CONSIDERED ESTIMATED DUE TO VARIANCE FROM QUALITY CONTROL CRITERIA.
2. B - THE COMPOUND IS ALSO FOUND IN AN ASSOCIATED BLANK.
3. U - THE COMPOUND WAS ANALYZED FOR BUT NOT DETECTED AT OR ABOVE THE QUANTITATION LIMIT INDICATED.
4. J - ESTIMATED VALUE: ANALYTE DETECTED AT A CONCENTRATION BELOW THE PRACTICAL QUANTITATION LIMIT FOR THE SAMPLE.
5. D - DILUTED SAMPLE.
6. **BOLD** TYPEFACE INDICATES THAT THE ANALYTE WAS DETECTED.
7. SHADING INDICATES DETECTED VALUE IS GREATER THEN NYSDEC RSCO.

LEGEND

PROPERTY BOUNDARY

HISTORICAL TEST PIT

TP-6 TEST PITS CONDUCTED 1/10/05

north

0 12.5 25 50
SCALE: FEET
1"=50'

REFERENCES

1) MAP TITLED "MAP OF A SURVEY MADE FOR NIAGARA MOHAWK POWER CORP." BY VAN DUSEN & STEVES LAND SURVEYORS, LLC. DATED 11/20/2001,DWG. NO. 01248, S1.

REV	DATE	BY	DESCRIPTION

SCALE: 1"=40'

WARNING 0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED: _____
DRAWN: _____
CHECKED: _____

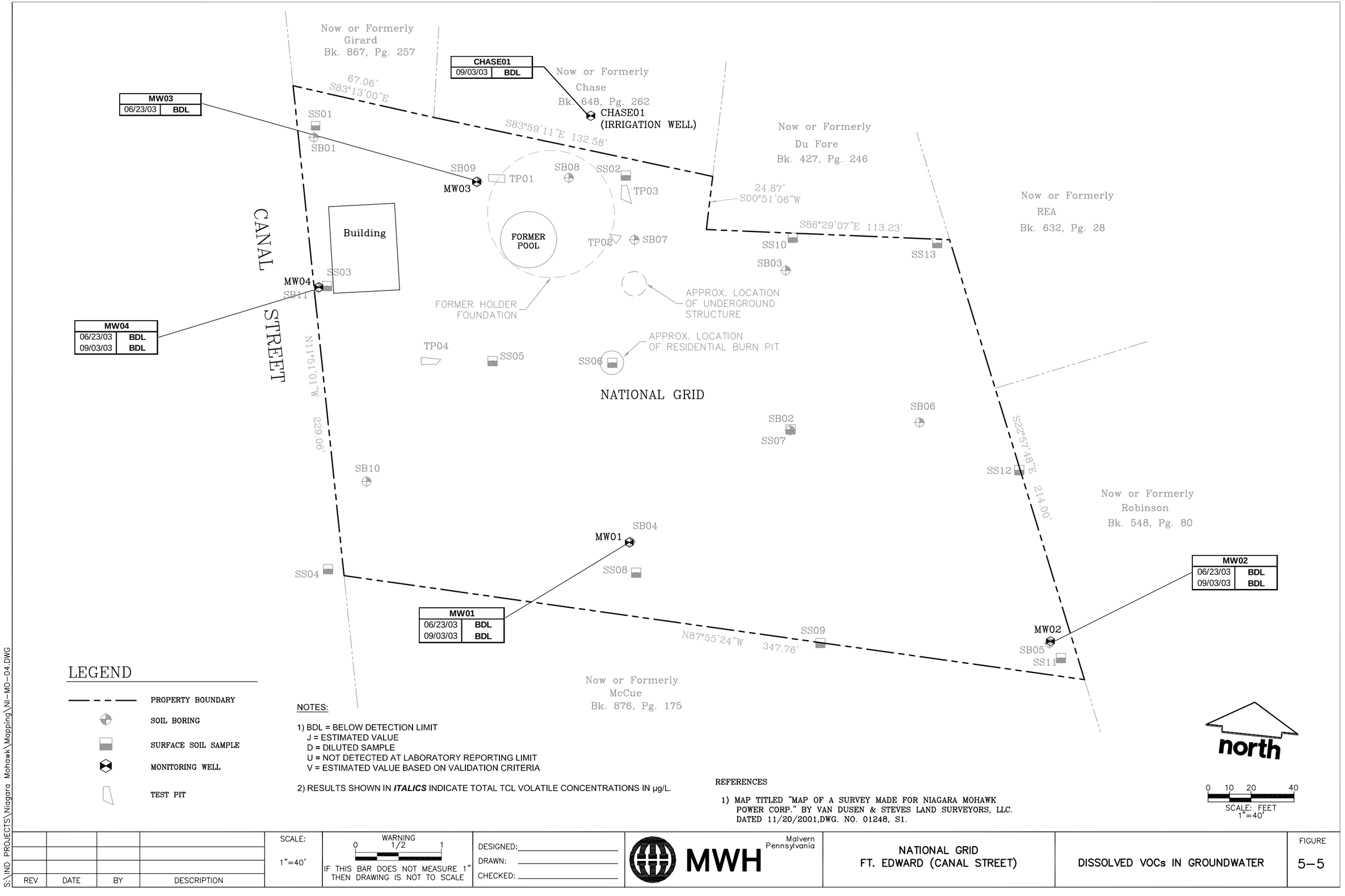
MWH Malvern Pennsylvania

NATIONAL GRID
FT. EDWARD (CANAL STREET)

PAHs AND CYANIDE IN TEST PIT SAMPLES

FIGURE 5-4

S:\ND PROJECTS\Niagara Mohawk\Mapping\NI-MO-13.DWG



LEGEND

- PROPERTY BOUNDARY
- SOIL BORING
- SURFACE SOIL SAMPLE
- MONITORING WELL
- TEST PIT

NOTES:

1) BDL = BELOW DETECTION LIMIT
   J = ESTIMATED VALUE
   D = DILUTED SAMPLE
   U = NOT DETECTED AT LABORATORY REPORTING LIMIT
   V = ESTIMATED VALUE BASED ON VALIDATION CRITERIA

2) RESULTS SHOWN IN ***ITALICS*** INDICATE TOTAL TCL VOLATILE CONCENTRATIONS IN µg/L.

REFERENCES

1) MAP TITLED "MAP OF A SURVEY MADE FOR NIAGARA MOHAWK POWER CORP." BY VAN DUSEN & STEVES LAND SURVEYORS, LLC. DATED 11/20/2001,DWG. NO. 01248, S1.

north

0 10 20 40
SCALE: FEET
1"=40'

REV	DATE	BY	DESCRIPTION

SCALE: 1"=40'

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED: _____
DRAWN: _____
CHECKED: _____

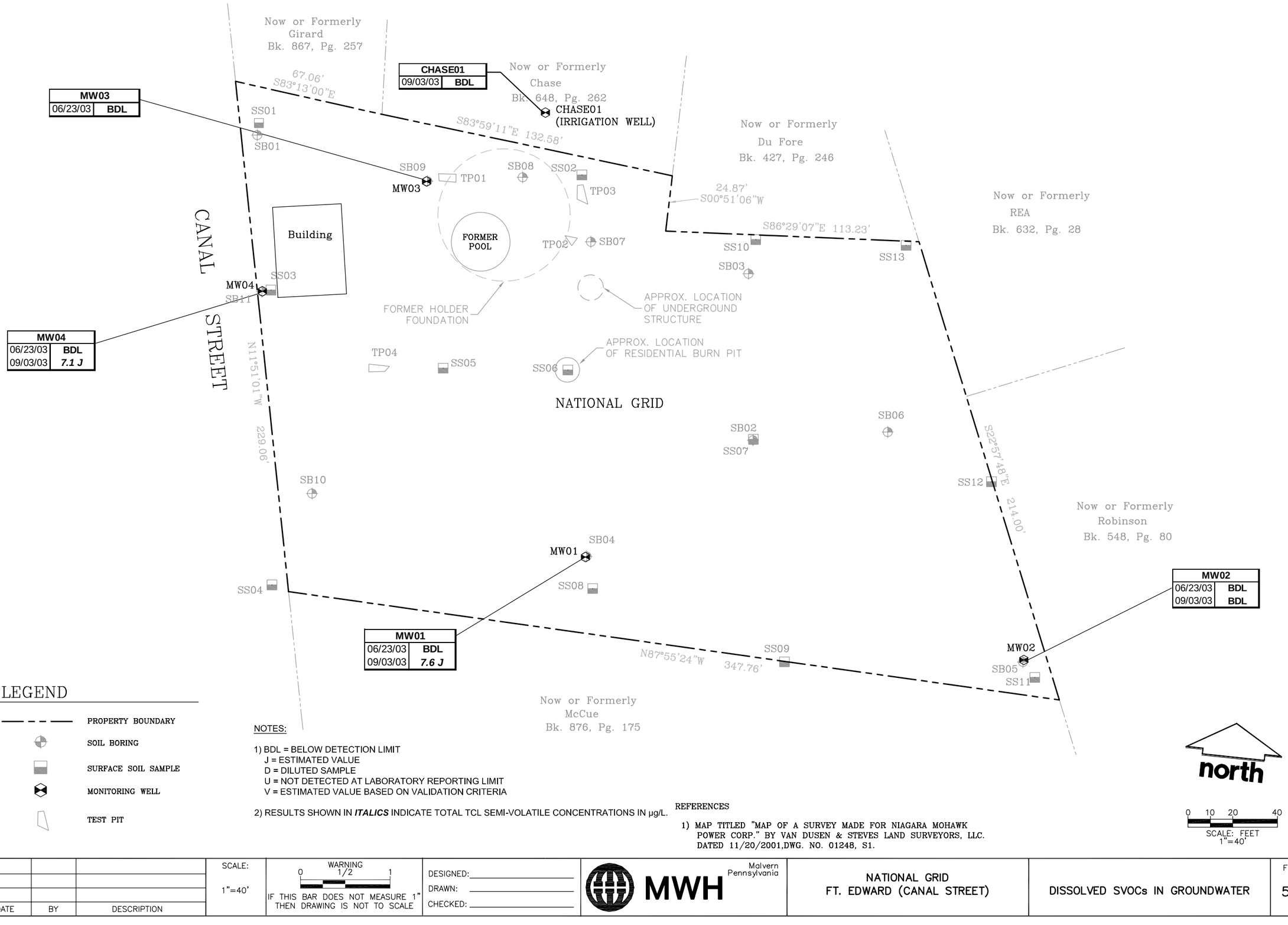
MWH Malvern Pennsylvania

NATIONAL GRID
FT. EDWARD (CANAL STREET)

DISSOLVED VOCs IN GROUNDWATER

FIGURE
5-5

S:\IND_PROJECTS\Niagara Mohawk\Mapping\NI-MO-04.DWG



LEGEND

- PROPERTY BOUNDARY
- SOIL BORING
- SURFACE SOIL SAMPLE
- MONITORING WELL
- TEST PIT

NOTES:

1) BDL = BELOW DETECTION LIMIT
   J = ESTIMATED VALUE
   D = DILUTED SAMPLE
   U = NOT DETECTED AT LABORATORY REPORTING LIMIT
   V = ESTIMATED VALUE BASED ON VALIDATION CRITERIA

2) RESULTS SHOWN IN ***ITALICS*** INDICATE TOTAL TCL SEMI-VOLATILE CONCENTRATIONS IN µg/L.

REFERENCES

1) MAP TITLED "MAP OF A SURVEY MADE FOR NIAGARA MOHAWK POWER CORP." BY VAN DUSEN & STEVES LAND SURVEYORS, LLC. DATED 11/20/2001,DWG. NO. 01248, S1.

north

0 10 20 40
SCALE: FEET
1"=40'

REV	DATE	BY	DESCRIPTION

SCALE: 1"=40'

WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED: _____
DRAWN: _____
CHECKED: _____

MWH Malvern Pennsylvania

NATIONAL GRID
FT. EDWARD (CANAL STREET)

DISSOLVED SVOCs IN GROUNDWATER

FIGURE
5-6

S:\IND PROJECTS\Niagara Mohawk\Mapping\NI-MO-05.DWG

TABLES

Table 2-1
Residential Non-Potable Well Sampling Results

Analyte	NYS Groundwater Standard or GV**	Chase 01 09/03/03
Volatiles (BTEX) by EPA Method 8021 (ug/L)		
Benzene	1	0.14 U
Ethylbenzene	5	0.18 U
Toluene	5	0.15 U
o-xylene	5*	0.19 U
m- & p-xylene	5*	0.22 U
Total BTEX	-	BDL
PAHs by EPA Method 8270 (ug/L)		
Naphthalene	10 (GV)	1.2 U
Acenaphthylene	none	1.2 U
Acenaphthene	20 (GV)	1.2 U
Fluorene	50 (GV)	1.1 U
Phenanthrene	50 (GV)	1.0 U
Anthracene	50 (GV)	1.3 U
Fluoranthene	50 (GV)	1.0 U
Pyrene	50 (GV)	1.0 U
Benzo(a)anthracene	0.002 (GV)	1.0 U
Chrysene	0.002 (GV)	1.6 U
Benzo(b)fluoranthene	0.002 (GV)	1.0 U
Benzo(k)fluoranthene	0.002 (GV)	2.7 U
Benzo(a)pyrene	non-detect	1.5 U
Benzo(g,h,i)perylene	none	1.3 U
Dibenz(a,h)anthracene	none	1.5 U
Indeno(1,2,3-cd)pyrene	0.002 (GV)	1.6 UV
Total PAHs	-	BDL

* Sum of all Xylenes

** Guidance Value

BDL Below Detection Limits of analytical instrument

U The compound was analyzed for but not detected at or above the quantitation limit indicated

V Considered estimated due to variance from QC criteria

Table 5-1
Surface Soils - TCL SVOCs

Analyte	RSCO	Location ID	SS01	SS02	SS03	SS04	SS05	SS06	SS07	SS08	SS09	SS10	SS11		SS12	SS13	
		Sample Date	06/03/2003	06/03/2003	06/04/2003	06/04/2003	06/04/2003	06/04/2003	06/04/2003	06/05/2003	06/05/2003	06/05/2003	06/09/2003	SS11-DUP 06/09/2003	06/12/2003	06/12/2003	SS13-DUP 6/12/2003
		Units															
2,4,5-Trichlorophenol	0.1	mg/Kg	1 U	1.4 U	1 U	0.97 U	1.1 U	**0.071 J**	1.1 U	1.2 U	1.1 U	1.2 U	0.89 U	0.92 U	1.2 U	1 U	1.1 U
2,4,6-Trichlorophenol	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
2,4-Dichlorophenol	0.4	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
2,4-Dimethylphenol	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
2,4-Dinitrophenol	0.2	mg/Kg	1 UV	1.4 UV	1 UV	0.97 UV	1.1 UV	1.1 UV	1.1 UV	1.2 UV	1.1 UV	1.2 UV	0.89 UV	0.92 UV	1.2 UV	1 UV	1.1 UV
2,4-Dinitrotoluene	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
2,6-dinitrotoluene	1.	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
2-Chloronaphthalene	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
2-Chlorophenol	0.8	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
2-Methylnaphthalene	36.4	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**0.15 J**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
2-Methylphenol (o-cresol)	0.1	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
2-Nitroaniline	0.43	mg/Kg	1 U	1.4 U	1 U	0.97 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	0.89 U	0.92 U	1.2 U	1 U	1.1 U
2-Nitrophenol	0.33	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
3,3'-Dichlorobenzidine	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 UV
3-Nitroaniline	0.5	mg/Kg	1 U	1.4 U	1 U	0.97 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	0.89 U	0.92 U	1.2 U	1 U	1.1 U
4,6-Dinitro-2-methylphenol	-	mg/Kg	1 UV	1.4 UV	1 UV	0.97 UV	1.1 UV	1.1 UV	1.1 UV	1.2 UV	1.1 UV	1.2 UV	0.89 UV	0.92 UV	1.2 UV	1 UV	1.1 UV
4-Bromophenyl phenyl ether	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
4-Chloro-3-methylphenol	0.24	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
4-Chloroaniline	0.22	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
4-Chlorophenyl phenyl ether	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
4-Nitroaniline	-	mg/Kg	1 U	1.4 U	1 U	0.97 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	0.89 U	0.92 U	1.2 U	1 U	1.1 UV
4-Nitrophenol	0.1	mg/Kg	1 U	1.4 U	1 U	0.97 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	0.89 UV	0.92 UV	1.2 UV	1 UV	1.1 UV
Acenaphthene	50	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**0.26 J**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	**0.055 J**	0.41 U	0.43 U
Acenaphthylene	41	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**1.2**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Acetophenone	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	**1.0**	0.42 U	0.46 U	**0.13 J**	0.37 U	0.47 U	0.41 U	0.43 U
Anthracene	50	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**7.2 D**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Atrazine	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Benzaldehyde	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 UV	0.37 U	0.47 U	0.41 U	0.43 U
Benzo(a)anthracene	0.224	mg/Kg	0.4 U	0.57 U	**0.081 J**	**0.091 J**	**0.1 J**	**9.5 D**	0.44 U	**0.12 J**	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	**0.077 J**	**0.051 V**
Benzo(a)pyrene	0.061	mg/Kg	0.4 U	0.57 U	0.4 U	**0.089 J**	**0.083 J**	**7.9 D**	0.44 U	**0.094 J**	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	**0.075 V**	**0.057 V**
Benzo(b)fluoranthene	1.1	mg/Kg	0.4 U	0.57 U	**0.095 J**	**0.1 J**	**0.087 J**	**8.3 D**	0.44 U	**0.12 J**	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	**0.1 V**	0.43 UV
Benzo(g,h,i)perylene	50	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**1.5**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 UV	0.43 UV
Benzo(k)fluoranthene	0.224	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**3.1**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 UV	0.43 UV
Biphenyl (diphenyl)	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**0.11 J**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
bis(2-Chloroethoxy) methane	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
bis(2-Chloroethyl) ether	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
bis(2-Chloroisopropyl) ether	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Caprolactam	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Carbazole	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**0.74**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Chrysene	0.4	mg/Kg	0.4 U	0.57 U	**0.079 J**	**0.081 J**	**0.084 J**	**8.2 D**	0.44 U	**0.11 J**	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	**0.097 J**	0.07 V
Cresols, M & P	0.9	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Di-n-butyl phthalate	8.1	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Dibenz(a,h)anthracene	0.014	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**0.92**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 UV	0.43 UV
Dibenzofuran	6.2	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**0.88**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Diethyl phthalate	7.1	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Fluoranthene	50	mg/Kg	0.4 U	0.57 U	**0.14 J**	**0.12 J**	**0.17 J**	**24 D**	0.44 U	**0.17 J**	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	**0.11 J**	0.43 U
Fluorene	50	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**1.8**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Hexachlorobenzene	0.41	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 UV	0.37 U	0.47 U	0.41 U	0.43 U
Hexachlorobutadiene	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 UV	0.37 UV	0.47 UV	0.41 UV	0.43 U
Hexachlorocyclopentadiene	-	mg/Kg	0.4 UV	0.57 UV	0.4 UV	0.38 UV	0.44 UV	0.44 UV	0.44 UV	0.47 UV	0.42 U	0.46 UV	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Hexachloroethane	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Indeno(1,2,3-c,d)pyrene	3.2	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	**2.9 JD**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 UV	0.43 UV
Isophorone	4.4	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
n-Nitrosodi-n-propylamine	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
n-Nitrosodiphenylamine	-	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Naphthalene	13	mg/Kg	0.4 U	0.57 U	0.4 U	**0.1 J**	0.44 U	**0.46**	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Nitrobenzene	0.2	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Pentachlorophenol	1.	mg/Kg	1 U	1.4 U	1 U	0.97 U	1.1 U	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	0.89 U	0.92 UV	1.2 UV	1 UV	1.1 U
Phenanthrene	50	mg/Kg	0.4 U	0.57 U	**0.072 J**	0.38 U	**0.046 J**	**14 D**	0.44 U	**0.056 J**	0.42 U	0.46 U	0.35 U	0.37 U	**0.13 J**	0.41 U	0.43 U
Phenol	0.03	mg/Kg	0.4 U	0.57 U	0.4 U	0.38 U	0.44 U	0.44 U	0.44 U	0.47 U	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	0.41 U	0.43 U
Pyrene	50	mg/Kg	0.4 U	0.57 U	**0.11 J**	**0.13 J**	**0.16 J**	**18 D**	0.44 U	**0.17 J**	0.42 U	0.46 U	0.35 U	0.37 U	0.47 U	**0.14 J**	0.43 UV
Total SVOCs	-	mg/Kg	BDL	BDL	**0.577 J**	**0.711 J**	**0.730 J**	**111.2 JD**	BDL	**1.84 J**	BDL	BDL	**0.13 J**	BDL	**0.185 J**	**0.599 JV**	**0.178 V**
Total PAHs		mg/kg	BDL	BDL	**0.577 J**	**0.711 J**	**0.730 J**	**109.4 JD**	BDL	**0.840 J**	BDL	BDL	BDL	BDL	**0.185 J**	**0.599 JV**	**0.178 J**
cPAHs	-	mg/Kg	BDL	BDL	**0.255 J**	**0.361 J**	**0.354 J**	**40.8 J**	BDL	**0.444 J**	BDL	BDL	BDL	BDL	**BDL**	**0.349 JV**	**0.108 V**

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Detection/Reporting Limit

Table 5-2
Surface Soils - TAL Metals

Analyte	RSCO	Location ID	SS01	SS02	SS03	SS04	SS05	SS06	SS07	SS08	SS09	SS10	SS11		SS12	SS13	
		Sample Date	06/03/2003	06/03/2003	06/04/2003	06/04/2003	06/04/2003	06/04/2003	06/04/2003	06/05/2003	06/05/2003	06/05/2003	06/09/2003	SS11-DUP 06/09/2003	06/12/2003	06/12/2003	SS13-DUP 06/12/2003
		Units															
Aluminum	**33,000**	**mg/Kg**	2,910	8,220	13,500	4,840	9,730	10,300	10,800	6,360	7,440	9,130	7,570	8,030	9,610	5,290	5,440
Antimony	**-**	**mg/Kg**	1.1 U	1.6 U	1.1 U	1.1 U	1.3 J	16 U	1.3 U	0.92 U	1.2 U	1.3 U	1.0 U	1.1 U	1.3 U	1.2 U	1.2 U
Arsenic	**7.5**	**mg/Kg**	1.2 J	8.6	4.3	3	6	6.1	6.2	4.5	2.1 J	3.9	2.8	2.7	2.8	3.1	3.3
Barium	**300**	**mg/Kg**	27.7 J	96.5	113	52.8	59.5	69.4	63.5	61.4	52.4	107	56.9	58.9	69.2	59.6	61.9
Beryllium	**0.16**	**mg/Kg**	0.16 J	0.39 J	0.59 J	0.29 J	0.46 J	0.43 J	0.49 J	0.31 J	0.4 J	0.43 J	0.4 J	0.43 J	0.53 J	0.28 J	0.27 J
Cadmium	**10**	**mg/Kg**	0.18 J	0.51 J	0.33 J	0.40 J	0.16 J	1.3 U	0.11 U	0.09 J	0.14 J	1.9	0.09 U	0.09 U	0.11 U	0.41 J	0.42 J
Calcium	**-**	**mg/Kg**	82,300	5,200	7,890	26,100	1,730	1,930	1,830	2,550	1,820	4,250	1,930	2,270	2,990	5,220	5,230
Chromium, total	**50**	**mg/Kg**	3.6	9.6	22.5	5.4	8.3	8.8	9.2	5	5.8	13.1	7.7	8.1	9.7	8.7	8.8
Cobalt	**30**	**mg/Kg**	2.1 J	4.9 J	11.5 J	4 J	4.4 J	4.7 J	4.8 J	2.8 J	3.8 J	6.6 J	4.4 J	4.8 J	5.4 J	4.2 J	4 J
Copper	**25**	**mg/Kg**	8.5	19.3	17.7	16	10.7	14.2	11.3	5.5	6.3	13.2	7.6	8.1	11.2	17.8	18
Iron	**2,000**	**mg/Kg**	6,080	14,100	21,800	10,000	13,700	16,600	15,200	13,500	10,400	13,000	13,600	15,800	18,400	10,900	11,200
Lead	**-**	**mg/Kg**	143	228	59.9	62.1	44.3	50.7	45.3	35.9	18	136	20.7	20.1	26.8	107	112
Magnesium	**-**	**mg/Kg**	6,610	1,340 J	5,390	9,390	1,200 J	1,320 J	1,360	876 J	1,200 J	1,340 J	1,010 J	1,100 J	1,350 J	1,570	1,690
Manganese	**-**	**mg/Kg**	141	310	704	258	204	217	210	307	203	211	382	434	382	235	232
Mercury	**0.1**	**mg/Kg**	0.12 U	0.2	0.14	0.14	0.14	0.18	0.13 U	0.09 U	0.12 U	0.28	0.1 U	0.11 U	0.13 U	0.12 U	0.12
Nickel	**13**	**mg/Kg**	4.8 J	12.7 J	19.1	8.6 J	5.4 J	5.7 J	5.8 J	3.8 J	5 J	6.1 J	4.2 J	4.8 J	5.8 J	6.7 J	7.4 J
Potassium	**43,000**	**mg/Kg**	358 J	440 J	1,570	671 J	171 J	204 J	194 J	221 J	316 J	369 J	199 J	217 J	245 J	375 J	384 J
Selenium	**2**	**mg/Kg**	0.82 J	2.2	2.3	1 J	2.1	1.8	1.9	0.59 U	0.74 U	1.9	0.65 U	0.67 U	0.83 U	0.74 U	0.79 U
Silver	**-**	**mg/Kg**	0.24 U	0.54 J	0.45 J	2.3 U	0.26 U	0.71 V	0.27 U	0.20 U	0.25 U	0.28 U	0.22 U	0.22 U	0.28 U	0.25 U	0.26 U
Sodium	**-**	**mg/Kg**	85.4 U	120 U	84.6 U	95.8 J	91.6 U	1,330 U	94.3 U	81.4 J	87.8 U	98.3 U	113 J	79.5 U	98.1 U	168 J	156 J
Thallium	**-**	**mg/Kg**	1.3 U	1.8 U	1.3 U	1.2 U	1.4 U	2.7 U	1.4 U	1.1 U	1.3 U	1.5 U	1.2 U	1.2 U	1.5 U	1.3 U	1.4 U
Vanadium	**150**	**mg/Kg**	8.1 J	22.5	30	11.2 J	20.6	21	22.4	15	15.2	20.9	18.9	21.6	25.4	15.6	16.3
Zinc	**20**	**mg/Kg**	43.9	173	131	211	47.4	50.9 V	56.8	56.2	51.0	202	35.7	48.9	64.6	274	172

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limit

Table 5-3
Surface Soils - Total Organic Carbon

Sample ID	SS01-02	SS02-01	SS03-01	SS04-01	SS05-01	SS06-01	SS07-01
Sample Date	6/3/2003	6/3/2003	6/4/2003	6/4/2003	6/4/2003	6/4/2003	6/4/2003
TOC (mg/kg)	4,000	4,500	2,500	5,800	2,700	5,000	4,200

Sample ID	SS08-01	SS09-01	SS10-01	SS09-01	SS12-01	SS13-02
Sample Date	6/5/2003	6/5/2003	6/5/2003	6/9/2003	6/12/2003	6/12/2003
TOC (mg/kg)	5,700	4,400	5,700	3,900	4,800	3,400

Table 5-4
Subsurface Soils- TCL VOCs

Analyte	RSCO	Location ID	SB03	SB04		SB05	SB07	SB08	SB09	SB10	SB11
		Field ID	SB03-02-6-8	SB04-07-26-28	SB04-07-26-28-DUP	SB05-07-28-30	SB07-07-32-34	SB08-01-1.5-3.5	SB09-06-30-32	SB10-01-2-4	SB11-06-32-34
		Sample Date	06/05/2003	06/06/2003	06/06/2003	06/09/2003	06/10/2003	06/10/2003	06/11/2003	06/11/2003	06/12/2003
		Units									
1,1,1-Trichloroethane	0.8	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,1,2,2-Tetrachloroethane	0.6	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,1,2-Trichloroethane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,1,2-Trichlorotrifluoroethane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,1-Dichloroethane	0.2	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,1-Dichloroethene	0.4	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,2,4-Trichlorobenzene	3.4	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,2-Dibromo-3-chloropropane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,2-Dibromoethane (ethylene Dibromide)	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,2-Dichlorobenzene	7.9	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,2-Dichloroethane	0.1	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,2-Dichloropropane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,3-Dichlorobenzene	1.6	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
1,4-Dichlorobenzene	8.5	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
2-Butanone	-	mg/Kg	0.012 UV	0.013 UV	0.013 UV	0.013 UV	0.013 UV	0.011 UV	0.012 UV	0.012 UV	0.013 UV
2-Hexanone	-	mg/Kg	0.012 UV	0.013 UV	0.013 UV	0.013 UV	0.013 UV	0.011 UV	0.012 UV	0.012 UV	0.013 UV
4-Methyl-2-pentanone	1.0	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Acetone	0.2	mg/Kg	0.012 UV	0.013 UV	0.013 UV	0.013 UV	0.013 UV	0.011 UV	0.012 UV	0.012 UV	0.013 UV
Benzene	0.06	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Bromodichloromethane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Bromoform	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 UV	0.013 UV	0.011 UV	0.012 UV	0.012 UV	0.013 UV
Bromomethane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Carbon disulfide	2.7	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Carbon tetrachloride	0.6	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Chlorobenzene	1.7	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Chloroethane	1.9	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Chloroform	0.3	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Chloromethane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
cis-1,2-Dichloroethylene	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
cis-1,3-Dichloropropene	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Cyclohexane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Dibromochloromethane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Dichlorodifluoromethane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Ethylbenzene	5.5	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Isopropylbenzene (Cumene)	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
m,p-Xylene	1.2	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Methyl Acetate	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Methyl tert-butyl Ether	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Methylcyclohexane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Methylene chloride	0.1	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
o-Xylene	1.2	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Styrene	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Tetrachloroethylene (PCE)	1.4	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Toluene	1.5	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
trans-1,2-Dichloroethene	0.3	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
trans-1,3-Dichloropropene	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Trichloroethylene (TCE)	0.7	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Trichlorofluoromethane	-	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Vinyl chloride	0.2	mg/Kg	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.012 U	0.013 U
Total BTEX	-	mg/Kg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total VOCS	-	mg/Kg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limit

Table 5-5
Subsurface Soils - BTEX

Analyte	RSCO	Location ID Field ID Sample Date Units	SB01 SB01-02-8-10 06/04/2003	SB01 SB01-03-14-16 06/04/2003	SB01 SB01-04-20-22 06/04/2003	SB01 SB01-05-24-26 06/04/2003	SB01 SB01-06-28-30 06/04/2003
Benzene	**0.06**	**mg/Kg**	0.0068 U	0.006 U	0.006 U	0.006 U	0.0058 UV
Ethylbenzene	**5.5**	**mg/Kg**	0.0068 U	0.006 U	0.006 U	0.006 U	0.0058 UV
m,p-Xylene	**1.2**	**mg/Kg**	0.0068 U	0.006 U	0.006 U	0.006 U	0.0058 UV
o-Xylene	**1.2**	**mg/Kg**	0.0068 U	0.006 U	0.006 U	0.006 U	0.0058 UV
Toluene	**1.5**	**mg/Kg**	0.0068 U	0.006 U	0.006 U	0.006 U	0.0058 UV
Total BTEX	**-**	**mg/Kg**	BDL	BDL	BDL	BDL	BDL

Analyte	RSCO	Location ID Field ID Sample Date Units	SB02 SB02-02-8-10 06/05/2003	SB02 SB02-03-12-14 06/05/2003	SB02 SB02-04-16-18 06/05/2003	SB02 SB02-05-20-22 06/05/2003	SB02 SB02-06-26-28 06/05/2003
Benzene	**0.06**	**mg/Kg**	0.0063 U	0.006 U	0.0057 UV	0.0064 U	0.0066 UV
Ethylbenzene	**5.5**	**mg/Kg**	0.0063 U	0.006 U	0.0057 UV	0.0064 U	0.0066 UV
m,p-Xylene	**1.2**	**mg/Kg**	0.0063 U	0.006 U	0.0057 UV	0.0064 U	0.0066 UV
o-Xylene	**1.2**	**mg/Kg**	0.0063 U	0.006 U	0.0057 UV	0.0064 U	0.0066 UV
Toluene	**1.5**	**mg/Kg**	0.0063 U	0.006 U	0.0057 UV	0.0064 U	0.0066 UV
Total BTEX	**-**	**mg/Kg**	BDL	BDL	BDL	BDL	BDL

Analyte	RSCO	Location ID Field ID Sample Date Units	SB03 SB03-03-8-10 06/05/2003	SB03 SB03-04-14-16 06/05/2003	SB03 SB03-05-18-20 06/05/2003	SB03 SB03-06-24-26 06/05/2003	SB03 SB03-07-28-30 06/05/2003
Benzene	**0.06**	**mg/Kg**	0.0062 U	0.0059 U	0.006 U	0.0061 U	0.006 U
Ethylbenzene	**5.5**	**mg/Kg**	0.0062 U	0.0059 U	0.006 U	0.0061 U	0.006 U
m,p-Xylene	**1.2**	**mg/Kg**	0.0062 U	0.0059 U	0.006 U	0.0061 U	0.006 U
o-Xylene	**1.2**	**mg/Kg**	0.0062 U	0.0059 U	0.006 U	0.0061 U	0.006 U
Toluene	**1.5**	**mg/Kg**	0.0062 U	0.0059 U	0.006 U	0.0061 U	0.006 U
Total BTEX	**-**	**mg/Kg**	BDL	BDL	BDL	BDL	BDL

Table 5-5
Subsurface Soils - BTEX

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB04				
			SB04-02-8-10 06/06/2003	SB04-03-12-14 06/06/2003	SB04-04-16-18 06/06/2003	SB04-05-20-22 06/06/2003	SB04-06-24-26 06/06/2003
Benzene	0.06	mg/Kg	0.0061 U	0.01	0.014	0.003 J	0.0057 U
Ethylbenzene	5.5	mg/Kg	0.0061 U	0.006 U	0.0058 U	0.0062 U	0.0057 U
m,p-Xylene	1.2	mg/Kg	0.0061 U	0.006 U	0.0058 U	0.0062 U	0.0057 U
o-Xylene	1.2	mg/Kg	0.0061 U	0.006 U	0.0058 U	0.0062 U	0.0057 U
Toluene	1.5	mg/Kg	0.0061 U	0.006 U	0.0058 U	0.0062 U	0.0057 U
Total BTEX	-	mg/Kg	BDL	0.01	0.014	0.003 J	BDL

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limit

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB05					
			SB05-02-6-8 06/09/2003	SB05-03-10-12 06/09/2003	SB05-04-14-16 06/09/2003	SB05-05-20-22 06/09/2003	SB05-05-20-22-DUP 06/09/2003	SB05-06-26-28 06/09/2003
Benzene	0.06	mg/Kg	0.0063 U	0.006 U	0.006 U	0.006 U	0.006 U	0.0068 U
Ethylbenzene	5.5	mg/Kg	0.0063 U	0.006 U	0.006 U	0.006 U	0.006 U	0.0068 U
m,p-Xylene	1.2	mg/Kg	0.0063 U	0.006 U	0.006 U	0.006 U	0.006 U	0.0068 U
o-Xylene	1.2	mg/Kg	0.0063 U	0.006 U	0.006 U	0.006 U	0.006 U	0.0068 U
Toluene	1.5	mg/Kg	0.0063 U	0.006 U	0.006 U	0.006 U	0.006 U	0.0068 U
Total BTEX	-	mg/Kg	BDL	BDL	BDL	BDL	BDL	BDL

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB06				
			SB06-02-6-8 06/09/2003	SB06-03-10-12 06/09/2003	SB06-04-16-18 06/09/2003	SB06-05-22-24 06/09/2003	SB06-05-28-30 06/09/2003
Benzene	0.06	mg/Kg	0.0063 U	0.006 U	0.0059 U	0.0061 U	0.0062 U
Ethylbenzene	5.5	mg/Kg	0.0063 U	0.006 U	0.0059 U	0.0061 U	0.0062 U
m,p-Xylene	1.2	mg/Kg	0.0063 U	0.006 U	0.0059 U	0.0061 U	0.0062 U
o-Xylene	1.2	mg/Kg	0.0063 U	0.006 U	0.0059 U	0.0061 U	0.0062 U
Toluene	1.5	mg/Kg	0.0063 U	0.006 U	0.0059 U	0.0061 U	0.0062 U
Total BTEX	-	mg/Kg	BDL	BDL	BDL	BDL	BDL

Table 5-5
Subsurface Soils - BTEX

Analyte	RSCO	Location ID Field ID Sample Date Units	SB07 SB07-02-10-12 06/10/2003	SB07 SB07-03-14-16 06/10/2003	SB07 SB07-04-18-20 06/10/2003	SB07 SB07-05-24-26 06/10/2003	SB07 SB07-06-28-30 06/10/2003
Benzene	**0.06**	**mg/Kg**	0.0059 U	0.006 U	0.006 U	0.0057 U	0.0062 U
Ethylbenzene	**5.5**	**mg/Kg**	0.0059 U	0.006 U	0.006 U	0.0057 U	0.0062 U
m,p-Xylene	**1.2**	**mg/Kg**	0.0059 U	0.006 U	0.006 U	0.0057 U	0.0062 U
o-Xylene	**1.2**	**mg/Kg**	0.0059 U	0.006 U	0.006 U	0.0057 U	0.0062 U
Toluene	**1.5**	**mg/Kg**	0.0059 U	0.006 U	0.006 U	0.0057 U	0.0062 U
Total BTEX	**-**	**mg/Kg**	BDL	BDL	BDL	BDL	BDL

Analyte	RSCO	Location ID Field ID Sample Date Units	SB08 SB08-02-5.5-7.5-DUP 06/10/2003
Benzene	**0.06**	**mg/Kg**	0.006 U
Ethylbenzene	**5.5**	**mg/Kg**	0.006 U
m,p-Xylene	**1.2**	**mg/Kg**	0.006 U
o-Xylene	**1.2**	**mg/Kg**	0.006 U
Toluene	**1.5**	**mg/Kg**	0.006 U
Total BTEX	**-**	**mg/Kg**	BDL

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limit

Analyte	RSCO	Location ID Field ID Sample Date Units	SB09 SB09-02-6-8 06/11/2003	SB09 SB09-03-12-14 06/11/2003	SB09 SB09-04-16-18 06/11/2001	SB09 SB09-05-22-24 06/11/2003	SB09 SB09-07-32-34 06/11/2003
Benzene	**0.06**	**mg/Kg**	0.0059 U	0.006 U	0.006 U	0.0057 U	0.0068 U
Ethylbenzene	**5.5**	**mg/Kg**	0.0059 U	0.006 U	0.006 U	0.0057 U	0.0068 U
m,p-Xylene	**1.2**	**mg/Kg**	0.0059 U	0.006 U	0.006 U	0.0057 U	0.0068 U
o-Xylene	**1.2**	**mg/Kg**	0.0059 U	0.006 U	0.006 U	0.0057 U	0.0068 U
Toluene	**1.5**	**mg/Kg**	0.0059 U	0.006 U	0.006 U	0.0057 U	0.0068 U
Total BTEX	**-**	**mg/Kg**	BDL	BDL	BDL	BDL	BDL

Table 5-5
Subsurface Soils - BTEX

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB10				
			SB10-03-10-12 06/11/2003	SB10-04-16-18 06/11/2003	SB10-05-22-24 06/11/2003	SB10-06-28-30 06/11/2003	SB10-07-30-32 06/11/2003
Benzene	**0.06**	**mg/Kg**	0.0063 U	0.0058 U	0.006 U	0.0057 U	0.0068 U
Ethylbenzene	**5.5**	**mg/Kg**	0.0063 U	0.0058 U	0.006 U	0.0057 U	0.0068 U
m,p-Xylene	**1.2**	**mg/Kg**	0.0063 U	0.0058 U	0.006 U	0.0057 U	0.0068 U
o-Xylene	**1.2**	**mg/Kg**	0.0063 U	0.0058 U	0.006 U	0.0057 U	0.0068 U
Toluene	**1.5**	**mg/Kg**	0.0063 U	0.0058 U	0.006 U	0.0057 U	0.0068 U
Total BTEX	**-**	**mg/Kg**	BDL	BDL	BDL	BDL	BDL

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB11					
			SB11-02-6-8 06/12/2003	SB11-03-14-16 06/12/2003	SB11-04-18-20 06/12/2003	SB11-05-22-24 06/12/2003	SB11-07-38-40 06/12/2003	SB11-07-38-40-DUP-RE 06/12/2003
Benzene	**0.06**	**mg/Kg**	0.006 U	0.0059 U	0.0059 U	0.006 U	0.007 UV	0.0072 UV
Ethylbenzene	**5.5**	**mg/Kg**	0.006 U	0.0059 U	0.0059 U	0.006 U	0.007 UV	0.0072 UV
m,p-Xylene	**1.2**	**mg/Kg**	0.006 U	0.0059 U	0.0059 U	0.006 U	0.007 UV	0.0072 UV
o-Xylene	**1.2**	**mg/Kg**	0.006 U	0.0059 U	0.0059 U	0.006 U	0.007 UV	0.0072 UV
Toluene	**1.5**	**mg/Kg**	0.006 U	0.0059 U	0.0059 U	0.006 U	0.007 UV	0.0072 UV
Total BTEX	**-**	**mg/Kg**	BDL	BDL	BDL	BDL	BDL	BDL

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limit

Table 5-6
Subsurface Soils - TCL SVOCs

Analyte	RSCO	Location ID Field ID Sample Date Units	SB03 SB03-02-6-8 06/05/2003	SB04 SB04-07-26-28 06/06/2003	SB04 SB04-07-26-28-DUP 06/06/2003	SB05 SB05-07-28-30 06/09/2003	SB07 SB07-07-32-34 06/10/2003	SB08 SB08-01-1.5-3.5 06/10/2003	SB09 SB09-06-30-32 06/11/2003	SB10 SB10-01-2-4 06/11/2003	SB11 SB11-06-32-34 06/12/2003
2,4,5-Trichlorophenol	**0.1**	**mg/Kg**	1 U	1.1 U	1 U	1.1 U	1.1 U	0.92 U	0.99 U	1 U	1.1 U
2,4,6-Trichlorophenol	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
2,4-Dichlorophenol	**0.4**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
2,4-Dimethylphenol	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
2,4-Dinitrophenol	**0.2**	**mg/Kg**	1 UV	1.1 UV	1 UV	1.1 UV	1.1 UV	0.92 UV	0.99 UV	1 UV	1.1 UV
2,4-Dinitrotoluene	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
2,6-dinitrotoluene	**1.0**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
2-Chloronaphthalene	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
2-Chlorophenol	**0.8**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
2-Methylnaphthalene	**36.4**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
2-Methylphenol (o-cresol)	**0.1**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
2-Nitroaniline	**0.43**	**mg/Kg**	1 U	1.1 U	1 U	1.1 U	1.1 U	0.92 U	0.99 U	1 U	1.1 U
2-Nitrophenol	**0.33**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
3,3'-Dichlorobenzidine	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
3-Nitroaniline	**0.5**	**mg/Kg**	1 U	1.1 U	1 U	1.1 U	1.1 U	0.92 U	0.99 U	1 U	1.1 U
4,6-Dinitro-2-methylphenol	**-**	**mg/Kg**	1 UV	1.1 UV	1 UV	1.1 UV	1.1 UV	0.92 UV	0.99 UV	1 UV	1.1 UV
4-Bromophenyl phenyl ether	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
4-Chloro-3-methylphenol	**0.24**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
4-Chloroaniline	**0.22**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
4-Chlorophenyl phenyl ether	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
4-Nitroaniline	**-**	**mg/Kg**	1 U	1.1 U	1 U	1.1 U	1.1 U	0.92 U	0.99 U	1 U	1.1 U
4-Nitrophenol	**0.1**	**mg/Kg**	1 U	1.1 U	1 U	1.1 UV	1.1 UV	0.92 UV	0.99 UV	1 UV	1.1 UV
Acenaphthene	**50**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Acenaphthylene	**41**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Acetophenone	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Anthracene	**50**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Atrazine	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Benzaldehyde	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Benzo(a)anthracene	**0.224**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Benzo(a)pyrene	**0.061**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Benzo(b)fluoranthene	**1.1**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Benzo(g,h,i)perylene	**50**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Benzo(k)fluoranthene	**0.224**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Biphenyl (diphenyl)	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
bis(2-Chloroethoxy) methane	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
bis(2-Chloroethyl) ether	**-**	**mg/Kg**	0.4 UV	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
bis(2-Chloroisopropyl) ether	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Caprolactam	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Carbazole	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Chrysene	**0.4**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Cresols, M & P	**0.9**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Di-n-butyl phthalate	**8.1**	**mg/Kg**	**0.046 J**	0.43 U	0.41 U	**0.059 J**	0.43 U	**0.039 J**	0.39 U	0.4 U	**0.058 J**
Dibenz(a,h)anthracene	**0.014**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Dibenzofuran	**6.2**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Diethyl phthalate	**7.1**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	**0.05 J**	0.39 U	0.4 U	0.42 U
Fluoranthene	**50**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Fluorene	**50**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Hexachlorobenzene	**0.41**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Hexachlorobutadiene	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 UV	0.37 UV	0.39 UV	0.4 UV	0.42 UV
Hexachlorocyclopentadiene	**-**	**mg/Kg**	0.4 UV	0.43 UV	0.41 UV	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Hexachloroethane	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Indeno(1,2,3-c,d)pyrene	**3.2**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Isophorone	**4.4**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
n-Nitrosodi-n-propylamine	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
n-Nitrosodiphenylamine	**-**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Naphthalene	**13**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Nitrobenzene	**0.2**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Pentachlorophenol	**1.0**	**mg/Kg**	1 U	1.1 U	1 U	1.1 UV	1.1 UV	0.92 UV	0.99 UV	1 UV	1.1 UV
Phenanthrene	**50**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Phenol	**0.03**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Pyrene	**50**	**mg/Kg**	0.4 U	0.43 U	0.41 U	0.43 U	0.43 U	0.37 U	0.39 U	0.4 U	0.42 U
Total SVOCs	**500**	**mg/Kg**	**0.046 J**	BDL	BDL	**0.059 J**	BDL	**0.089 J**	BDL	BDL	**0.058 J**
Total PAHs	**-**	**mg/Kg**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limit

Table 5-7
Subsurface Soils - PAHs

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB01						SB02						SB03
			SB01-01-4-6 06/04/2003	SB01-02-8-10 06/04/2003	SB01-03-14-16 06/04/2003	SB01-04-20-22 06/04/2003	SB01-05-24-26 06/04/2003	SB01-06-28-30 06/04/2003	SB02-01-4-6 06/05/2003	SB02-02-8-10 06/05/2003	SB02-03-12-14 06/05/2003	SB02-04-16-18 06/05/2003	SB02-05-20-22 06/05/2003	SB02-06-26-28 06/05/2003	SB03-01-2-4 06/05/2003
Acenaphthene	50	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Acenaphthylene	41	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Anthracene	50	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Benzo(a)anthracene	0.224	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Benzo(a)pyrene	0.061	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Benzo(b)fluoranthene	1.1	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Benzo(g,h,i)perylene	50	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Benzo(k)fluoranthene	0.224	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Chrysene	0.4	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Dibenz(a,h)anthracene	0.014	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Fluoranthene	50	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Fluorene	50	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Indeno(1,2,3-c,d)pyrene	3.2	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Naphthalene	13	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Phenanthrene	50	mg/Kg	0.4 U	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U
Pyrene	50	mg/Kg	**0.041 J**	0.44 U	0.4 U	0.39 U	0.39 U	0.38 U	0.4 U	0.42 U	0.39 U	0.38 U	0.42 U	0.43 U	0.4 U

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB03					SB04						SB05	
			SB03-03-8-10 06/05/2003	SB03-04-14-16 06/05/2003	SB03-05-18-20 06/05/2003	SB03-06-24-26 06/05/2003	SB03-07-28-30 06/05/2003	SB04-01-2-4 06/06/2003	SB04-02-8-10 06/06/2003	SB04-03-12-14 06/06/2003	SB04-04-16-18 06/06/2003	SB04-05-20-22 06/06/2003	SB04-06-24-26 06/06/2003	SB05-01-2-4 06/09/2003	SB05-02-6-8 06/09/2003
Acenaphthene	50	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Acenaphthylene	41	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Anthracene	50	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Benzo(a)anthracene	0.224	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Benzo(a)pyrene	0.061	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Benzo(b)fluoranthene	1.1	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Benzo(g,h,i)perylene	50	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Benzo(k)fluoranthene	0.224	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Chrysene	0.4	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Dibenz(a,h)anthracene	0.014	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Fluoranthene	50	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Fluorene	50	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.046 J	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Indeno(1,2,3-c,d)pyrene	3.2	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Naphthalene	13	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Phenanthrene	50	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U
Pyrene	50	mg/Kg	0.41 U	0.38 U	0.39 U	0.4 U	0.4 U	0.45 U	0.4 U	0.4 U	0.38 U	0.4 U	0.38 U	0.38 U	0.41 U

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limit

Table 5-7
Subsurface Soils - PAHs

Analyte	RSCO	Location ID	SB05					SB06						SB07	
		Field ID	SB05-03-10-12	SB05-04-14-16	SB05-05-20-22	SB05-05-20-22-DUP	SB05-06-26-28	SB06-01-0-2	SB06-02-6-8	SB06-03-10-12	SB06-04-16-18	SB06-05-22-24	SB06-05-28-30	SB07-01-4-6	SB07-02-10-12
		Sample Date	06/09/2003	06/09/2003	06/09/2003	06/09/2003	06/09/2003	06/09/2003	06/09/2003	06/09/2003	06/09/2003	06/09/2003	06/09/2003	06/10/2003	06/10/2003
		Units													
Acenaphthene	**50**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U
Acenaphthylene	**41**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U
Anthracene	**50**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U
Benzo(a)anthracene	**0.224**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U
Benzo(a)pyrene	**0.061**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 UV	0.39 U
Benzo(b)fluoranthene	**1.1**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 UV	0.39 U
Benzo(g,h,i)perylene	**50**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 UV	0.39 U
Benzo(k)fluoranthene	**0.224**	**mg/Kg**	0.39 U	0.39 UV	0.39 UV	0.39 UV	0.44 UV	0.47 UV	0.41 UV	0.4 UV	0.39 UV	0.4 UV	0.41 UV	0.41 UV	0.39 U
Chrysene	**0.4**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U
Dibenz(a,h)anthracene	**0.014**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 UV	0.39 U
Fluoranthene	**50**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U
Fluorene	**50**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U
Indeno(1,2,3-c,d)pyrene	**3.2**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U
Naphthalene	**13**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U
Phenanthrene	**50**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U
Pyrene	**50**	**mg/Kg**	0.39 U	0.39 U	0.39 U	0.39 U	0.44 U	0.47 U	0.41 U	0.4 U	0.39 U	0.4 U	0.41 U	0.41 U	0.39 U

Analyte	RSCO	Location ID	SB07				SB08		SB09					
		Field ID	SB07-03-14-16	SB07-04-18-20	SB07-05-24-26	SB07-06-28-30	SB08-02-5.5-7.5	SB08-02-5.5-7.5-DUP	SB09-01-0-2	SB09-02-6-8	SB09-03-12-14	SB09-04-16-18	SB09-05-22-24	SB09-07-32-34
		Sample Date	06/10/2003	06/10/2003	06/10/2003	06/10/2003	06/10/2003	06/10/2003	06/11/2003	06/11/2003	06/11/2003	06/11/2001	06/11/2003	06/11/2003
		Units												
Acenaphthene	**50**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	0.36 U	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Acenaphthylene	**41**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.08 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Anthracene	**50**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.055 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Benzo(a)anthracene	**0.224**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.25 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Benzo(a)pyrene	**0.061**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.3 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Benzo(b)fluoranthene	**1.1**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.3 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Benzo(g,h,i)perylene	**50**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.24 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Benzo(k)fluoranthene	**0.224**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.25 J**	0.39 U	0.39 UV	0.39 UV	0.38 UV	0.45 UV
Chrysene	**0.4**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.27 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Dibenz(a,h)anthracene	**0.014**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.058 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Fluoranthene	**50**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.41**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Fluorene	**50**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	0.36 U	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Indeno(1,2,3-c,d)pyrene	**3.2**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.21 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Naphthalene	**13**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	0.36 U	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Phenanthrene	**50**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.15 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U
Pyrene	**50**	**mg/Kg**	0.39 U	0.39 U	0.37 U	0.41 U	0.4 U	0.39 U	**0.35 J**	0.39 U	0.39 U	0.39 U	0.38 U	0.45 U

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limit

TABLE 5-7a

Niagara Mohawk - Fort Edward - Former MGP

Test Pit Laboratory Results - PAHs and Cyanide

Sample ID	NYSDEC RSCO*	TP-05	TP-06	TP-07	TP-08	TP-0800
Lab Sample		7-8 (feet)	Composite	Composite	Composite	Composite
Sample Date		1/10/05	1/10/05	1/10/05	1/10/05	1/10/05
PAHs and Cyanide (mg/Kg)						
Naphthalene	113	**0.30 J**	0.01 U	0.01 U	0.01 UV	0.09 UV
Acenaphthylene	41	**0.66 J**	0.01 U	0.01 U	0.01 UV	0.01 UV
Acenaphthene	50	0.03 U	0.01 U	0.01 U	0.01 UV	0.01 UV
Fluorene	50	0.04 U	0.01 U	0.01 U	0.01 UV	0.01 UV
Phenanthrene	50	**4.6**	0.01 U	0.01 U	**0.21 JV**	0.01 UV
Anthracene	50	**2.3**	0.01 U	0.01 U	**0.07 JV**	0.01 UV
Fluoranthene	50	**11 V**	0.01 U	**0.16 J**	**0.58**	**0.09 JV**
Pyrene	50	**10 V**	0.01 U	**0.16 J**	**0.57**	**0.09 JV**
Benzo(a)anthracene	0.22	**9.2**	0.01 U	**0.10 J**	**0.30 JV**	**0.05 JV**
Chrysene	0.40	**7.5**	0.01 U	**0.10 J**	**0.28 JV**	**0.05 JV**
Benzo(b)fluoranthene	1.1	**9.1**	0.02 U	**0.10 J**	**0.34 JV**	**0.05 JV**
Benzo(k)fluoranthene	1.1	**4.0**	0.01 U	**0.05 J**	**0.18 JV**	0.01 UV
Benzo(a)pyrene	0.06	**8.1**	0.01 U	**0.10 J**	**0.28 JV**	**0.05 JV**
Indeno(1,2,3-cd)pyrene	3.2	**4.6**	0.01 U	**0.05 J**	**0.18 JV**	0.01 UV
Dibenzo(a,h)anthracene	0.01	**1.2 J**	0.01 U	0.01 U	0.01 UV	0.01 UV
Benzo(ghi)perylene	50	**5.1**	0.02 U	**0.08 J**	**0.23 JV**	0.02 UV
Total PAHs	-	**78 JV**	BDL	**0.89 J**	**3.2 JV**	**0.37 JV**
Total Cyanide	-	**100 V**	**13**	**1.1**	**0.41 JV**	**0.62 JV**

V - The reported value is considered estimated due to variance from quality control criteria

B - The compound is also found in an associated blank.

U - The compound was analyzed for but not detected at or above the quantitation limit indicated.

J - Estimated Value: analyte detected at a concentration below the practical quantitation limit for the sample

* - RSCO = Recommended Soil Cleanup Objective

TP-0800 - Field Duplicate TP-08

Bold typeface indicates that the analyte was detected.

Shading indicates detected value is greater then NYSDEC RSCO

Table 5-8
Subsurface Soils - TAL Metals

Analyte	TAGM 4046 Eastern USA Background	RSCO	Location ID / Field ID / Sample Date / Units	SB03 SB03-02-6-8 06/05/2003	SB04 SB04-07-26-28 06/06/2003	SB04 SB04-07-26-28-DUP 06/06/2003	SB05 SB05-07-28-30 06/09/2003	SB07 SB07-07-32-34 06/10/2003	SB08 SB08-01-1.5-3.5 06/10/2003	SB09 SB09-06-30-32 06/11/2003	SB10 SB10-01-2-4 06/11/2003	SB11 SB11-06-32-34 06/12/2003
Aluminum	33000	SB	mg/Kg	2,570	9,730	7,550	6,120	13,000	8,500	2,600	8,110	4,600
Antimony	n/a	SB	mg/Kg	14.8 U	1.2 U	1.2 U	1.2 U	1.2 U	1.0 U	1.1 U	1.1 U	1.2 U
Arsenic	3 - 12	7.5 or SB	mg/Kg	2.5 U	1.6 J	2.1 J	1.8 J	2.6 J	1.3 J	2.6	4.9	1.2 J
Barium	15 - 600	300 or SB	mg/Kg	21.8 J	109	89.1	70.6	164	32.9 J	22.8 J	84.6	53.1
Beryllium	0 - 1.75	0.16 or SB	mg/Kg	0.17 J	0.52 J	0.41 J	0.33 J	0.65 J	0.38 J	0.19 J	0.45 J	0.25 J
Cadmium	0.1 - 1	10	mg/Kg	1.2 U	0.11 U	0.10 U	0.10 U	0.10 U	0.09 U	0.10 U	0.09 U	0.10 U
Calcium	130-35,000	SB	mg/Kg	1,340	21,400	20,000	16,400	21,700	1,950	1,680	4,690	6,910
Chromium, total	1.5 - 40	50	mg/Kg	3.7	13.9	11	9.8	20.9	7.2	4.3	6.8	7.2
Cobalt	2.5 - 60	30 or SB	mg/Kg	2.8 J	10.5 J	8.4 J	7.8 J	12.1 J	4.9 J	4.9 J	4.7 J	6.0 J
Copper	1 - 50	25 or SB	mg/Kg	3.2 J	16.8	14.3	14.2	23.2	5.7	13.3	6.8	12.8
Iron	2,000-550,000	2,000 or SB	mg/Kg	4,710	22,000	17,900	14,500	30,800	13,600	6,210	12,200	12,600
Lead	400*	400*	mg/Kg	2.4	6.1	7.1	3.7	8.5	2.2	5.2	11.3	4.2
Magnesium	100 - 5,000	SB	mg/Kg	1110 J	8,450	7,460	6,190	9,830	1,340	1,790	1,420	4,060
Manganese	50 - 5,000	SB	mg/Kg	22.9	417	380	280	529	201	44	254	174
Mercury	0.001 - 0.2	0.1	mg/Kg	0.12 U	0.13 U	0.13 U	0.12 U	0.12 U	0.11 U	0.11 U	0.11 U	0.13 U
Nickel	0.5 - 25	13 or SB	mg/Kg	3.2 J	20.7	16.4	14.1	25.6	6.2 J	9.1 J	7.9 J	11.2
Potassium	8,500-43,000	SB	mg/Kg	139 J	1,490	1,130 J	879 J	4,140	309 J	550 J	318 J	1,320
Selenium	0.1 - 3.9	2 or SB	mg/Kg	1.2 U	0.79 U	0.74 U	0.76 U	0.77 U	0.65 U	0.72 U	0.71 U	0.77 U
Silver	n/a	SB	mg/Kg	2.5 UV	0.26 U	0.25 U	0.25 U	0.26 U	0.22 U	0.24 U	0.24 U	0.26 U
Sodium	6,000-8,000	SB	mg/Kg	101 J	117 J	249 J	125 J	2,400	92.4 J	323 J	83.8 U	892 J
Thallium	n/a	SB	mg/Kg	2.5 U	1.4 U	1.3 U	1.4 U	1.4 U	1.2 U	1.3 U	1.3 U	1.4 U
Vanadium	1 - 300	150 or SB	mg/Kg	13.4	23.8	16.9	15.8	27.5	22.4	8 J	17.8	12.8
Zinc	18507	20 or SB	mg/Kg	25	53.4	44.9	43.7	62.4	31	37.9	38	34.5

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limit
* - USEPA's Interim Lead Hazard Guidance (1994) established a residential screening level of 400 ppm
SB - Site Background
n/a - Not Available

Table 5-8a
Subsurface Soils - Cyanide

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB01						SB02					
			SB01-01-4-6 6/4/2003	SB01-02-8-10 6/4/2003	SB01-03-14-16 6/4/2003	SB01-04-20-22 6/4/2003	SB01-05-24-26 6/4/2003	SB01-06-28-30 6/4/2003	SB02-01-4-6 6/5/2003	SB02-02-8-10 6/5/2003	SB02-03-12-14 6/5/2003	SB02-04-16-18 6/5/2003	SB02-05-20-22 6/5/2003	SB02-06-26-28 6/5/2003
Cyanide	n/a	mg/kg	0.612 U	0.680 U	0.602 U	0.604 U	0.603 U	0.579 U	0.617 U	0.636 U	0.600 U	0.575 U	0.644 U	0.662 U
Amenable Cyanide	n/a	mg/kg	0.61 U	0.68 U	0.60 U	0.60 U	0.60 U	0.58 U	0.62 U	0.64 U	0.60 U	0.57 U	0.64 U	0.66 U

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB03						SB04					
			SB03-01-2-4 6/5/2003	SB03-03-8-10 6/5/2003	SB03-04-14-16 6/5/2003	SB03-05-18-20 6/5/2003	SB03-06-24-26 6/5/2003	SB03-07-28-30 6/5/2003	SB04-01-2-4 6/6/2003	SB04-02-8-10 6/6/2003	SB04-03-12-14 6/6/2003	SB04-04-16-18 6/6/2003	SB04-05-20-22 6/6/2003	SB04-06-26-28 6/6/2003
Cyanide	n/a	mg/kg	0.605 U	0.627 U	0.587 U	0.605 U	0.608 U	0.604 U	0.688 U	0.608 U	0.604 U	0.581 U	0.616 U	0.577 U
Amenable Cyanide	n/a	mg/kg	0.60 U	0.63 U	0.59 U	0.60 U	0.61 U	0.60 U	0.69 U	0.61 U	0.60 U	0.58 U	0.62 U	0.58 U

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB05							SB06					
			SB05-01-2-4 6/9/2003	SB05-02-6-8 6/9/2003	SB05-03-10-12 6/9/2003	SB05-04-14-16 6/9/2003	SB05-05-20-22 6/9/2003	SB05-05-20-22FD 6/9/2003	SB05-06-26-28 6/9/2003	SB06-01-0-2 6/9/2003	SB06-02-6-8 6/9/2003	SB06-03-10-12 6/9/2003	SB06-04-16-18 6/9/2003	SB06-05-22-24 6/9/2003	SB06-06-28-30 6/9/2003
Cyanide	n/a	mg/kg	0.587 U	0.631 U	0.592 U	0.599 U	0.600 U	0.600 U	0.679 U	0.711 U	0.631 U	0.600 U	0.590 U	0.609 U	0.622 U
Amenable Cyanide	n/a	mg/kg	0.59 U	0.63 U	0.59 U	0.60 U	0.60 U	0.60 U	0.68 U	0.71 U	0.63 U	0.60 U	0.59 U	0.61 U	0.62 U

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB07						SB08	
			SB07-01-4-6 6/10/2003	SB07-02-10-12 6/10/2003	SB07-03-14-16 6/10/2003	SB07-04-18-20 6/10/2003	SB07-05-24-26 6/10/2003	SB05-07-28-30 6/10/2003	SB08-02-5.5-7.5 6/10/2003	SB08-02-5.5-7.5FD 6/10/2003
Cyanide	n/a	mg/kg	0.623 U	0.590 U	0.598 U	0.600 U	0.569 U	0.616 U	0.611 U	0.602 U
Amenable Cyanide	n/a	mg/kg	0.62 U	0.59 U	0.60 U	0.60 U	0.57 U	0.62 U	0.61 U	0.60 U

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB09						SB10					
			SB09-01-0-2 6/11/2003	SB09-02-6-8 6/11/2003	SB09-03-12-14 6/11/2003	SB09-04-16-18 6/11/2003	SB09-05-22-24 6/11/2003	SB09-07-32-34 6/11/2003	SB10-02-4-6 6/11/2003	SB10-03-10-12 6/11/2003	SB10-04-14-16 6/11/2003	SB10-05-22-24 6/11/2003	SB10-06-28-30 6/11/2003	SB10-07-30-32 6/12/2003
Cyanide	n/a	mg/kg	0.550 U	0.591 U	0.599 U	0.599 U	0.577 U	0.690 U	0.614 U	0.632 U	0.583 U	0.595 U	0.577 U	0/687 U
Amenable Cyanide	n/a	mg/kg	0.55 U	0.59 U	0.60 U	0.60 U	0.58 U	0.69 U	0.61 U	0.63 U	0.58 U	0.59 U	0.58 U	0.69 U

Analyte	RSCO	Location ID / Field ID / Sample Date / Units	SB11						
			SB11-01-4-6 6/12/2003	SB11-02-6-8 6/12/2003	SB11-03-14-16 6/12/2003	SB11-04-18-20 6/12/2003	SB11-05-22-24 6/12/2003	SB11-07-38-40 6/12/2003	SB11-07-38-40FD 6/12/2003
Cyanide	n/a	mg/kg	0.612 U	0.593 U	0.587 U	0.587 U	0.594 U	0.703 U	0.727 U
Amenable Cyanide	n/a	mg/kg	0.61 U	0.59 U	0.59 U	0.59 U	0.59 U	0.70 U	0.73 U

n/a - Not Available
U - Not detected at Laboratory Reporting Limit
J - Estimated value

Analysis by Method SW 9012

Table 5-8b
Subsurface Soils- Total Organic Carbon

Analyte	RSCO	Sample ID Sample Date Units	SB01-02-8-10 6/4/2003	SB02-02-8-10 6/5/2003	SB03-03-8-10 6/5/2003	SB04-01-2-4 6/6/2003	SB05-01-2-4 6/9/2003	SB06-05-28-30 6/9/2003
Total Organic Carbon	-	mg/kg	5,100	3,600	4,100	3,300	5,000	7,400

Analyte	RSCO	Sample ID Sample Date Units	SB07-01-4-6 6/10/2003	SB08-01-1.5-3.5 6/10/2003	SB09-06-30-32 6/13/2003	SB10-01-2-4 6/11/2003	SB11-02-6-8 6/12/2003
Total Organic Carbon	-	mg/kg	3,300	4,600	3,100	5,700	3,500

Table 5-9
Geotechnical Parameters

Sample ID Sample Depth (Feet) Sample Date	SB-10 32-34 6/11/03	SB-11 42-44 6/12/03
Porosity	0.34	0.48
Permeability (cm/sec)	1.80E-05	4.60E-08
Bulk Density	106.42	83.79
Grain Size	*	**
USCS Classification	SC	SC
Atterberg Limits	12	11
% Moisture	19.47	35.34
Specific Gravity	2.59	2.56

* 0.6 % Gravel, 77% Sand, 22.4 % Fines
** 5.4 % Gravel, 86.1% Sand, 8.5% Fines

Table 5-10
Groundwater - TCL VOCs

Analyte	NYSDEC Stdandard	Loc Id Field Id Sample Date Units	MW01 MW01-01 06/23/2003	MW01 MW01-02 09/03/2003	MW02 MW02-01 06/23/2003	MW02 MW02-02 09/03/2003	MW02-DUP MW02-02-DUP 09/03/2003	MW03 MW03-01 06/23/2003	MW03-DUP MW03-01-DUP 06/23/2003	MW04 MW04-01 06/23/2003	MW04 MW04-02 09/03/2003
1,1,1-Trichloroethane	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	1	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichlorotrifluoroethane	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane (ethylene Dibromide)	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	3	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	0.6	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	1	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	3	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	3	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	50	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	50	ug/L	10 UV	10 U	10 UV	10 U	10 U	10 UV	10 UV	10 UV	10 U
Benzene	1	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	50	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromoform	50	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromomethane	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	60	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	7	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloromethane	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethylene	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cyclohexane	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dichlorodifluoromethane	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Isopropylbenzene (Cumene)	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
m,p-Xylene	5	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Methyl Acetate	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl Ether	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylcyclohexane	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
o-Xylene	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Styrene	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethylene (PCE)	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Trichloroethylene (TCE)	5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Trichlorofluoromethane	-	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	2	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
VOCS, Total	-	ug/L	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Lim

Table 5-11
Groundwater - TCL SVOCs

Analyte	NYSDEC Standard	Loc Id Field Id Sample Date Units	MW01 MW01-01 06/23/2003	MW01 MW01-02 09/03/2003	MW02 MW02-01 06/23/2003	MW02 MW02-02 09/03/2003	MW02-DUP MW02-02-DUP 09/03/2003	MW03 MW03-01 06/23/2003	MW03-DUP MW03-01-DUP 06/23/2003	MW04 MW04-01 06/23/2003	MW04 MW04-02 09/03/2003
2,4,5-Trichlorophenol	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2,4,6-Trichlorophenol	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2,4-Dichlorophenol	5	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2,4-Dimethylphenol	50	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2,4-Dinitrophenol	10	ug/L	21 UV	21 U	21 UV	20 U	21 U	21 UV	21 UV	21 UV	21 U
2,4-Dinitrotoluene	5	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2,6-dinitrotoluene	5	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2-Chloronaphthalene	10	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2-Chlorophenol	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2-Methylnaphthalene	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2-Methylphenol (o-cresol)	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2-Nitroaniline	5	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
2-Nitrophenol	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
3,3'-Dichlorobenzidine	5	ug/L	21 U	21 U	21 U	20 U	21 U	21 U	21 U	21 U	21 U
3-Nitroaniline	5	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
4,6-Dinitro-2-methylphenol	-	ug/L	21 UV	21 U	21 UV	20 U	21 U	21 UV	21 UV	21 UV	21 U
4-Bromophenyl phenyl ether	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
4-Chloro-3-methylphenol	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
4-Chloroaniline	5	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
4-Chlorophenyl phenyl ether	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
4-Nitroaniline	5	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
4-Nitrophenol	-	ug/L	21 U	21 U	21 U	20 U	21 U	21 U	21 U	21 U	21 U
Acenaphthene	20	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Acenaphthylene	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Acetophenone	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Anthracene	50	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Atrazine	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Benzaldehyde	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Benzo(a)anthracene	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Benzo(a)pyrene	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Benzo(b)fluoranthene	0.002	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Benzo(g,h,i)perylene	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Benzo(k)fluoranthene	0.002	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Biphenyl (diphenyl)	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
bis(2-Chloroethoxy) methane	5	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
bis(2-Chloroethyl) ether	1	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
bis(2-Chloroisopropyl) ether	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Caprolactam	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Carbazole	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Chrysene	0.002	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Cresols, M & P	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Di-n-butyl phthalate	50.	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Dibenz(a,h)anthracene	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Dibenzofuran	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Diethyl phthalate	50	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Fluoranthene	50	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Fluorene	50	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Hexachlorobenzene	0.04	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Hexachlorobutadiene	0.05	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Hexachlorocyclopentadiene	5	ug/L	10 U	10 U	11 UV	10 U	10 U	10 U	10 U	11 UV	10 U
Hexachloroethane	5	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Indeno(1,2,3-c,d)pyrene	0.002	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Isophorone	50	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
n-Nitrosodi-n-propylamine	-	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
n-Nitrosodiphenylamine	50	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Naphthalene	10	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Nitrobenzene	0.4	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Pentachlorophenol	1	ug/L	21 U	21 U	21 U	20 U	21 U	21 U	21 U	21 U	21 U
Phenanthrene	50	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
Phenol	1	ug/L	10 U	**7.6 J**	11 U	10 U	10 U	10 U	10 U	11 U	**7.1 J**
Pyrene	50	ug/L	10 U	10 U	11 U	10 U	10 U	10 U	10 U	11 U	10 U
SVOCs, Total	-	ug/L	BDL	**7.6 J**	BDL	BDL	BDL	BDL	BDL	BDL	**7.1 J**

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limit

Shading indicates result exceeds NYSDEC Standards or Guidance value

Table 5-12
Groundwater - TAL Metals

Analyte	NYSDEC Standard	Location ID Field ID Sample Date Units	MW01 MW01-01 06/23/2003	MW01 MW01-02 09/03/2003	MW02 MW02-01 06/23/2003	MW02 MW02-02 09/03/2003	MW03 MW03-01 06/23/2003	MW03-DUP MW03-01-DUP 06/23/2003	MW04 MW04-01 06/23/2003	MW04 MW04-02 09/03/2003
Aluminum	100	ug/L	200 U	83.6 J	130 J	77.4 J	65.4 J	91.4 J	72.6 J	74.9 J
Antimony	3	ug/L	60 U	60 U	60 U	60 U	60 U	60 U	5.2 J	60 U
Arsenic	25	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Barium	1000	ug/L	232	196 J	119 J	99.9 J	241	243	357	295
Beryllium	3	ug/L	5 U	0.43 J	0.63 J	0.43 J	0.63 J	0.62 J	0.69 J	0.45 J
Cadmium	5	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	n/a	ug/L	42700	35600	36100	30400	89900	88400	92500	82000
Chromium, total	50	ug/L	4.1 J	10 U	0.74 J	10 U	10 U	10 U	10 U	10 U
Cobalt	n/a	ug/L	50 U	50 U	0.74 J	50 U	50 U	0.84 J	50 U	50 U
Copper	200	ug/L	2.3 J	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Iron	300	ug/L	7860	6910	8980	7920	10100	10100	20400	16900
Lead	25	ug/L	3 U	2 J	3 U	3 U	3 U	3 U	3 U	2 J
Magnesium	35000	ug/L	7560 V	5680	7210 E	5980	14400 E	14300 E	20200 E	15800
Manganese	300	ug/L	453 V	354	230 E	193	967 E	941 E	971 E	784
Mercury	0.7	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	ug/L	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U
Potassium	n/a	ug/L	5200 V	4250 JE	2130 JE	1770 JE	6220 E	6000 E	7240 E	6620 E
Selenium	10	ug/L	5 UN	5 U	5 UN	5 U	5 UN	5 UN	5 UN	5 U
Silver	50	ug/L	1.8 V	10 U	10 UN	10 U	10 UN	10 UN	10 UN	1.7 J
Sodium	20000	ug/L	7960	8470	4680 J	3890 J	51600	50800	50900	55800
Thallium	0.5	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vanadium	n/a	ug/L	3.5 J	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Zinc	2000	ug/L	20.8	25.5	18.1 J	23	17.8 J	22.5	28.5	22.7

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limi

Table 5-13
Groundwater - Natural Attenuation Parameters

Analyte	Location ID Field ID Sample Date Units	MW01 MW01-01 06/23/2003	MW01 MW01-02 09/03/2003	MW02 MW02-01 06/23/2003	MW02 MW02-02 09/03/2003	MW03 MW03-01 06/23/2003	MW03-DUP MW03-01-DUP 06/23/2003	MW04 MW04-01 06/23/2003	MW04 MW04-02 09/03/2003
Alkalinity, total (as CaCO3)	mg/L	90	100	90	96	180	180	200	240
Ammonia	mg/L	0.6	-	0.67	-	0.32	0.2 U	0.31	-
Biologic oxygen demand, five day	mg/L	25	12	28	14	31	28	19	9.4
Carbon dioxide	mg/L	56	40	50	27	100	100	100	84
Chemical oxygen demand	mg/L	5 U	-	5 U	-	5 U	5 U	5 U	-
Chloride (as Cl)	mg/L	38	32	19	17	120	120	130	110
Cyanide	mg/L	0.063	-	0.02	-	0.01 U	0.01 U	0.01 U	-
Cyanide, amenable to chlorination	mg/L	0.01 U	-	0.01 U	-	0.01 U	0.01 U	0.01 U	-
Ferric Iron	mg/L	7.9	6.9	9	7.9	10.1	10.1	20.4	16.9
Ferrous Iron	mg/L	0.1 U	0.1 B	0.1 U	0.1 B	0.1 U	0.1 U	0.1 U	0.1 B
Methane	mg/L	0.01 U	0.08 U	0.01 U	0.05 U	0.01 U	0.01 U	0.01 U	0.04 U
Nitrate	mg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Phosphorus, total orthophosphate (as PO4)	mg/L	0.01 U	-	0.01 U	-	0.01 U	0.01 U	0.01 U	-
Sulfate (as SO4)	mg/L	280	27	19	14	77	47	130	140
Total dissolved solids	mg/L	341	257	220	198	697	692	781	604
Total Plate Count	c/1ml	150	66	410	3400	220	180	370	-

DUP = Field Duplicate Sample; J = Estimated value, D = Diluted sample; U = Not detected at laboratory reporting limit; V = Estimated value based on validation criteria; BDL = Result Below Reporting Limi