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REPORT

Remedial Investigation
South First Street Site
Fulton, New York

National Grid

May 2006

O'BRIEN & GERE

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FINAL REPORT

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Fulton, New York

National Grid

STATE OF NEW YORK
JAMES R. HECKATHORNE
EXCELSIOR
56609
LICENSED PROFESSIONAL ENGINEER

James R. Heckathorne, P.E.
Vice President

May 2006

O'BRIEN & GERE
ENGINEERS, INC.

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1. Introduction

1.1. Project background

The Remedial Investigation (RI) of the South First Street former manufactured gas plant (MGP) Site in Fulton, New York is being conducted by National Grid pursuant to an Order on Consent with the New York State Department of Environmental Conservation (NYSDEC), dated November 2003 (Index # A-0473-0000). The investigative activities at the Site were initiated in 1996 under an earlier Order on Consent dated December 7, 1992 between the NYSDEC and the Niagara Mohawk Power Corporation. The 2003 Order on Consent supersedes the 1992 Order. Niagara Mohawk is now operating as National Grid.

Pursuant to the agreements with NYSDEC noted above, National Grid implemented a Preliminary Site Assessment and Interim Remedial Measures (PSA/IRM) Study at the South First Street Site between July 1996 and September 1996. The results of the PSA did not indicate conditions that would warrant the completion of an interim remedial measure (IRM). However, based on the results of the PSA a Remedial Investigation (RI) was recommended to further evaluate horizontal and vertical extent of chemical constituents.

This RI Report serves to summarize the RI conducted at the South First Street Site. Results of the RI have been integrated with the results of the PSA/IRM Study to provide characterization of Site conditions.

1.2. Site description and history

The South First Street Site, located in Fulton, NY (Figure 1-1), encompasses approximately 1.04 acres. The Site is made up of two areas, Area 1 and Area 2, which are separated by South First Street (Figure 1-2). Both Area 1 and Area 2 are owned by National Grid. Area 1 is located on the northeast side and Area 2 is located on the southwest side of South First Street. Presently, Area 1 is an undeveloped grass covered lot bounded by Conrail railroad tracks to the northeast and residential properties to the northwest and southeast. The topography in this area slopes to the southwest. The railroad tracks are elevated approximately 10 ft above the surface of Area 1.

Area 2 is a vacant, asphalt-paved lot. Within the lot is a concrete slab where the former Crossroads Gospel Tabernacle Ministries Church (CGTMC) building was located. Area 2 is bounded by the Oswego River to the southwest and residential properties to the northwest and southeast. The topography of the Site is generally flat, sloping gently to the southwest toward the Oswego River. The surface water level in the Oswego River is approximately 10 feet below ground surface of Area 2. The surface of Area 2 is approximately four feet above the surrounding properties.

There are a number of properties surrounding the Site as shown on Figure 1-2. Land between Area 2 and the Oswego River is owned by the New York State Canal Corporation. Land to the southwest of Area 2 is owned by the City of Fulton and is used as a park. Land northwest and southeast of Area 2 is owned by private property owners. As with the Area 2 parcel, land between the residential properties and the river is owned by the New York State Canal Corporation.

Prior to construction of the MGP in 1902, the Site was generally vacant land.

The following historical information was developed by National Grid based on review of historical records and maps. This information has been excerpted from the Final Work Plan for the PSA/IRM dated June 1996 as prepared by National Grid. Figure 1-3 depicts Site historical features.

In 1902, the Fulton Fuel and Light Company built the gas plant on South First Street, which began operation on February 20, 1903. The gas plant itself was located on Area 2, west of South First Street. A gas holder and oil tank were located on Area 1, east of South First Street. By 1906, a gas tank was constructed on Area 1 east of the oil tank (Sanborn 1906) (Niagara Mohawk 1996).

By 1911, two additional gas tanks, a coke shed and a small oil house were constructed on Area 2 west of the gas plant (Sanborn 1911). Records also indicate that by 1911, and possibly earlier, a tar well, approximately 4 ft in diameter, was located between the southern corner of the coal shed and the northern corner of the coke shed on a survey map.

A 1924 Sanborn Fire Insurance Map indicates the coke shed was removed in Area 2 and a concentrator house was added east of the coke shed location. In Area 1, a 30,000 cubic foot holder and second gas tank were added between the first holder and the railroad tracks.

In the late 1920's, natural gas was discovered locally and the gas plant was only used to supplement the peak demand periods. By 1932, a pipeline from Syracuse brought natural gas to Fulton and the gas plant ceased operation. A natural gas regulator station was located on Area 1 until 1984.

In 1947, the southern half of Area 2 was used as a used car lot. From 1958 to 1978 the southern half of Area 2 was used as Foster's Garden Center and Outdoor Power Equipment. In 1980 Area 2 was occupied by Modern Floor Covering (Fulton City Directories 1947-1980). The former Garden Center building was converted and used as the CGTMC. The CGTMC building and property was purchased by National Grid and subsequently demolished in January 1992.

In late July/early August 1993, National Grid cleared debris, and graded and seeded the northeastern half of Area 1 in response to complaints from adjacent landowners regarding the aesthetics of the Site. Prior to initiating the work, the western half of Area 1 was well-maintained lawn. The eastern half of Area 1 was undulating, overgrown, and contained large concrete saddles. The work consisted of the removal of the concrete saddles and general debris; grubbing of vegetation; placement of 102 cubic yards of bank-run gravel to fill low areas; placement of 36 cubic yards of topsoil; and hydro-seeding. Area 1 has subsequently been maintained by periodic mowing of the grass.

Review of historical maps from the Site area at the Friend of Fulton Historical Society indicates that the Oswego Canal was constructed prior to 1827. Excavation and subsequent maintenance of the canal created an island of dredge spoils west of the Site named Yelverton Island. Aerial photograph review indicates that the canal was no longer present in 1938. Presumably, the canal was backfilled to grade prior to 1938. Based on an interview with City of Fulton Water Department representative Roger Parsons, the canal was partially backfilled and the edge of the former canal served as an open drainage ditch. Sections of piping were subsequently added as the ditch was filled in to provide useable land.

1.3. Regional setting

1.3.1. Regional geology

The South First Street Site is located in southwestern Oswego County, along the Oswego River approximately 10 miles south of Lake Ontario and within the glaciated hummocky lowlands of the Lake Ontario lowland (USGS 1982). The Lake Ontario lowland is covered by glacial and lake deposits which are underlain by a series of sandstone and shale formations that dip gently southward at a rate of 50 feet per mile. Unconsolidated overburden deposits overlying bedrock are typically glacial till. Drumlins, which are elongate deposits of lodgment till of varying thickness, overlie bedrock predominantly in the eastern part of the Lake Ontario lowland, and occur to a lesser extent in the western portion of the Lowland. Thinner deposits of till are found between the drumlins. Scattered deposits of sand and gravel, laid down by melt waters flowing away from the ice front, are interspersed throughout the area (USGS 1982). These include kame and outwash deposits, which either overlie the till, or, where no till is present, lie directly on bedrock.

1.3.2. Regional hydrogeology

Regionally, ground water occurs within unconsolidated deposits consisting of lake sand, silt and clay; alluvial silt and sand; swamp deposits; and glacial deposits of low permeability lodgment till. These deposits directly overlie the bedrock surface throughout the area. However, distinct areas of sand and gravel glacial outwash form select segments of the aquifer system that overlies the till.

The regional unconfmed aquifer system in the vicinity of the Site is defined by surface water drainage divides, because the relatively flat Lake Ontario plain contains no lateral bedrock boundaries. Similar to the topography, the water table is relatively flat. Ground water levels rise and fall seasonally in response to fluctuations in recharge or discharge. Regionally, ground water discharges into streams, the Oswego River and into Lake Neatahwanta. Ground water flows toward the Oswego River in a direction roughly parallel to the slope of the land surface.

The Oswego River flows northwest and discharges into Lake Ontario, approximately 10 miles downstream of Fulton. In the Fulton area, which encompasses both sides of the river, ground water is primarily recharged through kame sand and gravels. Well yields in the Fulton area are generally less than 50 gallons per minute (gpm). However, three areas have been defined which contain highly permeable gravel that produces more than 250 gpm from individual wells. These areas include: Fulton Water Works, Lake Neatahwanta Municipal well field, and Great Bear Springs (USGS 1982) and are discussed in Section 1.3.3.

Fulton is located in the vicinity of contact between shale-sandstone bedrock of the Clinton Group and the underlying sandstone bedrock of the Medina Group (Fisher 1970). The median yield of the sandstone-shale unit is 3 gpm, and yields in about 25% of all bedrock wells in this unit are considered inadequate for domestic and farm supplies. The upper 100 feet of bedrock in the vicinity of Fulton is likely to contain salty ground water (Kantrowitz 1970).

1.3.3. Ground water usage in Site vicinity

The South First Street Site is located within a sole source aquifer area. The Fulton Area aquifer serves nearly 22,000 people (USGS 1982). Residents of the City of Fulton receive public water from the Fulton Water Works well field, which taps one of the glacial sand and gravel units. The Fulton Water Works well field is located approximately 0.9 miles upriver (southeast) of the Site (Figure 1-1). A ridge of Pleistocene-age lake silt deposits forms a hydraulic barrier between the river and the aquifer and therefore, pumping does not draw river water into the aquifer (USGS 1982). Ground water flow at the South First Street Site is to the west and northwest away from the Water Works. Based on the Water Works location and on site hydrogeology, there is no potential for the well field to be impacted by the Site.

Other water supply sources in the vicinity of the Site include the Great Bear Springs located approximately 3.5 miles southeast of the Site, the

Lake Neatahwanta Municipal Community Water System Well Fields located approximately 1 mile west of the Site, and domestic wells. The Great Bear Springs and South Bay are not affected based on distance from the Site, and the location of the Oswego River between the Site and the well fields. As discussed in Section 2.9, private domestic wells are not located in the Site area.

1.4. Summary of PSA/IRM study

A Preliminary Site Assessment (PSA) was conducted in accordance with:

1. the NYSDEC approved Final Work Plan for Preliminary Site Assessment/Interim Remedial Measures (PSA/IRM) Study at the South First Street Site, dated June 1996.
2.. Generic Quality Assurance Program Plan (GQAPP) for Site Investigations, Niagara Mohawk, June 1996.
3. Generic Field Sampling Plan (GFSP) for Site Investigations, Niagara Mohawk, June 1996.
4. Health & Safety Plan (HASP) for PSA/IRM Study for the South First Street Site, City of Fulton, NY, O'Brien & Gere, June 1996.

Pursuant to the 1992 Order on Consent, National Grid implemented a PSA/IRM Study at the South First Street Site between July 1996 and September 1996. The study objective was to collect sufficient environmental data for a preliminary evaluation of the presence and nature of MGP and non-MGP related chemical constituents at the Site. Study activities included completion of four test pits, seven soil borings, five monitoring wells, one piezometer, and the collection of subsurface soil, surface soil and ground water samples for analysis.

Test pits

Four test pits were completed on site to evaluate the presence, integrity, and contents of the former tar well, gas holder foundations, and the oil tank foundation that remain on site. One sample from each test pit was collected and analyzed for MGP-related parameters and total organic carbon (TOC).

Soil borings and subsurface soil sampling

Soil borings were completed and subsurface soil samples were collected to assess the presence of MGP and non-MGP-related constituents in subsurface soils, to provide information regarding the vertical extent of potential residues, and to provide hydrogeologic information pertaining to the Site.

A total of seven borings were completed at the Site. Five of the soil borings were converted into monitoring wells (MW-1 through MW-5) and one was converted to a piezometer (PZ-1). A total of twenty-six subsurface soil samples were collected from the soil borings. One sample from each of the borings was analyzed for full Target Compound List/Target Analyte List (TCL/TAL) parameters. In addition to chemical analyses, four subsurface soil samples were selected for laboratory hydraulic conductivity testing.

Surface soils
A total of six sample locations, including two background locations, were identified and analyzed for TCL/TAL parameters and cyanide, along with total organic carbon (TOC). Samples were collected from two intervals, 0 to 2 inches and 0 to 24 inches, except at background samples which were sampled from the 0 to 2 inch interval only.

Ground water sampling
Two sets of ground water samples were collected to assess the presence and, if detected, nature of MGP-related constituents in the ground water underlying the former Site. Samples were collected on July 24, 1996 and September 4, 1996. The purpose of collecting the second set of samples was to verify the results obtained during the first sampling event. Both sets of samples were analyzed for TCL/TAL parameters. The TCL/TAL parameter list includes MGP related constituents as well as non-MGP related constituents to identify other possible sources/contributors that may impact ground water quality.

Fish and Wildlife Impact Analysis (FWIA)
In November 1996, as part of the PSA/IRM, Steps I & IIa of a FWIA were conducted for the South First Street Site to evaluate the potential for ecological impacts.

PSA Recommendations
Based on the findings of the PSA/IRM Study, the following recommendations were made:

Area 1

- The concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) and polycyclic aromatic hydrocarbons (PAHs) observed in the soils and ground water in Area 1 of the Site suggested that the impacts from former MGP operations are limited. Depending on the potential risks, it may be necessary to further delineate the extent and determine the form of cyanide found in the surface soil sample SS-2. Otherwise, it may be appropriate to eliminate this portion of the Site from further assessment.

Area 2

- A monitoring well should be installed between the Site and the Oswego River to better evaluate the concentrations of constituents potentially flowing toward the Oswego River. This would further define the horizontal extent of impacts and will enable a better evaluation of potential exposure to fish and wildlife via surface water and sediment.

- Deeper borings/wells should be installed at TP-4 and along the west portion of the Site to assess the quality of ground water and/or soil.

- *In situ* hydraulic conductivity tests should be performed on existing and proposed monitoring wells to evaluate the horizontal hydraulic conductivity.

In addition, the document recommended that:

- A baseline human health risk assessment should be conducted to identify whether remedial actions are necessary

- Step IIb of the Fish and Wildlife Impact Analysis (FWIA) should be considered to evaluate the effects of chemical exposures on the ecological receptors. (It was later decided that Step IIb was not required.)

1.5. Remedial investigation objectives

The objectives of the RI were to collect sufficient environmental data to address data gaps and implement the recommendations identified in the PSA/IRM Study to allow the nature and extent of contamination associated with the former MGP to be assessed. These objectives were presented in the Remedial Investigation/Feasibility Study Work Plan (O'Brien & Gere 1998). Additional data gaps were also defined in subsequent Correspondence between NYSDEC and National Grid dated December 14, 2003, April 1, 2005, and December 12, 2005.

1.6. Report organization

This RI report is organized into the following sections:

Section 1 - Introduction
Section 2 - RI field investigation activities
Section 3 - Geologic and hydrogeologic conditions
Section 4 - Nature and extent of contamination
Section 5 - Qualitative exposure assessment
Section 6 - Conclusions

2. RI field activities

This section describes the RI activities that were completed at the South First Street Site in Fulton, NY. The RI was conducted in accordance with the Remedial Investigation/Feasibility Study Work Plan dated February 1998 and approved by the NYSDEC. The initial objectives were defined by data gaps identified by the PSA. Additional activities were completed as needed to fill data gaps identified by National Grid or the NYSDEC. Activities were performed in accordance with NYSDEC approved supplemental work plans. These scope additions were documented in correspondence between NYSDEC and National Grid dated December 14, 2003, April 1, 2005, and December 12, 2005. The scope of work included:

- surface soil sampling and analysis
- soil vapor sampling and analysis
- subsurface soil sampling and analysis
- monitoring well installation
- ground water sampling and analysis
- ground water usage survey
- cultural resource assessment.

Field investigation procedures and activities were implemented in accordance with three companion documents previously prepared under the 1992 Order on Consent, specifically for the MGP Site investigations. The documents are listed below:

1. Generic Quality Assurance Program Plan (GQAPP) for Site Investigations, Niagara Mohawk, June 1996.

2. Generic Field Sampling Plan (GFSP) for Site Investigations, Niagara Mohawk, June 1996.

3. Health & Safety Plan (HASP) for PSA/IRM Study for the South First Street Site, City of Fulton, NY, O'Brien & Gere, June 1996.

In general, samples collected during the field efforts were submitted for analysis of the primary constituents of concern related to MGP sites including BTEX, PAHs, and cyanide.

Samples were delivered to O'Brien & Gere Laboratories, Inc. using chain-of-custody procedures outlined in the guidance documents. Analyses were completed in accordance with NYSDEC analytical services protocol (ASP) with Category B Deliverables. Data were reviewed and a Data Usability Summary Report (DUSR) was prepared to verify that data were useable for achieving the RI objectives.

2.1. Surface soil samples

Surface soil samples were collected from 36 on site, off site, and background locations as illustrated in Figure 2-1. As discussed in Section 1, samples SS-1 through SS-6 were collected from the 0 to 2 inch and 0 to 24 inch interval in 1996 as part of the PSA/IRM. Samples SS-7 through SS-9 were collected from the 0 to 24 inch interval as part of the RI activities. Samples SS-10 through SS-32 collected during the RI were from the 0 to 2 inch interval. The following provides a summary of the samples collected from each of the on site and off site areas.

2.1.1. Area 1

Three surface soil samples, SS-1 through SS-3, were collected from Area 1 during the PSA/IRM and analyzed for TCL/TAL parameters and cyanide. The NYSDEC requested additional sampling in the vicinity of SS-2 to investigate an elevated detection of cyanide in the sample collected from the 0 to 24 inches interval.. As part of the RI, three samples, SS-7 through SS-9, were collected adjacent to SS-2 from 0 to 24 inches and analyzed for cyanide.

2.1.2. Area 1 off site

Eight samples, SS-10 through SS-17, were collected from off site locations on residential properties adjacent to Area 1 during the RI. These samples were collected from the 0 to 2 inch interval and analyzed for PAHs, BTEX, metals, and cyanide.

2.1.3. Area 2

Due to blacktop cover, surface soil was only collected at location SS-4 in a grass-covered area of Area 2, as part of the PSA/IRM. Samples were collected from both a 0 to 2 inch and 0 to 24 inch depth and analyzed for VOCs, SVOCs, pesticides, PCBs, metals and cyanide.

2.1.4. Area 2 off site

Fourteen samples, SS-23 through SS-32 and SS-24A through SS-24D, were collected from off site locations adjacent to Area 2. The samples were collected from 0 to 2 inches and analyzed for PAHs.

2.1.5. Background

A total of seven samples were collected to evaluate background concentrations of constituents in surficial soils as follows:

- During the PSA/IRM Study, surface soil samples were collected from two locations SS-5 and SS-6. At each location samples were collected from the 0 to 2 inch and 0 to 24 inch interval. These samples were collected from the city park located northwest of the

Site and analyzed for VOCs, SVOCs, pesticides, PCBs, metals and cyanide.

- During the RI, five samples, SS-18 through SS-22, were collected from the 0 to 2 inch depth interval along the north side of South First Street. These samples were analyzed for PAHs.

2.2. Soil vapor samples

Three soil vapor samples (SV-1, SV-2, and SV-3) were collected from Area 2 on June 22, 1998 at the locations shown on Figure 2-1 to evaluate the potential for the constituents, if any, to migrate to an adjacent residence within soil vapor. Soil vapor samples were collected at depths 3 ft below surface using stainless steel probes with retractable points. Prior to sampling, probes were decontaminated with Alconox®, nitric acid, methanol, and distilled water rinses. The soil vapor was extracted from the ground and conveyed into Tedlar® bags using a hand held pump, disposable teflon tubing, and a Pelican® sample box. The soil vapor samples were shipped to Performance Analytical Laboratory in Canoga Park, CA where they were analyzed for BTEX by modified CARB method 410 and PAHs by EPA method TO-13.

2.3. Soil borings and subsurface soil samples

Four test pits and seven soil borings were completed during the PSA/IRM and 65 soil borings were completed during the RI. The objectives of these activities were to assess the presence of MGP-related constituents in subsurface soils, to provide information regarding the horizontal and vertical extent of MGP-related contamination at the Site, and to further assess Site geologic characteristics. Some of the soil borings were converted to monitoring wells to provide ground water quality data and assess ground water flow conditions.

Borings were advanced through the shallow unconsolidated deposits utilizing hollow-stem auger drilling techniques as described in Section 5 of the GFSP. Split-spoon samples were collected continuously from each soil boring and screened for the presence of volatile organic constituents using a photoionization detector (PID), and the presence of non-aqueous phase liquid (NAPL) or other indicators of contamination using ultraviolet light (UVL) and/or visual inspection. The field hydrogeologist selected the number and location of soil samples for analyses at each boring location with the intent of delineating the upper and lower boundaries of affected soils and the constituent concentrations within the soils. Specifically, soil samples were selected for analysis to establish the vertical extent and horizontal extent of impacted soils at soil boring locations where elevated PID readings, positive UVL readings (indicative of the potential presence of MGP-related NAPL), or visual observations indicated possible MGP residuals. At some soil boring locations where evidence indicated possible residuals, an attempt was made to establish the vertical extent of impacted soils through collection of samples from above and below the identified zone but rather were collected from soil samples with no field indicators of contamination to evaluate and confirm the vertical extent of impacts. In these instances soils were not always collected for analysis from within the zone identified as impacted via field screening, based on the assumption that concentrations would likely be above criteria in this zone. Boring logs reflect these observations and are included in Appendix A. Table 2-1 summarizes sample number, depth interval, and types of analyses conducted.

2.4. Ground water investigation

2.4.1. Monitoring well and piezometer installation

Seventeen monitoring wells and seven piezometers were installed during the PSA/IRM and RI at the locations illustrated on Figure 2-1. Wells were installed to evaluate the extent of MGP-related constituents, assess the direction of ground water flow, and to evaluate hydraulic conductivity of the unconsolidated deposits.

Monitoring well installation and development was conducted in accordance with the procedures described in Section 6 of the GFSP. The monitoring wells and piezometers were constructed with 2 inch diameter, flush joint, PVC riser pipe and screens. The only exception is MW-13, which was constructed of 4 inch diameter, flush joint, PVC riser pipe and screen. In addition, wells MW-1 through MW-5 and MW-13 were constructed with sumps at the bottom of the wells. Well construction details are included on the soil boring logs in Appendix A. Monitoring well specifications are summarized in Table 2-2.

The monitoring wells and piezometers were developed to optimize hydraulic connection with the adjacent unconsolidated deposits and to reduce the effects of residual formation silts and clays that could potentially interfere with chemical analysis. The wells were developed using a bottom-loading bailer in accordance with procedures described in Section 6.2 of the GFSP.

2.4.2. Ground water sampling and water level and NAPL gauging

To evaluate the extent of MGP-related compounds in the ground water, ground water samples were collected from the monitoring wells on seven occasions during the investigations as follows:

<u>PSA/IRM</u>

- July 1996: MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6
- September 1996: MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6

RI

- July 1998: MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9S, MW-9D, and MW-10
- August 1999: MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9S, and MW-9D
- May/June 2001: MW-1, MW-4, MW-5, MW-8, MW-9S, and MW-11
- July 2004: MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-7D, MW-8, MW-8D, MW-9S, MW-9D, MW-10, MW-11, MW-12S, and MW-12D
- November 2005: MW-1, MW-2, MW-3 (8.5 ft), MW-3 (12 ft), MW-4 (8 ft), MW-4 (12 ft), MW-5, MW-6, MW-7 (7 ft), MW-7 (11ft), MW-7D, MW-8, MW-8D, MW-9S, MW-9D, MW-10, MW-11 (5 ft), MW-11 (10 ft), MW-12S (8.5 ft), MW-12S (12 ft), and MW-12D.

The most complete and recent set of ground water samples was collected between November 1 and November 3, 2005 from the 16 on site and off site monitoring wells.

Prior to water sampling, water levels were measured in the monitoring wells for use in the assessment of ground water flow conditions at the Site. Measurements of water levels were obtained using an electronic water-level probe.

Conventional bailing techniques were used to collect the ground water samples prior to 2001. The sampling method includes purging three well volumes of water from the well prior to sample collection. If the well went dry during purging, the water level was allowed to recover prior to sample collection. The bailer was inspected for evidence of NAPL prior to purging and sample collection. Temperature, pH, conductivity, and turbidity were measured and recorded on ground water sampling logs.

The ground water sampling method was changed from bailing techniques to low flow techniques in 2001. With this technique, samples were collected using a peristaltic pump with disposable polyethylene tubing. During the purging process, the flow rate did not exceed 0.5 liters/min except during the start up of the pump.

Sampling performed in November 2005 consisted of a combination of low-flow and bailing techniques. Shallow wells were sampled using low flow techniques. Samples were collected from two depth intervals at wells MW-3, MW-4, MW-7, MW-11, and MW-12S to evaluate whether the change in the method of sampling (i.e., use of low-flow sampling methods in 2001 and 2004) may have influenced the concentrations observed. The first sample was collected from the upper portion of the screened interval. The tubing was then replaced and the intake was lowered to the bottom portion of the screen to collect the second sample. Deep wells were sampled using bailing techniques due to low yield of these wells.

Measurements of pH, specific conductivity, temperature, oxidation-reduction potential (ORP), dissolved oxygen (DO), turbidity, and flow rate were recorded at regular intervals during low flow purging.

Ground water samples were collected after equilibration of water quality parameters. Equilibration was defined as three consecutive readings of turbidity and DO within 10% of each other, specific conductivity and temperature within 3% of each other, a change in ORP of less than 10 millivolts, and drawdown stabilization. Ground water sampling logs are contained in Appendix B.

Ground water samples collected during the PSA/IRM were analyzed for TCL/TAL parameters. Ground water samples collected during subsequent investigations were analyzed for BTEX and PAHs as MGP indicators with the samples collected during November 2005 also being analyzed for cyanide.

2.4.3. In situ hydraulic conductivity tests

Hydraulic conductivity tests were completed on two separate occasions to evaluate the range of hydraulic conductivity values across the Site. In 1998, tests were conducted on monitoring wells MW-1, MW-6, MW-7, MW-9, and MW-9D. In 2004, hydraulic conductivity tests were conducted on two wells previously tested and six new wells. The tests were completed on monitoring wells MW-3, MW-7, MW-7D, MW-8S, MW-8D, MW-9, MW-12S, and MW-12D.

Hydraulic conductivity testing was conducted in accordance with procedures described in Section 6.3 of the GFSP. The test data were analyzed using the Bouwer and Rice method (Bouwer 1989) for unconfined aquifers contained in Aquifer^{Win32} ® version 2.36. Results of the hydraulic conductivity test results are included on Table 2-2, and test plots are contained in Appendix C.

2.5. Investigation derived waste management

Investigation derived waste (IDW) was managed in accordance with the procedures described in Section 10 GFSP. Specifically, IDW was containerized and staged on site pending characterization and subsequent disposal off site by National Grid.

2.6. Sediment evaluation

2.6.1. Sediment probing

In a June 29, 1999 letter from NYSDEC, sediment probing was requested to assess the presence or absence of MGP-related contamination in Oswego River sediments proximal to the Site. Accordingly, on August 19, 1999, reconnaissance was conducted along a 120-ft stretch of the shore of the Oswego River near the Site to observe and document the nature of river sediment (i.e., extent of fine-grained sediments, rocks, cobbles, etc.), water depths, and potential evidence of sheens or odors.

Sediment probing was conducted along seven transects spaced 20 ft apart. Along each transect, probing was conducted at the shoreline and at 10 ft and 25 ft from the shore. Two methods were utilized dependent on water depth. A 5-ft steel rod with a pointed tip was used in water less than 4 ft deep. For water greater than 4 ft deep, a 1 inch diameter 10-ft steel pipe was used to probe sediment from an aluminum boat. Observations were recorded in field logs, which are presented in Appendix D.

2.6.2. Sediment sampling

In a letter dated September 18, 2000, NYSDEC requested that sediment samples be collected. In May 2001, nine sediment samples were collected; four from background locations and five from locations near the Site. Background samples were collected from upstream locations as illustrated in Figure 2-2. Background samples BK-1 and BK-2 were collected from the west bank of the river while samples BK-3 and BK-4 were collected from the east bank of the river. Five sediment samples (Figure 2-3) were collected immediately adjacent to and downstream from the Site. Samples were collected from a boat using a standard sediment core sampler. The samples were analyzed for TOC, PAHs, and BTEX

2.7. Sewer line evaluation

In early 2000, a storm sewer line was identified directly west of Area 2 of the South First Street Site as a result of conversations with City of Fulton employee Roger Parsons. Review of maps available at the time suggested that the line ran in a north-south direction and crossed the Site to the west of monitoring well MW-4. According to conversations with City of Fulton employees, the storm sewer reportedly discharges to the Oswego River north (downstream) of the Site.

In April 2001, a remote sensing device was used to locate the sewer line. The device consisted of a transmitter attached to a fiberglass pole. The transmitter was pushed through the sewer line from the manhole located southwest of Area 2. A receiver was used along the ground surface to trace the movement of the transmitter. The location and depth of the pipe was marked on the surface and subsequently surveyed to tie the location into the Site datum. The sewer line was traced to a point approximately 15 ft north of Area 2 where an obstruction in the line prevented further locating efforts. The sewer is located on the western edge of Area 2, trending in a southeast to northwest direction. The sewer location is shown on Figure 2-1.

In June 2001, water samples from within the sewer line were collected at two locations to assess whether MGP-related constituents were being introduced into the storm sewer in the vicinity of the South First Street Site. One sample was collected from the manhole located 400 ft south of the Site to provide upstream information, and a second sample was collected from the storm grate located 600 ft north of the Site. The samples were analyzed for PAHs and BTEX.

On October 6, 2005 video-inspection of the sewer line was conducted to evaluate the construction, integrity, and degree of infiltration within the sewer. Skanex Pipe Services, Inc. was contracted to conduct the inspection. The inspection was conducted from two directions. Inspection was conducted from a manhole south of the Site behind the residence at 582 South First Street and a manhole north of the Site adjacent to a pump house located in the City park property.

2.8. Cultural resource assessment

In July 1998 a Stage 1A Cultural Resource Assessment (CRA) was performed at the South First Street Site by the Department of Anthropology at the State University of New York (SUNY) at Binghamton. The assessment included Site file checks, a literature review, and a Site inspection. The Stage 1A CRA Report was submitted under separate cover to the New York State Office of Parks, Recreation, and Historic Preservation (SHPO) on December 22, 1998. The CRA Report is included as Appendix E.

2.9. Ground water user survey

A ground water user survey was initiated for the nearest three residences located on either side of Areas 1 and 2 to verify that private domestic wells are not located on the properties. Prior to the survey, the City of Fulton Water Department verified that the twelve closest residences to the Site were connected to the city water system. Respondents to the survey indicated that no domestic ground water wells were located at the residences adjacent to the Site. Specific details of the survey are presented in National Grid correspondence to the NYSDEC dated July 27, 1998. A copy of this correspondence is included in Appendix F.

2.10. Fish and wildlife impact analysis

During the PSA/IRM, steps I and IIa of a FWIA were conducted for the South First Street Site to evaluate the potential for ecological impacts. The FWIA was developed based on information obtained from regulatory agencies, by the study area reconnaissance conducted on November 6, 1996, and information generated under other PSA tasks. The FWIA was conducted in accordance with the NYSDEC Division of Fish and Wildlife guidance document entitled Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites (NYSDEC 1994). This document was previously submitted and approved as part of the original PSA/IRM dated January 1997.

2.11. DUSR

Laboratory analyses of environmental samples were conducted in accordance with NYSDEC ASP-CLP protocols, and Category B deliverables were provided by the analytical laboratory. For each set of analytical data, a DUSR was prepared by Data Validation Services to establish and document usability of the data for site assessment purposes. The DUSR was prepared by reviewing and evaluating the analytical data packages. The parameters and documentation that were evaluated include chain-of-custody, holding times, instrument print-outs, chromatograms, calibrations, spikes, blanks, control samples, surrogate recoveries, duplicates and sample data. Quality control issues that were identified were then evaluated as to their effect on the usability of the sample data.

In general, the DUSRs prepared for this project concluded that the analytical data were usable. Some of the results were adjusted or qualified as estimated based on matrix interference and other related issues. These qualifiers were added or adjustments were made to the analytical tables as indicated by the DUSR. The DUSRs are included as Appendix G.

3. Geologic and hydrogeologic conditions

3.1. Geology

The subsurface geology in the vicinity of the South First Street Site is illustrated in generalized hydrogeologic cross-sections A-A', B-B', and C-C' (Figure 2-1). Cross Section A-A' (Figure 3-1) extends from southwest to northeast across the Site. Cross-section B-B' (Figure 3-2) extends from southeast to northwest across Area 2 and cross-section C-C' (Figure 3-3) extends across Area 2 from south to north.

The overburden deposits encountered at the Site consist of three units: fill; fluvial deposits composed of silt, sand, gravel and/or clay; and glacial till composed predominantly of fine sand with varying amounts of silt and gravel. Surficial fill materials were found in both Area 1 and Area 2. Fill materials consist of sand, gravel and various debris such as brick fragments, asphalt pieces, cinders, glass and other material. In Area 1, fill materials ranged in thickness from 0.5 ft in the south central end at SB-40 to 8 ft in the northwest portion of Area 1 at SB-16. In Area 2, fill thickness ranged from 1.5 ft at SB-2 to 15 ft at SB-36 and SB-43, which is located on the southwest Site boundary near the Oswego River (Figure 2-1). In general, fill thickness increases towards the river.

Review of historic maps and aerial photographs indicates that the Oswego Canal was filled sometime between 1911 and 1938. Evidence of the former Oswego Canal (e.g., canal bottom and/or walls) was not observed during drilling. Some historic maps indicate that the canal structure ended just north of the Site, such that the segment of the canal adjacent to the Site was not contained within structural walls. It is speculated that the canal channel was filled with several types of material, some similar to native soils. Thus, there is not a distinct subsurface material indicative of canal fill. Dredge spoils were reportedly placed on Yelverton Island and these materials may have also been used for fill in the canal.

The unit underlying the fill is a series of discontinuous layers of silt, silt and fine sand, sand, clay, and gravel. The thickness of this unit and the individual layers varies across the Site (Figures 3-1, 3-2 and 3-3). However, as the unit approaches the river in the vicinity of MW07, composition becomes primarily silt with obvious clay lenses. This unit is the result of historical depositional environments, such as recent processes of the Oswego River or historic streambeds feeding the river.

As noted above, the deposits near the river may actually be local, native material that was placed in the former Oswego canal.

A glacial till unit, consisting primarily of sand, with varying amounts of silt and gravel overlies bedrock at the Site. The density of the till grades from loose at shallow depths to extremely dense with greater depth. The top of till undulates and was observed from 5.3 ft at SB-28 to 26.2 ft at SB-41. The dense till is encountered at depths ranging from at 12 ft in SB-16, SB-17, and SB-18 to 28.5 ft below land surface (bls) at SB-4 and SB-36. The top of the dense till layer slopes down toward the southwest and the river. The unit was fully penetrated at MW-6 where bedrock was encountered at 36.5 ft below grade. At this location the dense till is 17.5 ft thick.

3.2. Hydrogeology

Ground water elevations have been measured on a number of occasions since the 1996 PSA. Recent and historical water elevation data are presented on Table 2-2. The most complete set of water level data was collected on March 31, 2006.

An unconfmed overburden water-bearing zone exists beneath the Site. The ground water table was encountered within the fill unit at approximate depths of 1.5 ft in well MW-11 to 8 ft at MW-10. A ground water elevation contour map was developed to illustrate the shallow ground water flow characteristics. These contour maps are provided as Figures 3-4 and 3-5 and present the ground water elevations on November 5, 2005 and March 31, 2006, respectively. As illustrated on these figures, generally ground water flows to the south across Area 1 to Area 2. Ground water flow under Area 2 veers towards the west. Of note, flow contours appear to converge along the axis of the storm sewer line. The hydraulic gradient varies slightly from 0.035 ft/ft in Area 1 to 0.05 ft/ft in Area 2.

The ground water contour convergence observed in the vicinity of PZ-3, PZ-5, and PZ-6 is likely indicative of infiltration of ground water into the storm sewer. Slightly higher ground water elevations are observed at PZ-2 and PZ-4 indicating similar flow convergence near PZ-3. This indicates that the storm sewer and/or the associated bedding intercepts ground water flowing across the Site. The sewer is approximately 20 feet below grade at the Site, and as such is below the river level. As described in Section_4.6, infiltration is apparent as water was observed entering the pipe through fractures as well as through joints in the pipe.

Six deep wells (MW-6, MW-7D, MW-8D, MW-9D, MW-12D, and MW-13) are screened between 20 ft and 37 ft below grade. Wells MW-6, MW-8D , MW-9D and MW-12 D are screened within the till unit. MW-13 is screened within a sand and gravel lense. The screen for well MW-7D extends 1 ft below the top of the dense till unit. However, this well is also screened across a 2 ft thick sand and gravel deposit located adjacent to the river. Therefore it is considered to be in a separate hydrogeologic unit.

Ground water elevations at the deep wells are shown on the shallow ground water contour map (Figure 3-5) to allow for assessment of vertical flow potential at each location because the deep wells are not considered to be installed within a single hydrogeologic unit. Review of ground water elevations between the shallow and deep well pairs suggest that a downward vertical hydraulic gradient ranging from 0.17 ft/ft at MW-12 to 0.07 ft/ft at MW-9 cluster exists in Area 2.

Hydraulic conductivity values in the shallow water-bearing zone above the till at the Site range from 0.49 ft/day in MW-12S to 3.31 ft/day in MW-3 with a geometric mean value of 1 ft/day. Within the till unit, hydraulic conductivity values range from 0.04 ft/day in MW-9D to 1.14 ft/day in MW-12D with a geometric mean of 0.15 ft/day. These values are approximately an order of magnitude less than the shallow materials. Deep well, MW-7D is screened in a deep gravel unit (Figure 3-3). The hydraulic conductivity of this material is significantly higher at 4.39 ft/day. The degree of variation observed in hydraulic conductivity supports the observations of a variety of materials in the overburden soils.

4. Nature and extent of contamination

The following section provides a discussion of the nature and extent of contamination based on findings from the PSA and RI. The evaluation of nature and extent of contamination includes comparison of analytical results with NYSDEC standards and guidance to screen the data for potential constituents of concern. Analytical data for soil samples were screened using NYSDEC's recommended soil cleanup objectives (RSCOs) provided in Technical Administrative Guidance Memorandum #4046 entitled *"Determination of Soil Cleanup Objectives and Soil Cleanup Levels"* (TAGM 4046 RSCOs). Per NYSDEC correspondence dated May 16, 2005, the TAGM 4046 RSCO of 500 ppm for total SVOCs was used as a screening criterion for the subsurface soil samples. Given that PAHs are considered to be representative of MGP operations and only trace amounts of other SVOCs were detected, the total PAH value was compared to the total SVOCs/TAGM 4046 RSCOs at this Site. Individual VOCs were compared to compound-specific TAGM 4046 RSCOs. For the evaluation of surface soil concentrations from background surface soil sample results were used for comparison, as appropriate.

Ground water sample results were compared to New York State Class GA Ground Water Standards or guidance values as presented in the Division of Water Technical and Operational Guidance Series 1.1.1 entitled *Ambient Water Quality Standards and Guidance Values and Ground Water Effluent Limitations* – (NYSDEC TOGS).

The following tables present data collected during the PSA/IRM and RI investigations. Tables 4-1 through 4-5 summarize the analytical results for surface soil. Tables 4-6 through 4-10 summarize the analytical results for subsurface soil. Tables 4-11 through 4-15 summarize the analytical results for ground water. Tables 4-16 through 4-17 summarize the analytical results for sediment. Table 4-18 summarizes Total Organic Carbon (TOC) for sediment samples. Table 4-19 summarizes the analytical results for the storm sewer water sampling.

4.1. Surface soil

4.1.1. Background samples

To assess the potential contribution of constituents to surface soil from sources other than historical MGP operations, a total of seven background surface soil samples were collected. These samples are identified as SS-05, SS-06, SS-18, SS-19, SS-20, SS-21, and SS-22. Samples SS-05 and SS-06 were analyzed for VOCs, SVOCs, metals, cyanide, pesticides, and PCBs. Samples SS-18 through SS-22 were analyzed for PAHs. Results for surface soil samples are provided in Tables 4-1 through 4-5. Concentrations of total PAHs and the following carcinogenic PAHs (CPAHs) were used for developing background concentrations:

- benzo(a)anthracene
- benzo(a)pyrene
- benzo(b)fluoranthene
- benzo(k)fluoranthene
- chrysene
- dibenzo[a,h]anthracene
- ideno(1,2,3-cd)pyrene)

Concentrations from the background locations are as follows:

Location	Total PAHs (ppm)	Total CPAHs (ppm)
SS-05	0.119	0.056
SS-06	0.568	0.099
SS-18	19.84	10.94
SS-19	4.65	2.37
SS-20	7.88	4.14
SS-21	24.25	11.24
SS-22	16.20	7.89

Based on this evaluation, background concentrations of total PAHs and total CPAHs of up to 24.25 mg/kg and 11.24 mg/kg, respectively, can be expected in the surficial soil.

4.1.2. General

A total of four potential areas of concern were identified for surface soil. These areas were in the vicinity of samples SS-1, SS-2, SS-4, SS-24. CPAHs were detected above the background concentration, 11.24 parts per million (ppm), in three of the areas. Also, NYSDEC requested additional sampling in the vicinity of sample SS-2 based on cyanide concentrations

Analytical results for metals in surface soil samples are presented in Table 4-4. Metals concentrations detected in Areas 1 and 2 are comparable to background concentrations. Detected constituent concentrations are within an order of magnitude of background samples and are not discussed further.

Trace concentrations of pesticides were detected in samples as indicated in Table 4-5. Similar constituents were detected in Areas 1 and 2 as well as in background samples at concentrations typically in the range of 0.05 ppm. The source of these compounds is likely local use of pesticides on lawns and shrubbery in the area. These compounds are not considered to be a result of historic land use and are not discussed further.

Data collected during the PSA reveal that surface soil samples from both areas of the Site indicated that BTEX compounds, if present, are below the screening criteria.

As previously discussed, surface soil samples were collected from 2 depth intervals in early stages of investigation: 0 to 2 inch and 0 to 24 inch. As the NYSDOH considers the 0 to 2 inch interval to represent the surface soil exposure pathway, only the 0 to 2 inch samples will be discussed within the context of surface soil. The exception being the evaluation of cyanide at SS-2 and associated follow-up samples SS-7 through SS-9.

4.1.3. Area 1

Surficial samples (SS-1 through SS-3, SS-7 through SS-10, and SS-11 through SS-17) were collected from Area 1 and the adjacent properties (Figure 2-1). Samples SS-1, SS-2, and SS-3 were analyzed for VOCs, SVOCs, metals and cyanide during the original investigation. Samples SS-7, SS-8, and SS-9 were collected during follow-up investigations and analyzed for cyanide.

Only SS-1 and SS-2, located in Area 1, had concentrations of total CPAHs above the maximum background CPAH concentration. The CPAH concentrations at the other samples in Area 1, and the surrounding properties, were within the range of background concentrations.

At surface soil sample SS-2, collected during the PSA cyanide was detected at 11 ppm in the 0 to 2 inch interval and 810 ppm in the 0 to 24 inch interval. Upon request from NYSDEC, surface soil samples surrounding SS-2 (SS-7, SS-8, and SS-9) were subsequently collected from the 0 to 24 inch interval to delineate the extent of cyanide detected at SS-2. Cyanide was detected at all three locations, with a highest concentration of 60 ppm at SS-9, which was significantly lower than the 810 ppm identified at SS-2.

No soil RSCO has been developed in TAGM 4046 for cyanide. However, as reference, the USEPA Region 3 Preliminary Remediation Goal (PRG) for cyanide is 1564 ppm and the USEPA Region 9 PRG for cyanide is 1200 ppm. Based on this comparison, the presence of cyanide at the SS-2 location is not considered to be significant. Further, the concentration of cyanide in the 0 to 2 inch interval, which is the interval defined by the NYSDEC and NYSDOH for human health exposure, was only 11 ppm.

4.1.4. Area 2

Only a small segment of Area 2 contains exposed soil. The remainder of the area is covered by asphalt pavement or the concrete building slab.

Sample SS-4, collected from the area of exposed soil, contained total CPAHs above the background concentration criterion.

4.1.5. Area 2 off site

Figure 4-1 presents the Area 2 off site surface soil locations and total PAH and CPAH concentrations. Surface soil sample location SS-24, located on City of Fulton property adjacent to Area 2, was sampled in 2002. SS-24 contained total CPAHs above background concentrations. Subsequently, a total of nine additional samples were collected from locations surrounding SS-24 in two phases to further evaluate the CPAH concentrations in this area. The initial phase of sampling (SS-24A through SS-24D) was focused immediately adjacent to location SS-24. Total CPAHs were detected above background at two of the locations, SS-24C and SS-24D. The second phase of sampling (SS-28 through SS-32) included off site locations on the City property surrounding SS-24, at distances varying from 15 to 60 feet. Total CPAHs were detected above background at one location, SS-32, approximately 60 ft southwest of location SS-24 adjacent to the tree line. Additional surface soil samples were not collected in the tree line as the area is used for general disposal of household debris including included roofing shingles and ashes. PAH concentrations are likely attributable to sources unrelated to the MGP Site. No visible staining or discoloration was observed at the sample locations. Soils contained pieces of coal, clinkers, glass, and brick, indicating it is fill material.

The material in this area was the result of filling of the Oswego Canal sometime in between 1911 (1911 Sanborn Fire Insurance map) and 1938 (aerial photograph dated June 6, 1938) during MGP operation. The source of the fill has not been determined, but is likely comprised predominantly of dredge spoils that had been placed on the former Yelverton Island. Historical records review indicated that in 1912 there were discussions among local officials regarding use of dredge spoils from Yelverton Island, formerly located near the Site between the Oswego River and the former Oswego Canal, to backfill the canal bed (*Fulton Times*, March 6, 1912). It is, therefore, unclear whether the CPAHs are related to historic MGP operations or are inherent to the fill material.

4.2. Soil vapor

BTEX and PAH constituents were not detected in soil vapor samples collected at locations SV-1, SV-2, and SV-3 during the June 22, 1998 sampling event. The results suggest that soil gas vapor is not a migration pathway for Site-related chemical constituents to the adjacent residence although the detection limits are higher than those obtained using more current technology. The soil vapor laboratory analytical report is included in Appendix H. Per correspondence with NYSDEC, further evaluation of the potential migration of MGP-related constituents in soil vapor will be conducted.

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4.3. Subsurface soil

Concentrations of constituents potentially related to MGP operations were used to evaluate impacts to subsurface soil. In addition to analytical data, observation of impacted soil was noted in the drilling and test pit logs. As previously discussed, observations included staining, NAPL droplets, odor, or a positive fluorescence with the UVL. UVL fluorescence is an indicator of the potential presence of residual NAPL. Analytical results for subsurface soil were compared to the NYSDEC TAGM 4046 RSCOs as screening criteria as described in the beginning of this section.

Figures 4-2 through 4-6 provide a visual representation of BTEX and PAHs detected above screening criteria as well as observed impacts for subsurface soils at 4 ft depth intervals beginning at grade. As previously discussed, these screening criteria were the TAGM 4046 RSCO of 500 ppm for total PAHs and individual TAGM 4046 RSCOs for the each of the BTEX compounds. Tables 4-6 through 4-10 present the analytical data and provide a comparison to individual TAGM 4046 RSCOs for individual constituents.

4.3.1. Area 1

In Area 1, one or more BTEX compounds were detected above screening criteria at two locations, SB-15 and SB-38. Total PAHs were detected above 500 ppm at three locations SB-15, SB-38 and SB-46. Staining, residual NAPL, or UV-positive soil was observed at SB-15, SB-35, SB-38, and SB-46 as illustrated in Figures 4-1 through 4-5. In general, impacts are centered at the eastern concrete gas holder pad. The areal extent of impacts generally narrows with depth and impacts are generally limited to the upper 8 ft with some observed impacts reaching 12 ft (Figures 4-2 through 4-5).

The tapering of impacts at depth in tandem with impacts identified in shallow soils suggests that a surface release (e.g., a historic spill) was the source of the impacts observed in Area 1.

Metal concentrations detected during the PSA/IRM are comparable to the background surface soil concentrations. Metal analytical results for subsurface soils are presented in Table 4-3. Subsurface soils were also analyzed for cyanide during the original investigations at two locations (MW-1 and MW-2). Cyanide in subsurface soils was detected at MW-2 in the 6-8 ft interval.

4.3.2. Area 1 off site

Soil borings were completed on the properties adjacent to Area 1. Total PAHs were not detected in subsurface soil above screening criterion at off site locations adjacent to Area 1. Further, there were no indications of MGP-related impacts (NAPL, staining, sheens) on these adjacent properties based on field screening of soil samples (e.g., visual observations, UV fluorescence and odor).

4.3.3. Area 2

BTEX and PAHs were detected above screening criterion at nine locations in Area 2. NAPL or UV positive soil was observed at eight locations. Pesticides were either not detected or detected at concentrations below screening criteria, with the exception of Dieldrin. Dieldrin was detected above the criterion at SB-01 (6-8 ft). Dieldrin is not an MGP-related constituent.

Review of Figures 4-2 through 4-6 indicate that the largest area of impact was observed between 4 and 12 ft bls interval. Evidence of impacts greater than 16 ft bls is primarily limited to the southern property boundary.

The lack of impacts in soil shallower than 4 ft suggests releases below the ground surface, possibly from piping or other underground structures. An alternative explanation may be that the surface of the property was covered with fill after MGP operations ceased.

With the exception of MW-4 (8-10 ft) and MW-5 (8-10 ft), inorganic concentrations in the subsurface soil are comparable to background surface soil concentrations (Table 4-3). Concentrations of arsenic, iron, and lead were elevated at MW-4 (8-10 ft) compared to other subsurface soil samples and an order of magnitude higher than the background surface soil samples. Cyanide was detected at MW-4 (8–10 ft) above USEPA Region 3 PRG and USEPA Region 9 PRG for cyanide. In addition, the lead concentration of 560 ppm in MW-5 (8-10 ft) was also an order of magnitude higher than the background surface soil samples. With the potential exception of cyanide, the inorganics are not considered to be representative of MGP operations; and based on the depth, more likely associated with the fill material.

4.3.4. Area 2 off site

Soil borings were drilled and sampled on the off site properties adjacent to Area 2 to assess whether impacts identified on site extend onto off site areas. Impacts at off site properties appear to be limited to three general areas, as described below.

The first area is the southwestern corner of the paved lot near the retaining wall as identified by borings SB-36, SB-37 and SB-41. As illustrated in Figures 4-2 through 4-5, soils in this area contain elevated PAHs and BTEX that begin around 4 ft and continue to depths beyond

16 ft. In this area, analysis of soil reveal concentrations of PAHs and BTEX above screening criterion to at least 24 ft at SB-36. Although analyses were not completed on soil deeper than 24 ft at this location, no visual evidence of impacts is present below approximately 26 ft. The top of the dense till is located at 28 ft below grade at this location.

Of note, the MW-7 well cluster is located between this area and the river. Impacted soils were not observed at this location suggesting that MGP-related impacts have not migrated toward the river.

The second area is west of the former canal in borings SB-42 and SB-44. Total PAH concentrations are above the screening criterion at this location and are limited to soil less than 4 ft deep (Figure 4-2). Sample descriptions indicate the soil is fill, including various construction debris, coal fragments, etc. Based on historical maps, the area west of the former canal was formerly Yelverton Island, which was built from dredge spoils. These concentrations are potentially a reflection of constituents in the dredge spoil material and are not considered to have migrated from the Site.

The third area is behind the neighboring property to the north of Area 2 at SB-14 and MW-12D. Although PAHs were not detected above screening criterion at this location, staining and NAPL blebs were observed at these locations in soils between 4 ft and 16 ft.

In February 2002, soil boring SB-22 was completed in an area suspected to be within the former canal based on historic mapping. Field screening indicated limited soil impacts (i.e., a light spotty sheen on water in soil sample). A soil sample collected from the 12 to 14 ft depth was submitted to Worldwide Geosciences, Inc., for fingerprint analysis. The sample was analyzed by high resolution capillary gas chromatography to determine the type or types of parent products associated with the sample and to provide an indication of parent product age. The signature characteristics of the sample were determined to be indicative of coal tar as the product type. The complete report is attached in Appendix I. Of note, a portion of this sample was also submitted for analysis of PAHs. The results indicated that the sample contained 0.14 ppm total PAHs. Based on the history and timing of filling in this area (as described previously), it is unlikely MGP constituents migrated to this location. It is likely that this material was placed during filling.

4.4. Ground water

Ground water quality data were compared to NYSDEC TOGS as ground water screening criteria. As previously discussed, the most recent and complete set of ground water samples were collected in November 2005 and analyzed for BTEX and PAHs. These results were used for the following discussion of ground water quality. The ground water analytical results, including a comparison to the ground water screening criteria, are provided on Tables 4-11 through 4-15. Figures 4-7 and 4-8 provide a visual representation of BTEX, PAHs and cyanide detected above ground water screening criteria during the most recent sampling event.

Concentrations of BTEX and PAH compounds that are above the ground water criteria are limited to Area 2. BTEX compounds were detected in several shallow wells and were measured at concentrations above criteria at MW-4 and MW-5. PAHs were also detected in MW-4 and MW-5 at concentrations above the criteria. Additionally, in deep well MW-6, PAHs were also detected at concentrations above the criteria.

Review of historical ground water quality data indicates that concentrations of BTEX compounds and PAHs have decreased over time.. As previously discussed, sampling methods changed from bailing techniques to low flow techniques in 2001. To assess whether the change in sampling methods affected the data, during the November 2005 sampling event samples were conducted at two depths from shallow wells MW-3, MW-4, MW-7, MW-11, and MW-12S. The data indicate that concentrations do not vary substantially based on vertical placement of the intake in the screened interval, and thus, the change in sampling method does not appear to affect the quality of the results.

BTEX compounds, when detected, were at concentrations below criteria in deep wells MW-6, MW-8D and MW-12D.

Inorganics (metals and cyanide) were analyzed during the PSA. The concentrations of a number of inorganic constituents were detected above ground water criteria. Several of these are also above the criteria in upgradient well MW-1. Metals concentrations in ground water samples were generally comparable to measured concentrations in samples from Area 1. Some constituents were found to be above ground water standards in downgradient wells but not detected in the upgradient well (see Table 4-13). In these instances, the concentrations only slightly exceed the criteria and can likely be attributed to elevated turbidity. Furthermore, the constituents identified are not considered related to the MGP. Sampling logs are presented in Appendix B.

Cyanide was detected above TOGS in shallow ground water at wells MW-3 and MW-5. Cyanide was detected below TOGS in the remaining wells that were sampled. Cyanide was not detected in upgradient well MW-1.

Trace concentrations of pesticides were detected in the ground water during the PSA/IRM study on July 24, 1996. With the exception of samples from MW-4, the pesticides detected were either also detected in the associated laboratory preparatory blanks or not detected in follow-up sampling event. At MW-4, Endosulfan II was detected in a follow-up sampling event on September 4, 1996. No criterion exists for Endosulfan. Also, PCB Aroclor 1242 was detected in MW-1 during the July 1996 sampling event, however, it was not detected during a second sampling event in September 1996. None of these constituents are considered to be Site-related.

Ground water impacts potentially related to the former MGP (BTEX, PAHs, and cyanide) are limited to Area 2. These areas are proximal to the location of impacted subsurface soil. Impacts were not observed above criteria at sample points between the affected wells and the river or the downgradient locations suggesting that constituents are not migrating from the source area to the Oswego River.

4.5. Sediment

A total of 9 sediment samples were collected from the Oswego River at the approximate locations presented on Figure 2-2. As described in Section 2.6, five samples were collected near and downstream of the Site, and four were collected from upstream areas considered to generally represent background conditions. The sediment samples were analyzed for BTEX, PAHs, and TOC. Analytical results for BTEX, PAHs and TOC are provided in Tables 4-16 through 4-18. BTEX compounds were not detected.

Low levels of PAHs were detected in the river sediments both near the Site and upstream of the Site. The total PAH concentrations in the sediments near and downstream of the Site range from 0.36 to 1.6 mg/kg. This concentration range is similar to the concentrations measured in the upstream areas, which range from not-detected to 1.1 mg/kg. Note that several individual PAH compounds were detected near and downstream of the Site, while only one, benzo(a) pyrene, was detected in the upstream area (Table 4-16).

The detection of PAHs in the Oswego River sediments is not unexpected given the urban nature of the area and historic uses of this river for commercial transportation, and is not indicative of contribution from the former MGP.

4.6. Sewer line evaluation

April 2001 sewer line tracing activities traced the line from the southern manhole to a location adjacent to MW-12S and MW-12D. (Figure 2-1) It was suspected that the line had a blockage or was collapsed at this location. The sewer line is located between 18 and 20 ft below grade. In October 2005 the sewer line was inspected with a remote video camera. The sewer line appeared to be a 24 inch diameter concrete pipe. An initial attempt was made to conduct the video inspection starting from a manhole located approximately 500 feet to northwest of the Site. This inspection progressed 418 feet to a point approximately 60 feet west of the Site, where a concrete block prevented further progress of the video tractor. Subsequently, an attempt was made to conduct the video inspection from a manhole located approximately 210 feet southeast of the Site. This inspection progressed 90 feet to a point approximately 120 feet southeast of the Site, where a rock was encountered and prevented further progress of the video tractor. Several cracks in the concrete sewer line pipe were also observed and water was observed entering the pipe through these fractures as well as through joints in the pipe.

On June 20, 2001, samples of water from within the storm sewer line were collected upstream and downstream of the Site as discussed in Section 2.7. The following table presents the detected constituents.

Table 4-18: *Storm sewer water sampling results*

Parameter	Upstream	Downstream
Benzene	<0.50	1.6
Ethylbenzene	<0.50	0.69
Xylene (total)	<0.50	0.68

Results in $\mu g/L$ (ppb)
< - indicates not detected. Value to right is detection limit.

As illustrated on this table, low concentrations of benzene, ethylbenzene, and total xylenes were detected in the downstream storm water sample. The compounds detected in the downstream manhole may be contributed from infiltration of contaminated ground water from the Site. However, the downstream location is approximately 600 ft north of the Site and is covered by a grate. Therefore, the compounds detected at this location may be due to contaminated storm water rather than ground water infiltration from Area 2 as this catch basin, and possibly others, collect storm water from the roadways.

5. Qualitative exposure assessment

A qualitative assessment of the potential for receptors to be exposed to site-related constituents was completed for the Site. The assessment consisted of characterizing the exposure setting (including the physical environment and potentially exposed human populations), identifying complete and potentially complete exposure pathways, and evaluating contaminant fate and transport. Without an exposure pathway, constituents cannot impact human or ecological receptors. If an exposure pathway is complete, the potential for risk to the receptor depends on the degree and duration of exposure.

5.1. Current and future Site use

The use of the property is the underlying factor that influences the activities and potential for exposure to constituents that are present. The area in which the South First Street Site is located is predominantly residential in nature. The Site is vacant with no restriction to access. National Grid owns this property. Future use of the Site has not been established. The physical characteristics of the property are described in Section 1.2.

Ground water in the area is not used for potable water supplies. Surrounding residential properties are connected to City of Fulton water supply, which is provided by the City of Fulton Water Department. The City of Fulton Water Department receives its water from a well field located adjacent to the Oswego River, approximately one mile upstream from the Site (see Figure 1-1).

5.2. Constituents of concern

The surface soil was found to contain several CPAHs at concentrations above background values in Area 1, Area 2, and an off site location adjacent to Area 2. As previously discussed, it is not clear whether the presence of CPAHs at all locations is related to the former MGP operations.

In subsurface soil, PAHs and BTEX were detected above the screening criteria in several areas of the Site and some off site locations. In general, inorganic concentrations detected during the PSA/IRM are comparable to the background surface soil concentrations. The exceptions are arsenic and iron, which were detected above criteria at one location and lead which was detected above criteria at two locations in Area 2. These constituents are not considered to be associated with former MGP operations. Cyanide was detected in one location above USEPA Region

3 PRG and USEPA Region 9 PRG for cyanide (no TAGM 4046 RSCO has been developed for cyanide).

Current ground water analysis indicates that PAHs and BTEX compounds were detected above ground water criteria. These elevated concentrations are limited to Area 2.

5.3. Contaminant transport

According to the Agency for Toxic Substances and Disease Registry (ATSDR) *ToxFAQs® for Polycyclic Aromatic Hydrocarbons*, while some PAHs can volatilize to the air to some extent, they most commonly migrate in the air by sorbing to small particles that become entrained in the air as dust. PAHs do not readily dissolve in water. PAHs will attach to soil and sediment particles. In surface water bodies PAHs are typically sorbed to sediment particles and will migrate with the sediments via typical sediment transport mechanisms. Transport in the ground water is limited due to the preference for adsorption of most PAHs to subsurface soil.

BTEX compounds are volatile organic compounds. These compounds volatilize readily and therefore, can migrate via air. The compounds do degrade when exposed to the atmosphere. BTEX compounds can also migrate as vapors through unsaturated soil, and subsequently into outdoor or indoor air. BTEX compounds are also slightly soluble in ground water and can migrate in dissolved form with the ground water.

According to the ATSDR *ToxFAQs® for Cyanide,* cyanide enters the environment from both natural processes and human industrial activities. If detected in air, cyanide is mainly found as gaseous hydrogen cyanide and in less volatile forms associated with fine dust particles. Some cyanide compounds in soil can form hydrogen cyanide and evaporate while some compounds are transformed into other chemical forms by microorganisms. However, ferric ferrocyanide and other iron cyanide solids are the predominant form of cyanide associated with MGP residuals. These iron cyanides typically dissolve into iron cyanide complexes (Ghosh, etal, 1999) when leached. The rate of dissociation of iron cyanide complexes to free cyanide/hydrogen cyanide is very slow in the subsurface, and thus little if any hydrogen cyanide is expected to be associated with MGP sites. In high concentrations in soil, cyanide can pass through soil into ground water.

Based on the analytical data from sampling programs as presented in Section 4.4, ground water contaminant transport appears to be limited either by rapid degradation and/or interception by the storm sewer. Impacted ground water is isolated to the western portion of Area 2 predominantly in samples from two monitoring wells in Area 2. Data indicate that ground water impacts do not extend beyond these two wells.

Airborne transport of contaminants adhered to dust from Area 1, Area 2, and locations off site from Area 2 is expected to be minimal. Area 1 is covered with grass while the majority of Area 2 is blacktop-covered with the remaining land grass-covered. The majority of locations surrounding Area 2 are grass-covered. These conditions generally reduce or eliminate the potential for dust emissions from the Site. However, there is limited vegetative cover at the off site location to the west of Area 2, on City of Fulton property, where elevated PAH concentrations were observed near the Site. Therefore, this area is potentially susceptible to wind erosion. As noted in Section 4, it is possible that the PAH concentrations in this area are not related to former MGP operations at the Site.

~~disagree~~ OK see Section 4.

BTEX and PAH constituents were not detected in soil vapor samples collected at the Site. The vapor migration pathway was therefore, not addressed further during the risk evaluation.

Analytical results for the sediment samples did not indicate that Site-related constituents were present in the river sediments. Therefore this exposure pathway was not addressed further.

5.4. Potential receptors

A potential receptor is the population that is or may be exposed to contaminants at a point of exposure. In the areas of the South First Street Site the following receptors may be present:

Off site

- Local residents (adults and children) using the area of the City park adjacent to the Site or the nearby residential properties
- Utility or contractors working at the off site properties

On site

- Trespassers who walk on the Site
- Utility or construction workers working on the Site

Current and future receptors are considered to be similar.

5.5. Potential exposure pathways

5.5.1. Surface soils

Under existing Site conditions, a potentially complete exposure pathway to exists for Area 1, Area 2, and off site surface soils immediately west of Area 2. Surface soils in Area 2 are limited to the small, unpaved area. The receptor population includes trespassers (adults and children), construction, and utility workers. Routes of exposure include direct dermal contact, inhalation, or accidental ingestion. As discussed above, contaminants in soils west of Area 2 may be unrelated to former MGP operations. Under future conditions, the exposures above would include the same population.

5.5.2. Subsurface soils

A potentially complete exposure pathway exists for on site and limited off site subsurface soils. The receptor population includes trespassers, construction, and utility workers who dig through the grass cover or pavement and come into contact with underlying soils located in Area 1, Area 2, and adjacent to Area 2. Routes of exposure include direct dermal contact, inhalation, or accidental ingestion. Under future conditions, the exposures above would include the same population.

5.5.3. Ground water

A potential exposure pathway exists for construction and utility workers coming into contact with ground water underlying Area 2. However, ground water in this area lies approximately 7 to 8 ft below grade so the exposure potential is reduced. Routes of exposure include direct dermal contact, inhalation, or accidental ingestion. Under future conditions, the exposures above would include the same population.

There are no nearby users of ground water. Although the City of Fulton obtains its drinking water from ground water, the water supply wells are located approximately one mile from the Site and are not impacted by site-related constituents.

5.6. Summary

Based on the qualitative exposure assessment, there are potentially complete exposure pathways for PAHs, BTEX, and cyanide compounds in surface soil, subsurface soil, and/or ground water.

Specifically, a complete exposure pathway was identified for PAHs in surface soil in Area 1, Area 2, and west of Area 2 by direct dermal contact, inhalation, and accidental ingestion.

A potentially complete exposure pathway exists for constituents in Area 1 and Area 2 on site subsurface soils. Area 2 off site surface soils, Area 1 and Area 2 off site subsurface soils, and on site ground water in Area 2 by direct dermal contact, inhalation, and accidental ingestion. This type of exposure would occur only if potential receptors were to dig through the pavement, grass cover, and surface soils and come into contact with subsurface soils or ground water.

Future potential exposures are similar to current exposures and may occur via direct dermal contact and accidental ingestion of on site and off site soils by adult construction and utility workers and trespassers.

Does
water
discharges to
the River

6. Conclusions

The following conclusions are drawn based on the data collected during the completion of the PSA/IRM and the RI at the South First Street Site in Fulton, New York.

6.1. Hydrogeologic conditions

The overburden deposits encountered at the Site consist of three units: fill, alluvial deposits consisting of discontinuous lenses of sand, silt, clay and gravel, and sandy glacial till. The till generally becomes more dense with depth. Bedrock was encountered at approximately 36.5 ft below grade at one location.

The water table is positioned within the overburden materials overlying the till at depths ranging from 1.5 to 8 feet deep across the Site.

The geometric mean hydraulic conductivity of the till unit (0.15 ft/d) is an order of magnitude lower than that of the overlying deposits (1.0 ft/d). Thus, lateral ground water flow in the overburden occurs primarily within the deposits above the till.

The top of the till unit comprises the bottom of the upper water-bearing zone. The surface of till unit undulates, but generally slopes downward toward the Oswego River. Although variable, where completely penetrated, the till is approximately 17.5 ft thick.

Shallow ground water flows to the south and west across the Site. At Area 2 the flow contours converge in the vicinity of the storm sewer line that crosses the area indicating that the sewer and/or associated bedding intercepts shallow ground water flowing across the Site. This convergence is likely a localized effect due to leakage into the sewer line. Based on the video inspection, ground water appears to contribute water to the storm sewer. Based on the relatively low hydraulic conductivity of the till unit, the rate of ground water flow through this unit is substantially lower than in the overlying water bearing zone. A slight downward vertical hydraulic gradient exists in Area 2 from the upper water-bearing zone to the till unit.

The City of Fulton ground water supply wells are present adjacent to the Oswego River approximately one mile upstream to the southeast of the Site. Thus, Site ground water is outside the capture zone of these wells. Respondents to the ground water user survey completed as part of the RI indicated that no domestic ground water wells exist at the residences adjacent to the Site.

6.2. Nature and extent of contamination

The following summarizes the evaluation of the nature and extent of site-related impacts.

Surface soil

BTEX compounds detected in surface soils are consistent with background concentrations.

Total CPAH concentrations are elevated in comparison to background concentrations at four areas surrounding SS-1, SS-2, SS-4, and SS-24. Samples SS-1 and SS-2 are located within Area 1. SS-4 is located adjacent to the pavement in Area 2. These three locations are on properties owned by National Grid.

Sample SS-24 is located on property to the west of Area 2. This property is behind a residence and owned by the City of Fulton. Additional sampling defined the northern and western extent of CPAHs above background levels. The southern extent is unclear due to the presence of debris (household debris including roofing shingles and ashes) in the area. Due to historical filling in this area, it is unclear whether the elevated CPAHs are the result of historic MGP operations or constituents within material used to fill the former Oswego Canal which was located in this area.

Concentrations of cyanide in surface soils are below the USEPA Region 3 PRG for cyanide (1,564 mg/kg) and the Region 9 PRG (1200 mg/kg). A TAGM 4046 RSCO has not been established by NYSDEC for cyanide.

Subsurface soil

In Area 1, both analytical and visual evidence of MGP-related impacts were observed in subsurface soil. In general, impacts are centered at the eastern concrete gas holder pad. Impacts generally narrow with depth and are limited to the upper 8 ft with some observed impacts reaching 12 ft in the center of the area. Subsurface soil from the adjacent properties bordering Area 1 did not contain MGP-related constituents above the screening criteria or visual indicators of MGP-tar-related impacts. .

In Area 2, analytical and visual impacts were observed in the subsurface soils. Evidence of impacts begins at 4 ft below grade and, in the southern corner of the area, extends to depths up to at least 24 ft below grade. The widest zone of impacted soil was observed between, 4 to 12 ft below grade. The impacted soil extends off the National Grid property to the south and southeast but was not observed adjacent to the Oswego River. The lack of impacted soil shallower than 4 ft suggests that releases occurred below the ground surface, possibly from piping or other underground structures or, alternatively, fill may have been brought in after MGP operations ceased covering the impacted soil.

Impacted subsurface soil was also observed in two general areas to the west of Area 2. One area is located west of the former Oswego Canal. The second area is located in the vicinity of the sewer line that runs along the southwestern side of Area 2.

In the area west of the former canal concentrations of total PAHs above 500 ppm were generally limited to less than 4 ft below grade. Based on historical maps, the area west of the former canal was formerly Yelverton Island, which was reportedly constructed from dredge spoils. Therefore, these observed impacts are potentially a reflection of constituents in the dredge spoil material and are not considered to represent migration of materials from the former MGP area.

Impacts in soil near the sewer line included visual evidence (e.g., stained soil, NAPL blebs) observed in soils shallower than 16 ft and PAHs greater than criterion shallower than 12 ft.

Ground water

Concentrations of BTEX compounds, PAHs and cyanide above the ground water screening criteria (NYSDEC TOGS) are limited to the shallow ground water beneath Area 2. Constituent concentrations in off site wells, including those between Area 2 and the Oswego River, are below the criteria. Ground water with constituent concentrations above the criteria is likely captured via seepage to the storm sewer located directly southwest of Area 2. Video inspection directly upstream and downstream of the Site did not indicate any visible site-related impacts. Samples from storm sewer manholes located 400 feet upstream and 600 ft downstream of the Site indicated the presence of low concentrations of benzene, ethylbenzene, and total xylenes in the downstream storm water sample. It is unclear whether this is the result of contribution from the property or influent from storm water discharges from nearby roadways or other potential sources.

Sediment

There is no evidence of contribution of site-related constituents to the sediment of the river. PAH compounds were detected below screening criteria at all locations and were consistent with concentrations in background (upstream) samples. BTEX compounds were not detected.

Soil vapor

BTEX and PAH constituents were not detected in soil vapor samples SV-1, SV-2, and SV-3 suggesting that soil gas vapor is not a migration pathway for site-related constituents to the residence to the west of Area 2.

6.3. Exposure pathways

Potential complete pathways exist on Areas 1 and 2 for contact with surface soil and subsurface soil. The ground water exposure pathway is also complete in Area 2. Potential receptors include trespassers, construction, and utility workers.

The off site subsurface soil south of Area 2 and east of Area 1 represents a potential complete exposure pathway to users of the property in this area. Users may include local residents, contractors, and utility workers.

Surface and subsurface soil represents a potential complete exposure pathway in localized areas to the west, southwest, and northwest of Area 2. Users may include local residents, contractors, and utility workers. However, it should be noted that it is not clear whether the constituents identified in these areas are related to the former MGP operations.

7. Recommendations

To date, the nature and extent of MGP-related impacts from the Site to environmental media (surface and subsurface soil, ground water, and sediments) have been evaluated to a degree sufficient to meet the RI objectives, with the exception of potential impact to soil vapor. As described in correspondence with NYSDEC (National Grid's letter to NYSDEC dated June 15, 2005), National Grid plans to develop a supplemental RI Work Plan to evaluate the potential for MGP-related constituents to migrate in soil vapor.

At this time, National Grid has several soil vapor intrusion (SVI) investigations pending at various MGP sites in New York. Because SVI investigations are a relatively recent initiative in New York, NYSDEC and National Grid agreed during an April 12, 2006 meeting to take advantage of the findings and experiences from these initial upcoming SVI studies to develop standard procedures for SVIs at MGP sites, to the extent practical. The standard procedures would address both sampling programs and data evaluation. Accordingly, National Grid plans to postpone the preparation of the work plan for the SVI component of the RI for the Fulton (South First St.) MGP until the standard procedures are developed.

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TABLES

Table 2-1
National Grid
Fulton, New York
Subsurface Soil Summary

Sample Location	Sample Date	Sample Interval		Sample Analytes						
		Start Depth (ft)	End Depth (ft)	BTEX	VOCs	PAHs	SVOCs	Metals	Cyanide	Pesticides / PCBs
MW-01	7/9/1996	6	8		X		X	X	X	X
MW-01	7/9/1996	14	16	X		X			X	
MW-01	7/9/1996	24	26	X		X			X	
MW-02	7/9/1996	6	8		X		X	X	X	X
MW-02	7/9/1996	14	16	X		X			X	
MW-02	7/10/1996	20	22	X		X			X	
MW-03	7/12/1996	4	6	X		X			X	
MW-03	7/12/1996	8	10	X		X			X	
MW-03	7/12/1996	18	20	X		X			X	
MW-03	7/12/1996	22	24		X		X	X	X	X
MW-03	7/12/1996	26	28	X		X			X	
MW-04	7/11/1996	0	6	X		X			X	
MW-04	7/11/1996	8	10		X		X	X	X	X
MW-04	7/11/1996	18	20	X		X			X	
MW-04	7/11/1996	26	28	X		X			X	
MW-05	7/11/1996	2	4	X		X			X	
MW-05	7/11/1996	8	10		X		X	X	X	X
MW-05	7/11/1996	15.5	16	X		X			X	
MW-06	6/17/1998	6	8	X		X				
MW-06	6/17/1998	10	12	X		X				
MW-06	6/17/1998	16	18	X		X				
MW-06	6/17/1998	24	24.7	X		X				
MW-06	6/18/1998	32	34	X		X				
MW-07	6/17/1998	4	6	X		X				
MW-08	6/16/1998	8	10	X		X				
MW-09D	6/18/1998	18	20	X		X				
MW-09D	6/18/1998	26	26.9	X		X				
MW-09S	6/16/1998	10	12	X		X				
MW-10	6/17/1998	6	8	X		X				
MW-10	6/17/1998	12	14	X		X				
MW-11	5/10/2001	2	4	X		X				
MW-11	5/10/2001	6	8	X		X				
MW-11	5/10/2001	12	14	X		X				
MW-12	6/24/2004	0	4	X		X				
MW-12	6/24/2004	4	8	X		X				
MW-12	6/24/2004	10	12	X		X				
MW-12	6/24/2004	14	16	X		X				
PZ-01	7/10/1996	6	10		X		X	X	X	X
PZ-01	7/10/1996	14	16	X		X			X	
PZ-01	7/10/1996	24	26	X		X			X	
SB-01	7/12/1996	2	4	X		X			X	
SB-01	7/12/1996	6	8		X		X	X	X	X

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Sample Location	Sample Date	Sample Interval		Sample Analytes						
		Start Depth (ft)	End Depth (ft)	BTEX	VOCs	PAHs	SVOCs	Metals	Cyanide	Pesticides / PCBs
SB-01	7/12/1996	12	14	X		X			X	
SB-01	7/12/1996	18	20	X		X			X	
SB-01	7/12/1996	26	28	X						
SB-01	7/12/1996	28	30			X			X	
SB-02	2/23/2000	2	4			X				
SB-02	2/23/2000	4	6	X		X				
SB-02	2/23/2000	6	8			X				
SB-02	2/23/2000	8	10			X				
SB-02	2/23/2000	10	12			X				
SB-02	2/23/2000	12	14			X				
SB-03	2/22/2000	6	8			X				
SB-03	2/22/2000	10	12	X		X				
SB-03	2/22/2000	12	14			X				
SB-03	2/22/2000	14	16			X				
SB-03	2/22/2000	18	20			X				
SB-04	2/22/2000	2	4			X				
SB-04	2/22/2000	8	10			X				
SB-04	2/22/2000	10	12			X				
SB-04	2/22/2000	14	16			X				
SB-04	2/22/2000	16	18	X		X				
SB-04	2/22/2000	18	20			X				
SB-05	2/21/2000	4	6			X				
SB-05	2/21/2000	6	8	X		X				
SB-05	2/21/2000	10	12			X				
SB-05	2/21/2000	12	14			X				
SB-05	2/21/2000	14	16			X				
SB-06	2/22/2000	6	8	X		X				
SB-07	2/21/2000	2	4			X				
SB-07	2/21/2000	6	8	X		X				
SB-07	2/21/2000	10	12			X				
SB-07	2/21/2000	12	14			X				
SB-07	2/21/2000	14	16			X				
SB-08	2/21/2000	4	6			X				
SB-08	2/21/2000	6	8	X		X				
SB-08	2/21/2000	10	12			X				
SB-08	2/21/2000	12	14			X				
SB-08	2/21/2000	16	18			X				
SB-09	2/23/2000	2	4	X		X				
SB-09	2/23/2000	4	6			X				
SB-09	2/23/2000	8	10			X				
SB-09	2/23/2000	12	14			X				
SB-10	2/23/2000	4	6			X				

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Sample Location	Sample Date	Sample Interval		Sample Analytes						
		Start Depth (ft)	End Depth (ft)	BTEX	VOCs	PAHs	SVOCs	Metals	Cyanide	Pesticides / PCBs
SB-10	2/23/2000	8	10			X				
SB-10	2/23/2000	10	12			X				
SB-10	2/23/2000	12	14			X				
SB-10	2/23/2000	18	20	X		X				
SB-11	2/23/2000	2	4			X				
SB-11	2/23/2000	4	6	X		X				
SB-11	2/23/2000	8	10			X				
SB-11	2/23/2000	14	16	X		X				
SB-12	5/8/2001	4	6	X		X				
SB-12	5/8/2001	8	10	X		X				
SB-12	5/8/2001	12	14	X		X				
SB-12	5/8/2001	18	20	X		X				
SB-13	5/8/2001	2	4	X		X				
SB-13	5/8/2001	8	10	X		X				
SB-13	5/8/2001	14	16	X		X				
SB-13	5/8/2001	18	20	X		X				
SB-14	5/8/2001	2	4	X		X				
SB-14	5/8/2001	8	10	X		X				
SB-14	5/8/2001	12	14	X		X				
SB-14	5/8/2001	16	18	X		X				
SB-15	5/8/2001	2	4	X		X				
SB-15	5/8/2001	6	8	X		X				
SB-15	5/8/2001	12	14	X		X				
SB-15	5/8/2001	18	20.2	X		X				
SB-16	5/9/2001	2	4	X		X				
SB-16	5/9/2001	4	6	X		X				
SB-16	5/9/2001	8	10	X		X				
SB-16	5/9/2001	16	16.7	X		X				
SB-17	5/9/2001	2	4	X		X				
SB-17	5/9/2001	6	8	X		X				
SB-17	5/9/2001	10	12	X		X				
SB-17	5/9/2001	14	14.4	X		X				
SB-18	5/9/2001	0	2	X		X				
SB-18	5/9/2001	6	8	X		X				
SB-18	5/9/2001	14	14.4	X		X				
SB-20	2/11/2002	8	10			X				
SB-20	2/11/2002	14	16			X				
SB-20	2/11/2002	20	22			X				
SB-21	2/11/2002	4	6			X				
SB-21	2/11/2002	8	10			X				
SB-21	2/11/2002	16	18			X				
SB-22	2/12/2002	6	8			X				

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Subsurface Soil Summary

Sample Location	Sample Date	Sample Interval		Sample Analytes						
		Start Depth (ft)	End Depth (ft)	BTEX	VOCs	PAHs	SVOCs	Metals	Cyanide	Pesticides / PCBs
SB-22	2/12/2002	12	14			X				
SB-22	2/12/2002	18	20			X				
SB-23	2/12/2002	4	6			X				
SB-23	2/12/2002	10	12			X				
SB-23	2/12/2002	16	18			X				
SB-24	2/12/2002	4	6			X				
SB-24	2/12/2002	10	12			X				
SB-24	2/12/2002	18	20			X				
SB-25	2/13/2002	4	6			X				
SB-25	2/13/2002	10	12			X				
SB-25	2/13/2002	18	20			X				
SB-26	2/13/2002	4	6			X				
SB-26	2/13/2002	12	14			X				
SB-26	2/13/2002	18	20			X				
SB-27	2/13/2002	4	6			X				
SB-27	2/13/2002	12	14			X				
SB-27	2/13/2002	18	20			X				
SB-28	2/14/2002	4	6			X				
SB-28	2/14/2002	12	14			X				
SB-28	2/14/2002	18	20			X				
SB-29	2/14/2002	4	6			X				
SB-29	2/14/2002	10	12			X				
SB-29	2/14/2002	16	18			X				
SB-30	2/14/2002	6	8			X				
SB-30	2/14/2002	12	14			X				
SB-30	2/14/2002	18	20			X				
SB-31	2/15/2002	4	6			X				
SB-31	2/15/2002	12	14			X				
SB-31	2/15/2002	18	20			X				
SB-32	2/15/2002	6	8			X				
SB-32	2/15/2002	12	14			X				
SB-32	2/15/2002	18	20			X				
SB-33	2/15/2002	4	6			X				
SB-33	2/15/2002	12	14			X				
SB-33	2/15/2002	18	20			X				
SB-34	6/6/2003	2	4			X				
SB-34	6/6/2003	6	8			X				
SB-34	6/6/2003	14	16			X				
SB-35	6/14/2004	2	4	X		X				
SB-35	6/14/2004	6	8	X		X				
SB-35	6/14/2004	8	10	X		X				
SB-36	6/15/2004	8	10	X		X				

Table 2-1
National Grid
Fulton, New York
Subsurface Soil Summary

Sample Location	Sample Date	Sample Interval		Sample Analytes						
		Start Depth (ft)	End Depth (ft)	BTEX	VOCs	PAHs	SVOCs	Metals	Cyanide	Pesticides / PCBs
SB-36	6/15/2004	14	16	X		X				
SB-36	6/15/2004	16	18	X		X				
SB-36	6/15/2004	22	24	X		X				
SB-37	6/15/2004	10	12	X		X				
SB-37	6/15/2004	14	16	X		X				
SB-37	6/15/2004	18	20	X		X				
SB-37	6/15/2004	26	28	X		X				
SB-38	6/16/2004	2	4	X		X				
SB-38	6/16/2004	4	8	X		X				
SB-38	6/16/2004	8	12	X		X				
SB-39	6/16/2004	0	4	X		X				
SB-39	6/16/2004	6	8	X		X				
SB-39	6/16/2004	10	12	X		X				
SB-39	6/16/2004	12	16	X		X				
SB-40	6/17/2004	0	2	X		X				
SB-40	6/17/2004	4	8	X		X				
SB-40	6/17/2004	10	12	X		X				
SB-41	6/18/2004	8	12	X		X				
SB-41	6/18/2004	12	16	X		X				
SB-41	6/18/2004	16	20	X		X				
SB-41	6/18/2004	30	34	X		X				
SB-42	6/23/2004	0	4			X				
SB-42	6/23/2004	4	8			X				
SB-43	6/23/2004	0	4			X				
SB-43	6/23/2004	4	8			X				
SB-44	6/23/2004	0	4			X				
SB-44	6/23/2004	4	8			X				
SB-45	6/24/2004	2	4	X		X				
SB-45	6/24/2004	4	8	X		X				
SB-45	6/24/2004	8	12	X		X				
SB-45	6/24/2004	12	16	X		X				
SB-46	6/24/2004	0	4	X		X				
SB-46	6/24/2004	4	8	X		X				
SB-46	6/24/2004	8	12	X		X				
TP-01	7/8/1996			X		X			X	
TP-02	7/8/1996			X		X			X	
TP-03	7/8/1996			X		X			X	
TP-04	7/8/1996			X		X			X	

Table 2-2
National Grid
Fulton, NY
Monitoring Well Specifications

Well No.	Ground Elevation (ft)	Top of PVC Casing Elevation (ft)	Well Depth (ft bgs)	Screen Interval (ft bgs)	Sump interval (ft bgs)	Hydraulic Conductivity (ft/day)[1]	Ground Water Elevations (ft) 7/24/1996	9/4/1996	7/16/1998	8/4/1999	5/31/2001	7/7/2004	11/5/2005	3/31/2006
MW-1	367.20	369.69	17	5 - 15	15 - 17	0.54*	365.43	363.91	364.70	363.05	365.03	364.19	365.75	365.65
MW-2	361.00	360.80	15	2.5 - 12.5	13 - 15	-	357.64	356.43	357.05	355.06	357.65	355.77	357.10	357.32
MW-3	358.70	361.13	16	4 - 14	14 - 16	3.31	350.10	349.21	349.73	349.01	350.15	349.57	350.91	350.80
MW-4	360.00	359.74	16	4 - 14	14 - 16	-	351.88	350.92	351.54	350.76	352.14	351.61	352.96	352.72
MW-5	359.70	359.51	16	4 - 14	14 - 16	-	352.53	351.39	352.03	351.65	352.71	352.23	353.28	352.98
MW-6	359.39	359.00	37	27 - 37	NI	0.1*	-	-	351.84	351.25	352.16	351.64	352.49	352.19
MW-7	359.00	361.33	14	4 - 14	NI	0.57* and 0.95	-	-	352.43	351.99	352.84	352.62	353.74	353.28
MW-7D	358.10	360.13	28	23 - 28	NI	4.39	-	-	-	-	-	351.82	352.17	352.25
MW-8	358.70	360.78	16	6 - 16	NI	1.23	-	-	351.35	350.29	351.94	351.26	353.01	352.64
MW-8D	358.60	360.14	33	28 - 33	NI	0.1	-	-	-	-	-	350.52	351.58	351.37
MW-9	356.10	357.04	16	6 - 16	NI	0.97* and 0.81	-	-	348.48	347.60	348.67	348.37	349.85	349.72
MW-9D	356.40	358.21	30	20 - 30	NI	0.04*	-	-	347.64	347.15	347.90	347.70	348.55	348.17
MW-10	359.51	359.15	15	5 - 15	NI	-	-	-	351.24	350.39	351.46	350.88	351.71	351.48
MW-11	flush	354.41	12.5	2.5 - 12.5	NI	-	-	-	-	-	352.30	351.61	353.19	352.89
MW-12S	flush	353.91	16	6 - 16	NI	0.49	-	-	-	-	-	348.67	349.72	349.46
MW-12D	flush	353.34	28	23 - 28	NI	1.14	-	-	-	-	-	346.29	347.31	346.82
MW-13	flush	359.46	26	19 - 24	24 - 26	-	-	-	-	-	-	-	352.67	352.36
PZ-1	360.19	359.88	16	3.5 - 13.5	NI	-	354.49	353.59	-	353.24	354.49	-	354.48	354.38
PZ-2	flush	358.3	14	4 - 14	NI	-	-	-	-	-	-	-	353.36	353.20
PZ-3	flush	359.06	14	4 - 14	NI	-	-	-	-	-	-	-	353.18	352.93
PZ-4	flush	359.02	14	4 - 14	NI	-	-	-	-	-	-	-	353.19	352.92
PZ-5	358.3	360.49	14	4 - 14	NI	-	-	-	-	-	-	-	352.90	352.62
PZ-6	357.2	359.16	16	6 - 16	NI	-	-	-	-	-	-	-	353.13	351.12
PZ-7	357.8	359.67	16	6 - 16	NI	-	-	-	-	-	-	-	350.90	350.73

Notes:
[1]- K-tests were performed in 1998 and 2004. Some locations were tested twice. Results from 1998 testing are marked with an asterisks.
- Dash indicates no data collected.
NI - Not installed

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Table 4-1
National Grid
Fulton, New York
Surface Soil Samples - Volatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SS-01 7/10/96 0 0.17	SS-01 7/10/96 0 2	SS-02 7/10/96 0 0.17	SS-02 7/10/96 0 2	SS-03 7/11/96 0 0.17	SS-03 7/11/96 0 2
Benzene	.06	mg/kg	0.00072 J	0.00087 J	0.00089 J	0.0017 J	0.012 U	0.012 U
Ethylbenzene	5.5	mg/kg	0.013 U	0.013 U	0.012 U	0.012 U	0.012 U	0.012 U
Toluene	1.5	mg/kg	0.013 U	0.00085 J	0.012 U	0.0013 J	0.012 U	0.012 U
1,1,1-Trichloroethane	.8	mg/kg	0.013 U	0.013 U	0.012 U	0.00082 J	0.012 U	0.012 U
Xylene (total)	1.2	mg/kg	0.013 U	0.013 U	0.012 U	0.00066 J	0.012 U	0.012 U
Total BTEX	NC	mg/kg	0.00072	0.00172	0.00089	0.00366	---	---

0.00172 0.00066 0.00366 0 0

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SS-04 7/11/96 0 0.17	SS-04 7/11/96 0 2	SS-10 5/14/01 0 0.17	SS-11 5/14/01 0 0.17	SS-12 5/14/01 0 0.17	SS-13 5/14/01 0 0.17
Benzene	.06	mg/kg	0.011 U	0.011 U	0.011 U	0.012 U	0.014 U	0.012 U
Ethylbenzene	5.5	mg/kg	0.011 U	0.011 U	0.011 U	0.012 U	0.014 U	0.012 U
Toluene	1.5	mg/kg	0.011 U	0.011 U	0.011 U	0.012 U	0.0008 J	0.012 U
1,1,1-Trichloroethane	.8	mg/kg	0.011 U	0.011 U	---	---	---	---
Xylene (total)	1.2	mg/kg	0.011 U	0.011 U	0.011 U	0.012 U	0.014 U	0.012 U
Total BTEX	NC	mg/kg	---	---	---	---	0.0008	---

0.0008

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SS-14 5/14/01 0 0.17	SS-15 5/14/01 0 0.17	SS-16 5/14/01 0 0.17	SS-17 5/14/01 0 0.17	*Background Samples* SS-05 7/11/96 0 0.17	SS-06 7/11/96 0 0.17
Benzene	.06	mg/kg	0.016 U	0.018 U	0.011 U	0.013 U	0.011 U	0.0037 J
Ethylbenzene	5.5	mg/kg	0.016 U	0.018 U	0.011 U	0.013 U	0.011 U	0.012 U
Toluene	1.5	mg/kg	0.016 U	0.018 U	0.011 U	0.002 J	0.011 U	0.0026 J
1,1,1-Trichloroethane	.8	mg/kg	---	---	---	---	0.011 U	0.012 U
Xylene (total)	1.2	mg/kg	0.016 U	0.018 U	0.011 U	0.013 U	0.011 U	0.00077 J
Total BTEX	NC	mg/kg	---	---	---	0.002	---	0.00707

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

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Database: NimoFulton_Chem.mdb (EQuIS)

Table 4-2
Niagara Mohawk
Fulton, New York
Surface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID	SS-01	SS-01	SS-02	SS-02	SS-03	SS-03	SS-04	SS-04	SS-05	SS-06	SS-10
		Sample Date	7/10/1996	7/10/1996	7/10/1996	7/10/1996	7/11/1996	7/11/1996	7/11/1996	7/11/1996	7/11/1996	7/11/1996	5/14/2001
		Start Depth (ft)	0	0	0	0	0	0	0	0	0	0	0
		End Depth (ft)	0.17	2	0.17	2	0.17	2	0.17	2	0.17	0.17	0.17
Acenaphthene	50	mg/kg	0.46 U	0.005 J	0.41 U	40.00 U	0.005 J	0.40 U	3.70 U	3.60 U	0.37 U	0.39 U	0.056 J
Acenaphthylene	41	mg/kg	0.043 J	0.026 J	0.41	40.00 U	0.004 J	0.014 J	0.08 J	0.19 J	0.37 U	0.39 U	0.38 U
Anthracene	50	mg/kg	0.039 J	0.028 J	0.034 J	40.00 U	0.021 J	0.013 J	0.064 J	0.26 J	0.37 U	0.39 U	0.14 J
Benzo[a]anthracene**	.224	mg/kg	3 *	1.6 *	2 *	1.6 J*	0.6 *	0.8 *	5.1 *	14 *	0.009 J	0.018 J	0.44 *
Benzo[a]pyrene**	.061	mg/kg	4 *	1.9 *	3.2 *	2.8 J*	0.63 *	0.96 J*	7.5 J*	19 *	0.009 J	0.017 J	0.41 *
Benzo[b]fluoranthene**	.224	mg/kg	6 *	3.4 *	5.6 *	50 *	0.88 *	2.2 J*	12 J*	22 *	0.017 J	0.027 J	0.68 *
Benzo[g,h,i]perylene	50	mg/kg	4.7	1.3	4.3	1.8 J	1.4	0.81 J	4.9 J	11	0.018 J	0.006 J	0.099 J
Benzo[k]fluoranthene**	.224	mg/kg	1.6 *	1.1 *	2.1 *	1.9 J*	0.027 J	0.72 J*	0.29 J*	8.2 *	0.005 J	0.011 J	0.21 J
Chrysene**	.4	mg/kg	4.5 *	2.1 *	3 *	2.6 J*	0.69 *	0.99 *	5.1 *	14 *	0.011 J	0.02 J	0.46 *
di-n-Butyl Phthalate	8.1	mg/kg	0.46 U	0.45 U	0.41 U	40.00 U	0.009 J	0.015 J	3.70 U	3.60 U	0.009 J	0.006 J	---
Carbazole	NC	mg/kg	0.007 J	0.009 J	0.009 J	40.00 U	0.004 J	0.005 J	3.70 U	0.09 J	0.37 U	0.39 U	---
Dibenz[a,h]anthracene**	.014	mg/kg	0.46 U	0.45 U	0.41 U	40.00 U	0.39 U	0.40 UJ	3.70 UJ	3.60 U	0.37 U	0.39 U	0.38 U
Dibenzofuran	6.2	mg/kg	0.46 U	0.006 J	0.007 J	40.00 U	0.39 U	0.40 U	3.70 U	0.062 J	0.37 U	0.39 U	---
Fluoranthene	50	mg/kg	5.7	2.2	2.1	2.3 J	1.3	1	7.1	19	0.02 J	0.41	0.9
Fluorene	50	mg/kg	0.013 J	0.013 J	0.007 J	40.00 U	0.009 J	0.40 U	3.70 U	0.067 J	0.37 U	0.39 U	0.06 J
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	4.4 *	1.2	4.2 *	2.1 J	0.027 J	0.82 J	4.5 *	11 *	0.005 J	0.006 J	0.11 J
2-Methylnaphthalene	36.4	mg/kg	0.005 J	0.45 U	0.013 J	40.00 U	0.39 U	0.005 J	3.70 U	0.059 J	0.37 U	0.39 U	0.38 U
Naphthalene	13	mg/kg	0.016 J	0.007 J	0.035 J	40.00 U	0.39 U	0.011 J	0.091 J	0.16 J	0.37 U	0.39 U	0.38 U
Phenanthrene	50	mg/kg	2.1	1.3	1.1	0.8 J	0.81	0.51	0.22 J	7.9	0.01 J	0.02 J	0.69
Pyrene	50	mg/kg	8.2	3.6	3.2	2.3 J	1.2	1.8	7.6	22	0.015 J	0.033 J	0.99
Total CPAH**	11.24***	11.24	23.5	11.3	20.1	61	2.854	6.49	34.49	88.2	0.066	0.099	2.31
Total PAH	500	500	44.316	19.779	31.299	68.2	7.603	10.653	54.545	148.836	0.119	0.568	5.245

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs
*** Highest Background Value

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Table 4-2

Niagara Mohawk

Fulton, New York

Surface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SS-11	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21
		Sample Date	5/14/2001	5/14/2001	5/14/2001	5/14/2001	5/14/2001	5/14/2001	5/14/2001	4/16/2002	4/16/2002	4/16/2002	4/16/2002
		Start Depth (ft)	0	0	0	0	0	0	0	0	0	0	0
		End Depth (ft)	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Acenaphthene	50	mg/kg	0.42 U	0.051 J	0.084 J	0.52 U	0.59 U	0.36 U	0.44 U	.056 J	.43 U	2.2 U	.14 J
Acenaphthylene	41	mg/kg	0.26 J	0.093 J	0.076 J	0.056 J	0.069 J	0.36 U	0.048 J	.1 J	.43 U	2.2 U	.098 J
Anthracene	50	mg/kg	0.19 J	0.18 J	0.27 J	0.09 J	0.59 U	0.36 U	0.44 U	.3 J	.09 J	2.2 U	.44 J
Benzo[a]anthracene**	.224	mg/kg	**1.3 ***	**0.8 ***	**1.2 ***	**0.31 J***	**0.27 J***	0.069 J	0.14 J	**2 ***	**.41 J***	**.67 J***	**2 ***
Benzo[a]pyrene**	.061	mg/kg	**1.5 ***	**0.81 ***	**1.1 ***	**0.36 J***	**0.26 J***	0.051 J	**0.14 J***	**2 ***	**.41 J***	**.77 J***	**2 ***
Benzo[b]fluoranthene**	.224	mg/kg	**2.6 ***	**1.4 ***	**1.9 ***	**0.61 ***	**0.41 J***	0.08 J	**0.26 J***	**2.9 ***	**.57 ***	**1.2 J***	**3.1 ***
Benzo[g,h,i]perylene	50	mg/kg	0.52	0.29 J	0.37 J	0.15 J	0.11 J	0.36 U	0.062 J	0.78	.28 J	.35 J	0.83
Benzo[k]fluoranthene**	.224	mg/kg	**0.91 ***	**0.43 J***	**0.52 ***	0.19 J	0.14 J	0.36 U	0.076 J	**1 ***	.22 J	**.33 J***	**1 ***
Chrysene**	4	mg/kg	**1.4 ***	**0.93 ***	**1.2 ***	0.37 J	0.31 J	0.066 J	0.17 J	**2 ***	**.42 J***	**.83 J***	**2.1 ***
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---
Dibenz[a,h]anthracene**	.014	mg/kg	**0.16 J***	**0.1 J***	**0.11 J***	0.52 U	0.59 U	0.36 U	0.44 U	**.26 J***	**.079 J***	2.2 U	**.24 J***
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	2	1.6	2.1	0.56	0.49 J	0.13 J	0.23 J	3.4	0.81	1.4 J	4.6
Fluorene	50	mg/kg	0.057 J	0.058 J	0.088 J	0.52 U	0.59 U	0.36 U	0.44 U	.07 J	.43 U	2.2 U	.15 J
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	0.55	0.32 J	0.38 J	0.14 J	0.11 J	0.36 U	0.063 J	0.78	.26 J	.34 J	0.8
2-Methylnaphthalene	36.4	mg/kg	0.083 J	0.11 J	0.096 J	0.52 U	0.59 U	0.36 U	0.44 U	.048 J	.43 U	2.2 U	.14 J
Naphthalene	13	mg/kg	0.11 J	0.091 J	0.081 J	0.52 U	0.59 U	0.36 U	0.44 U	.048 J	.43 U	2.2 U	.11 J
Phenanthrene	50	mg/kg	0.87	0.93	1.2	0.34 J	0.15 J	0.11 J	0.095 J	1.2	.4 J	.69 J	2.5
Pyrene	50	mg/kg	3	1.6	2.3	0.75	0.52 J	0.12 J	0.25 J	2.9	0.7	1.3 J	4
Total CPAH**	11.24***	11.24	8.42	4.79	6.41	1.98	1.5	0.266	0.849	10.9	2.37	4.14	11.2
Total PAH	500	500	15.51	9.793	13.075	3.926	2.839	0.626	1.534	19.8	4.65	7.88	24.2

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs
*** Highest Background Value

Table 4-2
Niagara Mohawk
Fulton, New York
Surface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SS-22	SS-23	SS-24	SS-24A	SS-24B	SS-24C	SS-24D	SS-25	SS-26	SS-27	SS-28
		Sample Date	4/16/2002	4/16/2002	4/16/2002	6/25/2004	6/25/2004	6/25/2004	6/25/2004	4/16/2002	4/16/2002	4/16/2002	12/29/2005
		Start Depth (ft)	0	0	0	0	0	0	0	0	0	0	0
		End Depth (ft)	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Acenaphthene	50	mg/kg	.1 J	.13 J	.18 J	.12 J	.057 J	4.2 U	.48 J	.45 U	.45 U	.056 J	.22 J
Acenaphthylene	41	mg/kg	.097 J	.41 U	1.4	.14 J	.23 J	2.2 J	5.4	.25 J	.15 J	0.56	.065 J
Anthracene	50	mg/kg	.29 J	.4 J	.78 J	.35 J	.25 J	2 J	3.4 J	.18 J	.092 J	.38 J	0.53 J
Benzo[a]anthracene**	.224	mg/kg	1.3 *	1.1 *	4.2 *	1.8 *	1.5 *	11 *	22 *	1.1 *	.46 *	1.9 *	1.6 J*
Benzo[a]pyrene**	.061	mg/kg	1.4 *	.98 *	5.3 *	2 *	1.8 *	12 *	23 *	1.2 *	.56 *	2.3 *	1.6 J*
Benzo[b]fluoranthene**	.224	mg/kg	2.3 *	1.4 *	8.9 *	2.2 *	1.9 *	14 *	33 *	2.4 *	.98 *	4 *	2.2 J*
Benzo[g,h,i]perylene	50	mg/kg	0.57	.37 J	2.7	0.93	1	6.3	16	0.59	.29 J	1.2	0.83 J
Benzo[k]fluoranthene**	.224	mg/kg	.68 *	.53 *	3.3 *	2 *	1.7 *	13 *	33 *	.64 *	.29 J*	1.3 *	.85 J*
Chrysene**	.4	mg/kg	1.5 *	1.1 *	4.2 *	2 *	1.7 *	12 *	25 *	1.3 *	.52 *	2.1 *	1.6 J*
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	.19 J
Dibenz[a,h]anthracene**	.014	mg/kg	.16 J*	.13 J*	.71 J*	.28 J*	.26 J*	1.7 J*	4.1 J*	.17 J*	.08 J*	.28 J*	.22 J*
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	2.8	2.4	6.4	3.4	2.7	20	36	2	0.85	3.3	3.1 J
Fluorene	50	mg/kg	.09 J	.12 J	.2 J	.13 J	.058 J	.5 J	.46 J	.45 U	.45 U	.1 J	.2 J
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	0.55	.35 J	2.7	0.88	0.89	6.2 *	16 *	0.61	.28 J	1.1	0.52 J
2-Methylnaphthalene	36.4	mg/kg	.15 J	.1 J	.22 J	.089 J	.066 J	.97 J	4.5 U	.14 J	.45 U	.078 J	.058 J
Naphthalene	13	mg/kg	.11 J	.071 J	.49 J	.15 J	.15 J	2.4 J	1.4 J	.15 J	.061 J	.13 J	.075 J
Phenanthrene	50	mg/kg	1.5	1.7	2.5	1.8	1.2	8.3	12	0.78	.34 J	1.4	2.1 J
Pyrene	50	mg/kg	2.6	2.2	6.5	3.9	3.4	22	40	2	0.91	4	3.4 J
Total CPAH**	11.24***	11.24	7.89	5.59	29.3	11.2	8.75	69.9	156	7.42	3.17	13	8.59
Total PAH	500	500	16.2	13.1	50.7	22.2	18.9	135	271	13.5	5.86	24.2	19.2

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs
*** Highest Background Value

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Table 4-2
Niagara Mohawk
Fulton, New York
Surface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SS-29	SS-30	SS-31	SS-32
		Sample Date	2/29/2005	2/29/2005	2/29/2005	12/29/2005
		Start Depth (ft)	0	0	0	0
		End Depth (ft)	0.17	0.17	0.17	0.17
Acenaphthene	50	mg/kg	.19 J	.17 J	.071 J	0.77
Acenaphthylene	41	mg/kg	.051 J	.22 J	.14 J	0.87
Anthracene	50	mg/kg	0.5	0.5	.26 J	2.1
Benzo[a]anthracene**	.224	mg/kg	**1.8 ***	**1.8 ***	**1.2 ***	**6.8 J***
Benzo[a]pyrene**	.061	mg/kg	**1.8 J***	**1.9 J***	**1.2 J***	**6.1 J***
Benzo[b]fluoranthene**	.224	mg/kg	**2.8 J***	**3.1 J***	**2.1 J***	**11 J***
Benzo[g,h,i]perylene	50	mg/kg	0.97 J	1.1 J	0.75 J	4.2 J
Benzo[k]fluoranthene**	.224	mg/kg	**.83 J***	**1 J***	**.66 J***	**4 J***
Chrysene**	.4	mg/kg	**1.8 ***	**2 ***	**1.2 ***	**6.8 J***
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---
Carbazole	NC	mg/kg	.15 J	.18 J	.13 J	0.71
Dibenz[a,h]anthracene**	.014	mg/kg	**.27 J***	**.29 J***	**.2 J***	**1.2 J***
Dibenzofuran	6.2	mg/kg	---	---	---	---
Fluoranthene	50	mg/kg	3.2	3.3	2.2	13
Fluorene	50	mg/kg	.16 J	.17 J	.082 J	0.72
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	0.52 J	0.59 J	.38 J	2.5 J
2-Methylnaphthalene	36.4	mg/kg	.45 U	.063 J	.46 U	.21 J
Naphthalene	13	mg/kg	.047 J	.093 J	.06 J	0.53
Phenanthrene	50	mg/kg	1.9	2	1.1	7.3
Pyrene	50	mg/kg	4.2	4.2	2.7	11 J*
Total CPAH**	11.24***	11.24	9.82	10.7	6.94	38.4
Total PAH	500	500	21	22.5	14.3	79.1

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs
*** Highest Background Value

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Table 4-3
National Grid
Fulton, New York
Surface Soil Samples - Metals

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SS-01 07/10/96 0 0.17	SS-01 07/10/96 0 2	SS-02 07/10/96 0 0.17	SS-02 07/10/96 0 2	SS-03 07/11/96 0 0.17	SS-03 07/11/96 0 2	SS-04 07/11/96 0 0.17	SS-04 07/11/96 0 2	SS-10 05/14/01 0 0.17
Aluminum	SB	mg/kg	7400	9600	6100	3900	7100	7400	5800	5900	6280
Antimony	SB	mg/kg	17 UJ	16 UJ	15 UJ	15 UJ	14 UJ	14 UJ	13 UJ	13 UJ	0.24 J
Arsenic	7.5 or SB	mg/kg	5	4	4	**9 ***	4	6	5	6	3.2
Barium	300 or SB	mg/kg	60	70	70	100	60	80	60	70	41.2
Beryllium	0.16 (HEAST) or SB	mg/kg	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	**0.28 J ***
Cadmium	1 or SB	mg/kg	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.23 J
Calcium Metal	SB	mg/kg	4800 J	2200 J	4100 J	3100 J	4000 J	2000 J	23000 J	20000 J	1520
Chromium	10 or SB	mg/kg	9	**13 ***	10	**11 ***	9	10	10	9	8
Cobalt	30 or SB	mg/kg	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	3.2 J
Copper	25 or SB	mg/kg	24	16	**32 ***	**62 ***	**27 ***	**35 ***	**41 ***	**42 ***	13
Iron	2,000 or SB	mg/kg	**15000 J ***	**14000 J ***	**16000 J ***	**24000 J ***	**13000 J ***	**16000 J ***	**13000 J ***	**14000 J ***	**10600 ***
Lead	SB	mg/kg	48 J	27 J	50 J	120 J	69 J	120 J	150 J	90 J	26.6
Magnesium	SB	mg/kg	2400	1500	2400	1200	2300	1400	3000	2900	1400
Manganese	SB	mg/kg	510 J	240 J	420 J	280 J	330 J	220 J	400 J	440 J	258
Mercury	0.1	mg/kg	**0.2 ***	0.1	**0.2 ***	**0.7 ***	0.1 U	0.1	**1.1 ***	**0.5 ***	0.091 J
Nickel	13 or SB	mg/kg	10 UJ	10 UJ	10 UJ	10 J	10 UJ	10 UJ	10 J	9 J	7.1
Potassium	SB	mg/kg	1400 U	1400 U	1200 U	1200 U	1200 U	1200 U	1100 U	1100 U	473 J
Selenium	2 or SB	mg/kg	1	1	2	**3 ***	1	2	1 U	1 U	0.33 J
Silver	SB	mg/kg	3 U	3 U	2 U	2 U	2 U	2 U	2 U	2 U	0.083 U
Sodium	SB	mg/kg	300 U	300 U	200 U	200 U	200 U	200 U	200 U	200 U	45 J
Thallium	SB	mg/kg	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1.1 J
Vanadium	150 or SB	mg/kg	10	20	10	20	10	10	10	10	12.3
Zinc	20 or SB	mg/kg	**63 J ***	**53 J ***	**64 J ***	**78 J ***	**74 J ***	**110 J ***	**110 J ***	**89 J ***	**47.3 ***

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

Table 4-3
National Grid
Fulton, New York
Surface Soil Samples - Metals

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SS-11	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	Background Samples SS-05	Background Samples SS-06
		Sample Date	05/14/01	05/14/01	05/14/01	05/14/01	05/14/01	05/14/01	05/14/01	07/11/96	07/11/96
		Start Depth (ft)	0	0	0	0	0	0	0	0	0
		End Depth (ft)	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Aluminum	SB	mg/kg	7840	8320	6380	9980	10200	3870	12200	5500	6000
Antimony	SB	mg/kg	0.35 J	0.8 J	0.37 J	8.6 J	0.89 J	0.27 J	0.41 J	13 UJ	14 UJ
Arsenic	7.5 or SB	mg/kg	8.9 *	8.6 *	4.3	12.2 *	5.9	2.6	11.2 *	4	3
Barium	300 or SB	mg/kg	79.1	166	72.4	949 *	85.7	38.2	58.8	60	50
Beryllium	0.16 (HEAST) or SB	mg/kg	0.35 J *	0.44 J *	0.34 J *	0.57 J *	0.49 J *	0.18 J *	0.52 J *	1 U	1 U
Cadmium	1 or SB	mg/kg	0.28 J	0.72	0.42 J	1.5 *	0.36 J	0.06 J	0.28 J	1 U	1 U
Calcium Metal	SB	mg/kg	2300	4280	11200	5150	4290	16200	1370	1400 J	1800 J
Chromium	10 or SB	mg/kg	9.8	14.1 *	12.6 *	20 *	14.8 *	5.6	14.5 *	7	8
Cobalt	30 or SB	mg/kg	3.3 J	4.3 J	3.4 J	4.2 J	4.2 J	2.6 J	5.9 J	10 U	10 U
Copper	25 or SB	mg/kg	20.2	33.2 *	29.3 *	48.6 *	17.8	19.9	37.1 *	18	22
Iron	2,000 or SB	mg/kg	13300 *	16100 *	13400 *	16000 *	15800 *	9980 *	19800 *	11000 J *	9300 J *
Lead	SB	mg/kg	89.8	340	116	2770	91.8	10.8	52.1	22 J	36 J
Magnesium	SB	mg/kg	1500	1850	3050	2070	2030	3110	2550	1700	1400
Manganese	SB	mg/kg	306	454	298	496	178	369	318	310 J	80 J
Mercury	0.1	mg/kg	0.22 *	0.49 *	0.19 *	0.24 *	0.11 J *	0.033 U	0.081 J	0.1	0.2 *
Nickel	13 or SB	mg/kg	8.7	11.4	10.7	12.7	11	6.5	13	10 UJ	10 J
Potassium	SB	mg/kg	571 J	889	679	607 J	587 J	439 J	1020	1100 U	1200 U
Selenium	2 or SB	mg/kg	0.7	1	0.55 J	1.4	1.8	0.2 U	1	1 U	1 U
Silver	SB	mg/kg	0.092 U	0.16 J	0.09 U	0.11 U	0.13 U	0.079 U	0.098 U	2 U	2 U
Sodium	SB	mg/kg	31.5 J	43.1 J	207 J	115 J	140 J	50.8 J	44.8 J	200 U	200 U
Thallium	SB	mg/kg	0.45 U	0.5 U	0.44 U	0.68 J	0.88 J	0.39 U	0.99 J	1 UJ	1 UJ
Vanadium	150 or SB	mg/kg	16.6	25.2	18.6	24.3	20.3	8.7	24.3	10 U	10
Zinc	20 or SB	mg/kg	94.9 *	216 *	93.6 *	3360 *	169 *	44.7 *	75.9 *	34 J *	120 J *

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimate
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

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Table 4-4
National Grid
Fulton, New York
Surface Soil Samples - Cyanide

Chemical Name	TAGM 4046 Recommended Soil Cleanup							
		Location ID	SS-01	SS-01	SS-02	SS-02	SS-03	SS-03
		Sample Date	07/10/96	07/10/96	07/10/96	07/10/96	07/11/96	07/11/96
		Start Depth (ft)	0	0	0	0	0	0
		End Depth (ft)	0.17	2	0.17	2	0.17	2
Cyanide	NC	mg/kg	8.3 J	3.3 J	11 J	810 J	0.9 J	2.3 J

Chemical Name	TAGM 4046 Recommended Soil Cleanup						
		Location ID	SS-04	SS-04	SS-07	SS-08	SS-09
		Sample Date	07/11/96	07/11/96	06/22/98	06/22/98	06/22/98
		Start Depth (ft)	0	0	0	0	0
		End Depth (ft)	0.17	2	2	2	2
Cyanide	NC	mg/kg	1.9 J	5.1 J	15	2.3	60

Background Samples

Chemical Name	TAGM 4046 Recommended Soil Cleanup			
		Location ID	SS-05	SS-06
		Sample Date	07/11/96	07/11/96
		Start Depth (ft)	0	0
		End Depth (ft)	2	2
Cyanide	NC	mg/kg	0.6 UJ	0.6 UJ

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

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Table 4-5
National Grid
Fulton, New York
Surface Soil Samples - Pesticides PCBs

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SS-01 7/10/1996 0 0.17	SS-01 7/10/1996 0 2	SS-02 7/10/1996 0 0.17	SS-02 7/10/1996 0 2	SS-03 7/11/1996 0 0.17
Aldrin	0.041	mg/kg	0.0023 U	0.0023 U	0.02 U	0.0021 U	0.002 U
alpha-BHC	0.11	mg/kg	0.0023 U	0.0023 U	0.02 U	0.0021 U	0.002 U
alpha-Chlordane	0.54	mg/kg	0.0047 BJ	0.0023 U	0.02 U	0.0021 U	0.002 U
4,4'-DDD	2.9	mg/kg	0.0045 U	0.0046 U	0.049 J	0.012 J	0.0031 J
4,4'-DDE	2.1	mg/kg	0.0045 U	0.0045 BJ	0.041 U	0.0041 U	0.004 U
4,4'-DDT	2.1	mg/kg	0.0045 U	0.033	0.12 U	0.016 U	0.0079
Dieldrin	0.044	mg/kg	0.0045 U	0.0046 U	0.04 U	0.0041 U	0.004 U
Endosulfan II	0.9	mg/kg	0.0052 U	0.0096 U	0.04 U	0.013 J	0.004 U
Endosulfan Sulfate	0.1	mg/kg	0.0045 U	0.0046 U	0.042 J	0.007 U	0.004 U
Endrin	0.1	mg/kg	0.046 U	0.046 J	0.32 U	0.0041 U	0.004 U
Endrin Ketone	NC	mg/kg	0.0045 U	0.024 B	0.087 BJ	0.015 U	0.0025 J
gamma-Chlordane	0.54	mg/kg	0.0023 U	0.01 J	0.034 U	0.0023 U	0.002 U
Methoxychlor	10	mg/kg	0.0023 U	0.035 U	0.21 U	0.048 J	0.0064 J

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SS-03 7/11/1996 0 2	SS-04 7/11/1996 0 0.17	SS-04 7/11/1996 0 2	Background Samples: SS-05 7/11/1996 0 0.17	Background Samples: SS-06 7/11/1996 0 0.17
Aldrin	0.041	mg/kg	0.002 U	0.0057 J	0.0026 J	0.0019 U	0.002 U
alpha-BHC	0.11	mg/kg	0.002 U	0.018 J	0.018 U	0.0019 U	0.002 U
alpha-Chlordane	0.54	mg/kg	0.0018 J	0.018 J	0.061 J	0.0011 J	0.002 U
4,4'-DDD	2.9	mg/kg	0.0041 U	0.037 U	0.022	0.0037 U	0.0011 J
4,4'-DDE	2.1	mg/kg	0.0058 J	0.037 U	0.0043 J	0.0013 J	0.0011 J
4,4'-DDT	2.1	mg/kg	0.012 J	0.043 U	0.046 J	0.0017 J	0.004 U
Dieldrin	0.044	mg/kg	0.004 U	0.054 U	**0.048 ***	0.0037 U	0.004 U
Endosulfan II	0.9	mg/kg	0.00084 J	0.024 J	0.019 J	0.00065 J	0.004 U
Endosulfan Sulfate	0.1	mg/kg	0.004 U	0.037 U	0.037 U	0.0037 U	0.004 U
Endrin	0.1	mg/kg	0.004 U	0.037 U	0.037 U	0.0037 U	0.004 U
Endrin Ketone	NC	mg/kg	0.0058 J	0.044 J	0.056	0.0025 J	0.004 U
gamma-Chlordane	0.54	mg/kg	0.0016 J	0.044	0.072	0.0019 U	0.002 U
Methoxychlor	10	mg/kg	0.02 U	0.18 U	0.052 J	0.0056 J	0.02 U

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

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Table 4-6
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Volatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID	MW-01	MW-01	MW-01	MW-02	MW-02	MW-02	MW-03	MW-03	MW-03	MW-03	MW-03	MW-04
		Sample Date	7/9/1996	7/9/1996	7/9/1996	7/9/1996	7/9/1996	7/10/1996	7/12/1996	7/12/1996	7/12/1996	7/12/1996	7/12/1996	7/11/1996
		Start Depth (ft)	6	14	24	6	14	20	4	8	18	22	26	0
		End Depth (ft)	8	16	26	8	16	22	6	10	20	24	28	6
Benzene	.06	mg/kg	0.012 U	0.0028 U	0.0029 U	0.059 U	0.0028 U	0.0028 U	0.0053	0.0034 U	0.043 J	7 U	0.07 U	0.0028 U
Ethylbenzene	5.5	mg/kg	0.012 U	0.0028 U	0.0029 U	0.059 U	0.0028 U	0.0028 U	0.0029 U	0.0034 U	0.044 J	0.11 J	0.07 U	0.0028 U
Methyl ethyl ketone	.3	mg/kg	0.012 U	—	—	0.059 U	—	—	—	—	—	7 U	—	—
Tetrachloroethene	1.4	mg/kg	0.0026 J	—	—	0.059 U	—	—	—	—	—	7 U	—	—
Toluene	1.5	mg/kg	0.012 U	0.0028 U	0.0029 U	0.059 U	0.0028 U	0.0028 U	0.0087	0.0034 U	0.041 J	7 U	0.07 U	0.0028 U
Xylenes, Total	1.2	mg/kg	0.012 U	0.0028 U	0.0029 U	0.059 U	0.0028 U	0.0028 U	0.012	0.0034 U	0.098 U	7 U	0.07 U	0.0028 U
Total BTEX	NC	mg/kg	—	—	—	—	—	—	0.026	—	0.128	0.11	—	—

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID	MW-04	MW-04	MW-04	MW-05	MW-05	MW-05	MW-06	MW-06	MW-06	MW-06	MW-06	MW-07
		Sample Date	7/11/1996	7/11/1996	7/11/1996	7/11/1996	7/11/1996	7/11/1996	6/17/1998	6/17/1998	6/17/1998	6/17/1998	6/18/1998	6/17/1998
		Start Depth (ft)	8	18	26	2	8	15.5	6	10	16	24	32	4
		End Depth (ft)	10	20	28	4	10	16	8	12	18	24.7	34	6
Benzene	.06	mg/kg	**0.11 J***	1.8 U	0.0028 U	0.0027 U	3.3 U	0.032 J	**0.066 ***	**0.47 J***	0.0112 U	0.012 U	0.002 J	0.012 U
Ethylbenzene	5.5	mg/kg	**7.1 J***	1.8 U	0.0028 U	0.0027 U	5.5	0.031 J	0.074	0.034 J	0.011 U	0.012 U	0.011 U	0.012 U
Methyl ethyl ketone	.3	mg/kg	**1.9 J***	—	—	—	0.043 J	—	—	—	—	—	—	—
Tetrachloroethene	1.4	mg/kg	1.9 UJ	—	—	—	3.3 U	—	—	—	—	—	—	—
Toluene	1.5	mg/kg	0.016 J	1.8 U	0.0028 U	0.0027 U	0.02 J	0.41 U	0.034	0.15 J	0.011 U	0.012 U	0.002 J	0.012 U
Xylenes, Total	1.2	mg/kg	1.9 UJ	1.8 U	0.0028 U	0.0027 U	**12.1 ***	0.63	0.39	0.12 J	0.011 U	0.012 U	0.011 U	0.012 U
Total BTEX	NC	mg/kg	7.226	—	—	—	17.62	0.693	0.564	0.774	—	—	0.004	—

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID	MW-08	MW-09D	MW-09D	MW-09S	MW-10	MW-10	MW-11	MW-11	MW-11	MW-12	MW-12	MW-12
		Sample Date	6/16/1998	6/18/1998	6/18/1998	6/16/1998	6/17/1998	6/17/1998	5/10/2001	5/10/2001	5/10/2001	6/24/2004	6/24/2004	6/24/2004
		Start Depth (ft)	8	18	26	10	6	12	2	6	12	0	4	10
		End Depth (ft)	10	20	26.9	12	8	14	4	8	14	4	8	12
Benzene	.06	mg/kg	0.013 U	0.011 U	0.011 U	0.012 U	0.012 U	0.012 U	0.001 J	**0.77 ***	0.0008 J	.003 U	.003 U	.023 U
Ethylbenzene	5.5	mg/kg	0.013 U	0.011 U	0.011 U	0.012 U	0.012 U	0.012 U	0.01 U	0.38	0.011 J	.003 U	.003 U	.023 U
Methyl ethyl ketone	.3	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Tetrachloroethene	1.4	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Toluene	1.5	mg/kg	0.013 U	0.011 U	0.011 U	0.012 U	0.012 U	0.012 U	0.0009 J	0.29	0.004 J	.003 U	.003 U	.023 U
Xylenes, Total	1.2	mg/kg	0.013 U	0.011 U	0.011 U	0.012 U	0.012 U	0.012 U	0.01 U	0.34	0.006 J	.002 J	.003 U	.023 U
Total BTEX	NC	mg/kg	—	—	—	—	—	—	0.0019	1.78	0.0218	0.002	—	—

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**

Table 4-6
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Volatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID	MW-12	PZ-01	PZ-01	PZ-01	SB-01	SB-01	SB-01	SB-01	SB-01	SB-02	SB-03	SB-04
		Sample Date	6/24/2004	7/10/1996	7/10/1996	7/10/1996	7/12/1996	7/12/1996	7/12/1996	7/12/1996	7/12/1996	2/23/2000	2/22/2000	2/22/2000
		Start Depth (ft)	14	6	14	24	2	6	12	18	26	4	10	16
		End Depth (ft)	16	10	16	26	4	8	14	20	28	6	12	18
Benzene	.06	mg/kg	.003 U	1.5 U	0.0029 U	0.0028 U	3.0e-03 U	7.60 UJ	0.07 U	2.9e-03 U	2.7e-03 U	**0.12 J***	**0.35 J***	**1.2 J***
Ethylbenzene	5.5	mg/kg	.003 U	0.013 J	0.0029 U	0.0028 U	3.0e-03 U	0.3 J	0.07 U	2.9e-03 U	2.7e-03 U	1.7	0.15 J	**11 ***
Methyl ethyl ketone	.3	mg/kg	—	0.043 J	—	—	—	0.13 J	—	—	—	—	—	—
Tetrachloroethene	1.4	mg/kg	—	1.5 U	—	—	—	7.60 UJ	—	—	—	—	—	—
Toluene	1.5	mg/kg	.003 U	1.5 U	0.0029 U	0.0028 U	3.0e-03 U	7.60 UJ	0.07 U	2.9e-03 U	2.7e-03 U	1.30 U	0.38 J	**2.8 J***
Xylenes, Total	1.2	mg/kg	.003 U	1.5 U	0.0029 U	0.0028 U	3.0e-03 U	**21 J***	0.07 U	2.9e-03 U	2.7e-03 U	**1.5 ***	0.64 J	**24 ***
Total BTEX	NC	mg/kg	—	0.013	—	—	—	21.3	—	—	—	3.32	1.52	39

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID	SB-05	SB-06	SB-07	SB-08	SB-09	SB-10	SB-11	SB-11	SB-12	SB-12	SB-12	SB-12
		Sample Date	2/21/2000	2/22/2000	2/21/2000	2/21/2000	2/23/2000	2/23/2000	2/23/2000	2/23/2000	5/8/2001	5/8/2001	5/8/2001	5/8/2001
		Start Depth (ft)	6	6	6	6	2	18	4	14	4	8	12	18
		End Depth (ft)	8	8	8	8	4	20	6	16	6	10	14	20
Benzene	.06	mg/kg	**8.7 ***	0.01 U	0.06 U	6.80 U	1.10 U	0.004 J	**11 J***	0.01 U	0.007 J	0.002 J	0.01 U	0.01 U
Ethylbenzene	5.5	mg/kg	3.8 J	0.01 U	0.06 U	5.3 J	1.10 U	0.003 J	120.00 U	0.01 U	0.0007 J	0.01 U	0.01 U	0.01 U
Methyl ethyl ketone	.3	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Tetrachloroethene	1.4	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Toluene	1.5	mg/kg	**20 ***	0.01 U	0.003 J	0.86 J	0.062 J	0.0008 J	**17 J***	0.01 U	0.005 J	0.007 J	0.01 U	0.01 U
Xylenes, Total	1.2	mg/kg	**84 ***	0.01 U	0.017 J	**20 ***	0.091 J	0.004 J	**67 J***	0.01 U	0.008 J	0.003 J	0.01 U	0.01 U
Total BTEX	NC	mg/kg	116.5	—	0.02	26.16	0.153	0.0118	95	—	0.0207	0.012	—	—

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID	SB-13	SB-13	SB-13	SB-13	SB-14	SB-14	SB-14	SB-14	SB-15	SB-15	SB-15	SB-15
		Sample Date	5/8/2001	5/8/2001	5/8/2001	5/8/2001	5/8/2001	5/8/2001	5/8/2001	5/8/2001	5/8/2001	5/8/2001	5/8/2001	5/8/2001
		Start Depth (ft)	2	8	14	18	2	8	12	16	2	6	12	18
		End Depth (ft)	4	10	16	20	4	10	14	18	4	8	14	20.2
Benzene	.06	mg/kg	0.0007 J	0.01 U	0.01 U	0.01 U	0.002 J	0.05 U	1.20 U	0.01 U	**0.47 J***	120.00 U	0.01 U	0.01 U
Ethylbenzene	5.5	mg/kg	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.068 J	0.01 U	2.3	**60 J***	0.0006 J	0.002 J
Methyl ethyl ketone	.3	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Tetrachloroethene	1.4	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Toluene	1.5	mg/kg	0.001 J	0.01 U	0.01 U	0.01 U	0.003 J	0.05 U	1.20 U	0.01 U	0.14 J	**11 J***	0.01 U	0.001 J
Xylenes, Total	1.2	mg/kg	0.01 U	0.01 U	0.01 U	0.01 U	0.001 J	0.05 U	0.064 J	0.01 U	**1.6 ***	**120 ***	0.0008 J	0.003 J
Total BTEX	NC	mg/kg	0.0017	—	—	—	0.006	—	0.132	—	4.51	191	0.0014	0.006

Notes - Data Qualifier Definitions:
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B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**

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Table 4-6
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Volatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID	SB-16	SB-16	SB-16	SB-16	SB-17	SB-17	SB-17	SB-17	SB-18	SB-18	SB-18	SB-35
		Sample Date	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	6/14/2004
		Start Depth (ft)	2	4	8	16	2	6	10	14	0	6	14	2
		End Depth (ft)	4	6	10	16.7	4	8	12	14.4	2	8	14.4	4
Benzene	.06	mg/kg	0.0006 J	0.12 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	.027 U
Ethylbenzene	5.5	mg/kg	0.01 U	0.12 U	0.01 U	0.01 U	0.01 U	0.01 U	0.006 J	0.01 U	0.01 U	0.01 U	0.01 U	0.21
Methyl ethyl ketone	.3	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Tetrachloroethene	1.4	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Toluene	1.5	mg/kg	0.002 J	0.12 U	0.01 U	0.002 J	0.0008 J	0.01 U	0.01 U	0.0009 J	0.01 U	0.01 U	0.01 U	.022 J
Xylenes, Total	1.2	mg/kg	0.0007 J	0.12 U	0.01 U	0.002 J	0.01 U	0.01 U	0.003 J	0.01 U	0.01 U	0.01 U	0.01 U	0.21
Total BTEX	NC	mg/kg	0.0033	—	—	0.004	0.0008	—	0.009	0.0009	—	—	—	0.442

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID	SB-35	SB-35	SB-36	SB-36	SB-36	SB-36	SB-37	SB-37	SB-37	SB-37	SB-38	SB-38
		Sample Date	6/14/2004	6/14/2004	6/15/2004	6/15/2004	6/15/2004	6/15/2004	6/15/2004	6/15/2004	6/15/2004	6/15/2004	6/16/2004	6/16/2004
		Start Depth (ft)	6	8	8	14	16	22	10	14	18	26	2	4
		End Depth (ft)	8	10	10	16	18	24	12	16	20	28	4	8
Benzene	.06	mg/kg	.025 U	.003 U	**.91 ***	0.036	.024 J	**1.8 J***	**2.3 ***	.007 J	0.024	.001 J	**.082 J***	.026 U
Ethylbenzene	5.5	mg/kg	.011 J	0.006	0.99	0.078	0.06	**63 ***	1.5	.031 U	0.022	0.003	0.71	.026 U
Methyl ethyl ketone	.3	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Tetrachloroethene	1.4	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Toluene	1.5	mg/kg	.025 U	.003 U	1.3	0.031	0.046	**8.7 ***	**2.7 ***	.008 J	.006 J	.0008 J	.15 J	.026 U
Xylenes, Total	1.2	mg/kg	.007 J	0.008	**13 ***	0.2	0.86	**120 ***	**9.8 ***	.024 J	0.045	0.003	**2.4 ***	.026 U
Total BTEX	NC	mg/kg	0.018	0.014	16.2	0.345	0.99	194	16.3	0.039	0.097	0.0078	3.34	—

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID	SB-38	SB-39	SB-39	SB-39	SB-39	SB-40	SB-40	SB-40	SB-41	SB-41	SB-41	SB-41
		Sample Date	6/16/2004	6/16/2004	6/16/2004	6/16/2004	6/16/2004	6/17/2004	6/17/2004	6/17/2004	6/18/2004	6/18/2004	6/18/2004	6/18/2004
		Start Depth (ft)	8	0	6	10	12	0	4	10	8	12	16	30
		End Depth (ft)	12	4	8	12	16	2	8	12	12	16	20	34
Benzene	.06	mg/kg	.004 U	.003 U	.003 U	.003 U	.003 U	.003 U	.003 U	.003 U	**.62 ***	**.094 ***	0.026	.003 J
Ethylbenzene	5.5	mg/kg	.002 J	.003 U	.003 U	.003 U	.003 U	.003 U	.003 U	.003 U	1.5	0.24	.016 J	.006 J
Methyl ethyl ketone	.3	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Tetrachloroethene	1.4	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Toluene	1.5	mg/kg	.004 U	.003 U	.003 U	.003 U	.003 U	.003 U	.003 U	.003 U	.26 J	.016 J	.014 J	.002 J
Xylenes, Total	1.2	mg/kg	0.005	.001 J	.003 U	.003 U	.003 U	.003 U	.003 U	.003 U	**4.7 ***	0.26	0.1	0.015
Total BTEX	NC	mg/kg	0.007	0.001	—	—	—	—	—	—	7.08	0.61	0.156	0.026

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimat
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**

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T[illegible] 4-6
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Volatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-45 6/24/2004 2 4	SB-45 6/24/2004 4 8	SB-45 6/24/2004 8 12	SB-45 6/24/2004 12 16	SB-46 6/24/2004 0 4	SB-46 6/24/2004 4 8	SB-46 6/24/2004 8 12	SB-47 0/14/2005 0 2	SB-47 0/14/2005 2 4	SB-47 0/14/2005 4 6	SB-48 0/14/2005 0 2	SB-48 0/14/2005 2 4
Benzene	.06	mg/kg	.003 U	.003 U	.003 U	0.012	.006 U	.003 U	.003 U	.0033 U	.003 U	.0031 U	.0033 U	.0029 U
Ethylbenzene	5.5	mg/kg	.0006 J	.003 U	.0007 J	0.006	.002 J	.003 U	.003 U	.0033 U	.003 U	.0031 U	.0033 U	.0029 U
Methyl ethyl ketone	.3	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Tetrachloroethene	1.4	mg/kg	—	—	—	—	—	—	—	—	—	—	—	—
Toluene	1.5	mg/kg	.003 U	.003 U	.003 U	.003 U	.006 U	.003 U	.003 U	.0033 U	.003 U	.0031 U	.0033 U	.0029 U
Xylenes, Total	1.2	mg/kg	0.004	.002 J	0.005	0.006	.002 J	.002 J	.0008 J	.0067 U	.006 U	.0062 U	.0066 U	.0058 U
Total BTEX	NC	mg/kg	0.0046	0.002	0.0057	0.024	0.004	0.002	0.0008	—	—	—	—	—

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-48 0/14/2005 4 6
Benzene	.06	mg/kg	.003 U
Ethylbenzene	5.5	mg/kg	.003 U
Methyl ethyl ketone	.3	mg/kg	—
Tetrachloroethene	1.4	mg/kg	—
Toluene	1.5	mg/kg	.003 U
Xylenes, Total	1.2	mg/kg	.006 U
Total BTEX	NC	mg/kg	—

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)
Benzene	.06	mg/kg
Ethylbenzene	5.5	mg/kg
Methyl ethyl ketone	.3	mg/kg
Tetrachloroethene	1.4	mg/kg
Toluene	1.5	mg/kg
Xylenes, Total	1.2	mg/kg
Total BTEX	NC	mg/kg

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimat
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**

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Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	MW-01	MW-01	MW-01	MW-02	MW-02	MW-02	MW-03	MW-03	MW-03	MW-03	MW-03	MW-04
		Sample Date	7/9/1996	7/9/1996	7/9/1996	7/9/1996	7/9/1996	7/10/1996	7/12/1996	7/12/1996	7/12/1996	7/12/1996	7/12/1996	7/11/1996
		Start Depth (ft)	6	14	24	6	14	20	4	8	18	22	26	0
		End Depth (ft)	8	16	26	8	16	22	6	10	20	24	28	6
Acenaphthene	50	mg/kg	0.41 U	0.37 U	0.38 U	0.41 U	0.37 U	0.37 U	300 U	0.42 U	70 *	450 *	2.9	0.36 U
Acenaphthylene	41	mg/kg	0.41 U	0.37 U	0.38 U	0.41 U	0.37 U	0.37 U	6.1 J	0.42 U	38 U	2.3 J	0.41	0.36 U
Anthracene	50	mg/kg	0.41 U	0.37 U	0.38 U	0.006 J	0.37 U	0.37 U	340 *	0.007 J	3.3 J	180 *	2.1	0.36 U
Benzo[a]anthracene**	.224	mg/kg	0.41 U	0.37 U	0.38 U	0.02 J	0.37 U	0.37 U	950 *	0.019 J	3 J*	150 *	2 *	0.015 J
Benzo[a]pyrene**	.061	mg/kg	0.41 U	0.37 U	0.38 U	0.52 *	0.006 J	0.37 U	770 *	0.016 J	2.8 J*	150 *	1.7 *	0.014 J
Benzo[b]fluoranthene**	.224	mg/kg	0.41 U	0.004 J	0.38 U	0.5 *	0.008 J	0.37 U	910 *	0.023 J	2.9 J*	170 *	2.2 *	0.021 J
Benzo[g,h,i]perylene	50	mg/kg	0.41 U	0.032 J	0.38 U	0.028 J	0.005 J	0.37 UJ	440 *	0.006 J	1.5 J	63 *	0.61 J	0.008 J
Benzo[k]fluoranthene**	.224	mg/kg	0.41 U	0.37 U	0.38 U	0.018 J	0.37 U	0.37 U	410 *	0.008 J	0.94 J*	73 *	0.74 *	0.008 J
Chrysene**	.4	mg/kg	0.41 U	0.37 U	0.38 U	0.027 J	0.005 J	0.37 U	900 *	0.02 J	2.7 J*	150 *	2.1 *	0.016 J
di-n-Butyl Phthalate	8.1	mg/kg	0.41 U	---	---	0.015 J	---	---	---	---	---	37 U	---	---
Carbazole	NC	mg/kg	0.41 U	---	---	0.41 U	---	---	---	---	---	47	---	---
2-Chloronaphthalene	NC	mg/kg	0.41 U	0.37 U	0.38 U	0.41 U	0.37 U	0.37 U	300 U	0.42 U	38 U	37 U	0.36 U	0.36 U
Dibenz[a,h]anthracene**	.014	mg/kg	0.41 U	0.37 U	0.38 U	0.41 U	0.37 U	0.37 U	300 U	0.42 UJ	38 U	37 U	0.36 U	0.36 UJ
Dibenzofuran	6.2	mg/kg	0.41 U	---	---	0.41 U	---	---	---	---	---	160 *	---	---
2,4-Dimethylphenol	NC	mg/kg	0.41 U	---	---	0.41 U	---	---	---	---	---	37 U	---	---
Fluoranthene	50	mg/kg	0.41 U	0.37 U	0.38 U	0.03 J	0.006 J	0.37 U	1800 *	0.51	110 *	530 *	9.7	0.021 J
Fluorene	50	mg/kg	0.41 U	0.37 U	0.38 U	0.41 U	0.37 U	0.37 U	11 J	0.42 U	42	180 *	2	0.36 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	0.41 U	0.37 UJ	0.38 UJ	0.021 J	0.005 J	0.37 UJ	430 *	0.007 J	1.3 J	59 *	0.67	0.007 J
2-Methylnaphthalene	36.4	mg/kg	0.41 U	0.37 U	0.38 U	0.41 U	0.37 U	0.37 U	300 U	0.42 U	1.9 J	230 *	1.2	0.36 U
4-Methylphenol	.9	mg/kg	0.41 U	---	---	0.41 U	---	---	---	---	---	37 U	---	---
2-Methylphenol	1	mg/kg	0.41 U	---	---	0.41 U	---	---	---	---	---	37 U	---	---
Naphthalene	13	mg/kg	0.41 U	0.37 U	0.38 U	0.41 U	0.37 U	0.37 U	4.9 J	0:42 U	2.6 J	1600 *	2.4	0.36 U
Phenanthrene	50	mg/kg	0.41 U	0.37 U	0.38 U	0.013 J	0.005 J	0.37 U	870 *	0.027 J	150 *	970 *	13	0.014 J
Pyrene	50	mg/kg	0.41 U	0.37 U	0.38 U	0.79	0.008 J	0.37 U	1600 *	0.041 J	74 *	430 *	6.6	0.033 J
Total CPAH**	NC	mg/kg	---	0.004	---	1.106	0.024	---	4370	0.093	13.64	752	9.41	0.081
Total PAH	500	mg/kg	---	0.036	---	1.973	0.048	---	9442	0.684	468.94	5387.3	50.33	0.157

Notes - Data Qualifier Definitions:
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B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

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Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	MW-04	MW-04	MW-04	MW-05	MW-05	MW-05	MW-06	MW-06	MW-06	MW-06	MW-06	MW-07
		Sample Date	7/11/1996	7/11/1996	7/11/1996	7/11/1996	7/11/1996	7/11/1996	5/17/1998	5/17/1998	5/17/1998	5/17/1998	5/18/1998	5/17/1998
		Start Depth (ft)	8	18	26	2	8	15.5	6	10	16	24	32	4
		End Depth (ft)	10	20	28	4	10	16	8	12	18	24.7	34	6
Acenaphthene	50	mg/kg	670 UJ	2.2	0.36 U	0.016 J	0.32 J	0.43 U	**90 J***	7.8	0.18 J	0.39 U	0.37 U	0.39 U
Acenaphthylene	41	mg/kg	670 UJ	1.9 U	0.36 U	0.75 U	0.36 J	0.004 J	**57 J***	1.2 J	0.15 J	0.39 U	0.37 U	0.39 U
Anthracene	50	mg/kg	9.7 J	0.047 J	0.36 U	0.88	14	0.016 J	**200 J***	5.8	0.52	0.045 J	0.37 U	0.39 U
Benzo[a]anthracene**	.224	mg/kg	**51 J***	0.1 J	0.36 U	**2.2 ***	**14 ***	0.016 J	**180 J***	**4.9 ***	**0.51 ***	0.055 J	0.37 U	0.39 U
Benzo[a]pyrene**	.061	mg/kg	**28 J***	**0.066 J***	0.36 U	**1.5 ***	**13 ***	0.013 J	**170 J***	**4.5 ***	**0.48 ***	0.049 J	0.37 U	0.39 U
Benzo[b]fluoranthene**	.224	mg/kg	**44 J***	0.087 J	0.36 U	**2.1 ***	**16 ***	0.016 J	**170 J***	**4.9 ***	**0.51 ***	0.051 J	0.37 U	0.39 U
Benzo[g,h,i]perylene	50	mg/kg	25 J	0.047 J	0.36 UJ	0.059 J	5.1	0.006 J	**110 J***	1.7 J	0.2 J	0.39 U	0.37 U	0.39 U
Benzo[k]fluoranthene**	.224	mg/kg	**18 J***	0.033 J	0.36 U	**0.84 ***	**6.9 ***	0.005 J	**62 J***	**1.5 J***	0.19 J	0.39 U	0.37 U	0.39 U
Chrysene**	.4	mg/kg	**52 J***	0.091 J	0.36 U	**1.9 ***	**13 ***	0.014 J	**160 J***	**3.7 ***	**0.42 ***	0.044 J	0.37 U	0.39 U
di-n-Butyl Phthalate	8.1	mg/kg	670 UJ	---	---	---	4.6 U	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	670 UJ	---	---	---	6.2	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	670 UJ	1.9 U	0.36 U	0.75 U	4.6 U	0.43 U	21 UJ	1.9 U	0.37 U	0.39 U	0.37 U	0.39 U
Dibenz[a,h]anthracene**	.014	mg/kg	670 UJ	1.9 U	0.36 U	0.75 U	4.6 U	0.43 U	**19 J***	1.9 U	0.37 U	0.39 U	0.37 U	0.39 U
Dibenzofuran	6.2	mg/kg	670 UJ	---	---	---	**9.9 ***	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	670 UJ	---	---	---	0.081 J	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	**1400 J***	2.4	0.004 J	3.5	33	0.45	**450 J***	14	1.4	0.13 J	0.065 J	0.39 U
Fluorene	50	mg/kg	670 UJ	0.11 J	0.36 U	0.028 J	12	0.013 J	**130 J***	5.6	0.33 J	0.39 U	0.37 U	0.39 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	**20 J***	0.038 J	0.36 U	0.059 J	**5.6 ***	0.006 J	**85 J***	1.6 J	0.19 J	0.39 U	0.37 U	0.39 U
2-Methylnaphthalene	36.4	mg/kg	670 UJ	0.15 J	0.36 U	0.75 U	20	0.025 J	**160 J***	8.8	0.31 J	0.39 U	0.37 U	0.39 U
4-Methylphenol	.9	mg/kg	670 UJ	---	---	---	0.097 J	---	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	670 UJ	---	---	---	0.047 J	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	670 UJ	11	0.36 U	0.75 U	**120 ***	1.8	**730 J***	**30 ***	0.72	0.056 J	0.096 J	0.39 U
Phenanthrene	50	mg/kg	22 J	2.1	0.36 U	2.9	39	0.6	**610 J***	22	1.7	0.15 J	0.088 J	0.39 U
Pyrene	50	mg/kg	**1500 J***	3.6	0.005 J	4.3	28	0.037 J	**590 J***	14	1.3	0.13 J	0.062 J	0.39 U
Total CPAH**	NC	mg/kg	213	0.415	---	8.599	68.5	0.07	846	21.1	2.3	0.199	---	---
Total PAH	500	mg/kg	3169.7	22.069	0.009	20.282	340.28	3.021	3973	132	9.11	0.71	0.311	---

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Date Printed: 4/28/2006
File: SOIL-ALL-Format-hits.xls
Database: NimoFulton_Chem.mdb (EQuIS)

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	MW-08	MW-09D	MW-09D	MW-09S	MW-10	MW-10	MW-11	MW-11	MW-11	MW-12	MW-12	MW-12
		Sample Date	5/16/1998	5/18/1998	5/18/1998	5/16/1998	5/17/1998	5/17/1998	5/10/2001	5/10/2001	5/10/2001	5/24/2004	5/24/2004	5/24/2004
		Start Depth (ft)	8	18	26	10	6	12	2	6	12	0	4	10
		End Depth (ft)	10	20	26.9	12	8	14	4	8	14	4	8	12
Acenaphthene	50	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	4.10 U	2.30 U	0.44 U	.49 J	.04 J	0.89
Acenaphthylene	41	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	1.4 J	0.75 J	0.44 U	.73 J	.4 U	2.6
Anthracene	50	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	1.2 J	0.83 J	0.44 U	1.8 J	.087 J	1.9
Benzo[a]anthracene**	.224	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	**13 ***	**3.8 ***	0.046 J	**6.9 J***	.22 J	**.34 J***
Benzo[a]pyrene**	.061	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	**11 ***	**3.5 ***	0.44 U	**7.5 J***	**.19 J***	**.24 J***
Benzo[b]fluoranthene**	.224	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	**18 ***	**5 ***	0.053 J	**7 J***	.18 J	.18 J
Benzo[g,h,i]perylene	50	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	10	2.6	0.44 U	3.7 J	.1 J	.1 J
Benzo[k]fluoranthene**	.224	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	**6.4 ***	**1.9 J***	0.44 U	**6.2 J***	.21 J	**.24 J***
Chrysene**	.4	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	**12 ***	**3.4 ***	0.44 U	**6.7 J***	.22 J	.31 J
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	4.10 U	2.30 U	0.44 U	1.9 U	.4 U	.44 U
Dibenz[a,h]anthracene**	.014	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	**2.5 J***	2.30 U	0.44 U	**.39 J***	.4 U	.44 U
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	21	5.9	0.066 J	15 J	0.56	2
Fluorene	50	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	4.10 U	0.31 J	0.44 U	.6 J	.04 J	.3
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	**9.8 ***	2.6	0.44 U	**3.4 J***	.093 J	.098 J
2-Methylnaphthalene	36.4	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	4.10 U	0.6 J	0.44 U	.29 J	.4 U	.44 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	4.10 U	13	0.067 J	.66 J	.4 U	.15 J
Phenanthrene	50	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	5.1	2.2 J	0.44 U	6.6 J	.39 J	.8
Pyrene	50	mg/kg	0.45 U	0.36 U	0.36 U	0.41 U	0.4 U	0.39 U	19	5.5	0.061 J	14 J	0.48	1.5
Total CPAH**	NC	mg/kg	---	---	---	---	---	---	72.7	20.2	0.099	38.1	1.11	1.41
Total PAH	500	mg/kg	---	---	---	---	---	---	130.4	51.89	0.293	82	2.81	21.5

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

T[illegible]4-7

Niagara Mohawk

Fulton, New York

Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	MW-12 5/24/2004 14 16	PZ-01 7/10/1996 6 10	PZ-01 7/10/1996 14 16	PZ-01 7/10/1996 24 26	SB-01 7/12/1996 2 4	SB-01 7/12/1996 6 8	SB-01 7/12/1996 8 30	SB-01 7/12/1996 12 14	SB-01 7/12/1996 18 20	SB-02 2/23/2000 2 4	SB-02 2/23/2000 4 6	SB-02 2/23/2000 6 8
Acenaphthene	50	mg/kg	.37 U	0.025 J	0.38 U	0.37 U	0.39 U	17 J	0.36 U	0.40 U	0.38 U	0.18 J	15 J	0.66
Acenaphthylene	41	mg/kg	.37 U	0.009 J	0.38 U	0.37 U	0.39 U	16.00 U	0.36 U	0.40 U	0.38 U	2.8 J	22.00 U	0.066 J
Anthracene	50	mg/kg	.37 U	0.036 J	0.38 U	0.37 U	0.39 U	1.2 J	0.36 U	0.40 U	0.38 U	1.6 J	9.4 J	0.31 J
Benzo[a]anthracene**	.224	mg/kg	.37 U	**0.66 ***	0.38 U	0.37 U	0.027 J	**0.67 J***	0.36 U	0.40 U	0.38 U	**13 ***	**6.8 J***	**0.23 J***
Benzo[a]pyrene**	.061	mg/kg	.37 U	**0.49 ***	0.38 U	0.37 U	0.026 J	**0.44 J***	0.36 U	0.40 U	0.38 U	**30 ***	**6.7 J***	**0.19 J***
Benzo[b]fluoranthene**	.224	mg/kg	.37 U	**0.86 ***	0.38 U	0.37 U	**0.4 ***	**0.32 J***	0.36 U	0.40 U	0.38 U	**33 ***	**6.6 J***	0.17 J
Benzo[g,h,i]perylene	50	mg/kg	.37 U	0.022 J	0.38 UJ	0.37 UJ	0.015 J	16.00 U	0.36 UJ	0.40 UJ	0.38 UJ	18	4.3 J	0.072 J
Benzo[k]fluoranthene**	.224	mg/kg	.37 U	0.031 J	0.38 U	0.37 U	0.013 J	16.00 U	0.36 U	0.40 U	0.38 U	**9.4 ***	**2.8 J***	0.065 J
Chrysene**	4	mg/kg	.37 U	**0.69 ***	0.38 U	0.37 U	0.03 J	**0.65 J***	0.36 U	0.40 U	0.38 U	**13 ***	**5.4 J***	0.2 J
di-n-Butyl Phthalate	8.1	mg/kg	---	0.39 U	---	---	---	16.00 U	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	0.021 J	---	---	---	16.00 U	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	.37 U	0.39 U	0.38 U	0.37 U	0.39 U	16.00 U	0.36 U	0.40 U	0.38 U	1.70 U	22.00 U	0.39 U
Dibenz[a,h]anthracene**	.014	mg/kg	.37 U	0.39 U	0.38 U	0.37 U	0.39 U	16.00 U	0.36 U	0.40 U	0.38 U	**3.2 J***	22.00 U	0.39 U
Dibenzofuran	6.2	mg/kg	---	0.023 J	---	---	---	16.00 U	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	0.39 U	---	---	---	16.00 U	---	---	---	---	---	---
Fluoranthene	50	mg/kg	.37 U	1.3	0.38 U	0.005 J	0.46	0.91 J	0.009 J	0.005 J	0.38 U	10	18 J	0.53
Fluorene	50	mg/kg	.37 U	0.028 J	0.38 U	0.37 U	0.39 U	1.5 J	0.36 U	0.004 J	0.38 U	0.34 J	8.3 J	0.23 J
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	.37 U	0.023 J	0.38 UJ	0.37 UJ	0.015 J	16.00 U	0.36 UJ	0.40 UJ	0.38 UJ	**15 ***	**3.5 J***	0.062 J
2-Methylnaphthalene	36.4	mg/kg	.37 U	0.006 J	0.38 U	0.37 U	0.39 U	**86 J***	0.004 J	0.014 J	0.38 U	0.56 J	18 J	0.1 J
4-Methylphenol	.9	mg/kg	---	0.39 U	---	---	---	16.00 U	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	---	0.39 U	---	---	---	16.00 U	---	---	---	---	---	---
Naphthalene	13	mg/kg	.37 U	0.024 J	0.38 U	0.37 U	0.39 U	**92 J***	0.36 U	0.026 J	0.38 U	2 J	**190 ***	3.4
Phenanthrene	50	mg/kg	.37 U	1.3	0.38 U	0.004 J	0.009 J	40 J	0.014 J	0.018 J	0.38 U	2.6 J	32	1.1
Pyrene	50	mg/kg	.37 U	1.1	0.38 U	0.37 U	0.035 J	1.5 J	0.007 J	0.005 J	0.38 U	23	17 J	0.63
Total CPAH**	NC	mg/kg	---	2.754	---	---	0.511	2.08	---	---	---	116.6	31.8	0.917
Total PAH	500	mg/kg	---	6.604	---	0.009	1.03	242.19	0.034	0.072	---	177.68	343.8	8.015

Notes - Data Qualifier Definitions:

NC - No criteria established, U - Not Detected, J - Estimated,

B- Blank contamination, --- Not Analyzed/No results.

*** Exceedances (bold)**

** Carcinogenic PAHs

Date Printed: 4/28/2006

File: SOIL-ALL-Format-hits.xls

Database: NimoFulton_Chem.mdb (EQuIS)

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-02	SB-02	SB-02	SB-03	SB-03	SB-03	SB-03	SB-03	SB-04	SB-04	SB-04	SB-04
		Sample Date	2/23/2000	2/23/2000	2/23/2000	2/22/2000	2/22/2000	2/22/2000	2/22/2000	2/22/2000	2/22/2000	2/22/2000	2/22/2000	2/22/2000
		Start Depth (ft)	8	10	12	6	10	12	14	18	2	8	10	14
		End Depth (ft)	10	12	14	8	12	14	16	20	4	10	12	16
Acenaphthene	50	mg/kg	0.094 J	0.39 U	0.40 U	0.11 J	42 J	11	1.9 J	0.23 J	0.37 U	25 J	0.22 J	0.42 U
Acenaphthylene	41	mg/kg	0.39 U	0.39 U	0.40 U	0.14 J	**68 J***	2.5 J	1.9 J	0.2 J	0.37 U	**45 J***	0.51 U	0.048 J
Anthracene	50	mg/kg	0.39 U	0.39 U	0.40 U	0.35 J	**240 ***	6.3 J	4.6	0.53	0.054 J	**140 ***	0.18 J	0.19 J
Benzo[a]anthracene**	.224	mg/kg	0.39 U	0.39 U	0.40 U	**0.91 ***	**220 ***	**2.7 J***	**6.5 ***	**0.74 ***	**0.31 J***	**120 ***	0.18 J	0.19 J
Benzo[a]pyrene**	.061	mg/kg	0.39 U	0.39 U	0.40 U	**1 ***	**180 ***	**1.9 J***	**6.2 ***	**0.6 ***	**0.33 J***	**100 ***	**0.096 J***	**0.14 J***
Benzo[b]fluoranthene**	.224	mg/kg	0.39 U	0.39 U	0.40 U	**1.4 ***	**210 ***	**1.6 J***	**8.9 ***	**0.77 ***	**0.46 ***	**110 ***	0.16 J	0.17 J
Benzo[g,h,i]perylene	50	mg/kg	0.39 U	0.39 U	0.40 U	0.47	**59 J***	0.87 J	2.7 J	0.26 J	0.14 J	**55 J***	0.068 J	0.079 J
Benzo[k]fluoranthene**	.224	mg/kg	0.39 U	0.39 U	0.40 U	**0.4 ***	**63 J***	8.00 U	**2.1 J***	**0.23 J***	0.14 J	**45 J***	0.51 U	0.054 J
Chrysene**	4	mg/kg	0.39 U	0.39 U	0.40 U	**0.78 ***	**170 ***	**2.2 J***	**4.9 ***	**0.63 ***	0.3 J	**110 ***	0.17 J	0.18 J
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	0.39 U	0.39 U	0.40 U	0.38 U	79.00 U	8.00 U	0.41 U	0.42 U	0.37 U	67.00 U	0.51 U	0.42 U
Dibenz[a,h]anthracene**	.014	mg/kg	0.39 U	0.39 U	0.40 U	**0.085 J***	**18 J***	8.00 U	**0.74 J***	**0.068 J***	0.37 U	**12 J***	0.51 U	0.42 U
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	0.066 J	0.39 U	0.40 U	1.3	**520 ***	5.5 J	11	1.5	0.51	**320 ***	0.38 J	0.42 J
Fluorene	50	mg/kg	0.039 J	0.39 U	0.40 U	0.19 J	**180 ***	7.8 J	3.6	0.4 J	0.37 U	**90 ***	0.26 J	0.11 J
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	0.39 U	0.39 U	0.40 U	0.38 J	**62 J***	8.00 U	2.6 J	0.24 J	0.12 J	**47 J***	0.056 J	0.068 J
2-Methylnaphthalene	36.4	mg/kg	0.39 U	0.39 U	0.40 U	0.22 J	**64 J***	28	3 J	0.37 J	0.037 J	**39 J***	0.51 U	0.42 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	0.19 J	0.25 J	0.40 U	0.59	**51 J***	**42 ***	3.6	0.55	0.37 U	**66 J***	0.42 J	0.066 J
Phenanthrene	50	mg/kg	0.15 J	0.07 J	0.40 U	1.2	**670 ***	20	13	1.4	0.22 J	**380 ***	0.43 J	0.45
Pyrene	50	mg/kg	0.063 J	0.045 J	0.40 U	2.8	**440 ***	8.4	17	1.5	0.59	**350 ***	0.57	0.54
Total CPAH**	NC	mg/kg	---	---	---	4.955	923	8.4	31.94	3.278	1.66	544	0.662	0.802
Total PAH	500	mg/kg	0.602	0.365	---	12.325	3257	140.77	94.24	10.218	3.211	2054	3.19	2.705

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Date Printed: 4/28/2006
File: SOIL-ALL-Format-hits.xls
Database: NimoFulton_Chem.mdb (EQuIS)

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup		SB-04	SB-04	SB-05	SB-05	SB-05	SB-05	SB-05	SB-06	SB-07	SB-07	SB-07	SB-07
		Location ID	SB-04	SB-04	SB-05	SB-05	SB-05	SB-05	SB-05	SB-06	SB-07	SB-07	SB-07	SB-07
		Sample Date	2/22/2000	2/22/2000	2/21/2000	2/21/2000	2/21/2000	2/21/2000	2/21/2000	2/22/2000	2/21/2000	2/21/2000	2/21/2000	2/21/2000
		Start Depth (ft)	16	18	4	6	10	12	14	6	2	6	10	12
		End Depth (ft)	18	20	6	8	12	14	16	8	4	8	12	14
Acenaphthene	50	mg/kg	0.42 U	0.99	0.085 J	**96 J***	41 J	0.086 J	0.38 U	0.39 U	19.00 U	2.6	0.54	0.075 J
Acenaphthylene	41	mg/kg	0.42 U	0.28 J	0.39 U	**470 ***	**160 ***	0.093 J	0.04 J	0.39 U	19.00 U	0.4 J	0.088 J	0.40 U
Anthracene	50	mg/kg	0.06 J	0.82	0.34 J	**670 ***	**200 ***	0.23 J	0.07 J	0.39 U	4.9 J	2.2	0.51	0.076 J
Benzo[a]anthracene**	.224	mg/kg	0.062 J	**0.4 ***	**0.73 ***	**680 ***	**170 ***	0.2 J	0.058 J	0.39 U	**30 ***	**1.8 ***	**0.32 J***	0.047 J
Benzo[a]pyrene**	.061	mg/kg	0.42 U	**0.31 J***	**0.65 ***	**530 ***	**140 ***	**0.16 J***	0.042 J	0.39 U	**30 ***	**1.3 J***	**0.25 J***	0.40 U
Benzo[b]fluoranthene**	.224	mg/kg	0.057 J	**0.26 J***	**0.92 ***	**630 ***	**150 ***	0.2 J	0.059 J	0.39 U	**41 ***	**1.6 ***	**0.26 J***	0.40 U
Benzo[g,h,i]perylene	50	mg/kg	0.42 U	0.12 J	0.28 J	**170 J***	47 J	0.39 U	0.38 U	0.39 U	13 J	0.43 J	0.066 J	0.40 U
Benzo[k]fluoranthene**	.224	mg/kg	0.42 U	0.065 J	**0.26 J***	**250 J***	**61 J***	0.08 J	0.38 U	0.39 U	**10 J***	**0.55 J***	0.11 J	0.40 U
Chrysene**	.4	mg/kg	0.058 J	0.37 J	**0.65 ***	**560 ***	**140 ***	0.15 J	0.047 J	0.39 U	**27 ***	**1.5 J***	0.26 J	0.40 U
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	0.42 U	0.38 U	0.39 U	420.00 U	94.00 U	0.39 U	0.38 U	0.39 U	19.00 U	1.60 U	0.40 U	0.40 U
Dibenz[a,h]anthracene**	.014	mg/kg	0.42 U	0.38 U	**0.068 J***	**55 J***	**13 J***	0.39 U	0.38 U	0.39 U	**3.6 J***	1.60 U	0.40 U	0.40 U
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	0.13 J	0.8	1.4	**1700 ***	**430 ***	0.49	0.13 J	0.063 J	**61 ***	4.3	0.82	0.15 J
Fluorene	50	mg/kg	0.42 U	0.8	0.12 J	**420 ***	**150 ***	0.17 J	0.077 J	0.39 U	19.00 U	1.9	0.34 J	0.046 J
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	0.42 U	0.099 J	0.28 J	**190 J***	**49 J***	0.04 J	0.38 U	0.39 U	**13 J***	0.44 J	0.062 J	0.40 U
2-Methylnaphthalene	36.4	mg/kg	0.42 U	1.2	0.39 U	**420 ***	**200 ***	0.068 J	0.38 U	0.39 U	19.00 U	0.99 J	0.40 U	0.40 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	0.42 U	1.4	0.1 J	**1300 ***	**570 ***	0.13 J	0.082 J	0.39 U	19.00 U	1.9	0.40 U	0.40 U
Phenanthrene	50	mg/kg	0.14 J	2.6	1.2	**1900 ***	**590 ***	0.7	0.2 J	0.39 U	18 J	7.7	1.6	0.29 J
Pyrene	50	mg/kg	0.18 J	1.3	1.5	**1300 ***	**350 ***	0.46	0.14 J	0.057 J	**55 ***	4.2	1.1	0.18 J
Total CPAH**	NC	mg/kg	0.177	1.504	3.558	2895	723	0.83	0.206	---	154.6	7.19	1.262	0.047
Total PAH	500	mg/kg	0.687	11.814	8.583	11341	3461	3.257	0.945	0.12	306.5	33.81	6.326	0.864

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

		Location ID	SB-07	SB-08	SB-08	SB-08	SB-08	SB-08	SB-09	SB-09	SB-09	SB-09	SB-10	SB-10
	TAGM 4046	Sample Date	2/21/2000	2/21/2000	2/21/2000	2/21/2000	2/21/2000	2/21/2000	2/23/2000	2/23/2000	2/23/2000	2/23/2000	2/23/2000	2/23/2000
	Recommended	Start Depth (ft)	14	4	6	10	12	16	2	4	8	12	4	8
Chemical Name	Soil Cleanup	End Depth (ft)	16	6	8	12	14	18	4	6	10	14	6	10
Acenaphthene	50	mg/kg	0.37 U	0.40 U	11	6.5 J	3.7 J	0.37 U	0.24 J	0.085 J	0.40 U	0.41 U	0.80 U	0.40 U
Acenaphthylene	41	mg/kg	0.37 U	0.40 U	1.2 J	8.9	10	0.37 U	0.7 J	0.11 J	0.40 U	0.41 U	0.24 J	0.40 U
Anthracene	50	mg/kg	0.37 U	0.40 U	6 J	11	12	0.37 U	1	0.25 J	0.40 U	0.41 U	0.25 J	0.40 U
Benzo[a]anthracene**	.224	mg/kg	0.37 U	0.064 J	**5.6 J***	**11 ***	**9.5 ***	0.37 U	**1.2 ***	**0.53 ***	0.40 U	0.41 U	**2.4 ***	0.40 U
Benzo[a]pyrene**	.061	mg/kg	0.37 U	0.061 J	**4.7 J***	**8.8 ***	**8.5 ***	0.37 U	**1.1 ***	**0.49 ***	0.40 U	0.41 U	**2.6 ***	0.40 U
Benzo[b]fluoranthene**	.224	mg/kg	0.37 U	0.15 J	**4.7 J***	**10 ***	**8.9 ***	0.37 U	**1.4 ***	**0.67 ***	0.40 U	0.41 U	**3.6 ***	0.40 U
Benzo[g,h,i]perylene	50	mg/kg	0.37 U	0.048 J	1.9 J	3.1 J	3.3 J	0.37 U	0.38 J	0.17 J	0.40 U	0.41 U	1.8	0.40 U
Benzo[k]fluoranthene**	.224	mg/kg	0.37 U	0.054 J	**2.1 J***	**3.4 J***	**3.8 J***	0.37 U	**0.46 J***	**0.26 J***	0.40 U	0.41 U	**1.3 ***	0.40 U
Chrysene**	.4	mg/kg	0.37 U	0.11 J	**4.4 J***	**8.2 J***	**7.1 J***	0.37 U	**1 ***	**0.56 ***	0.40 U	0.41 U	**2.1 ***	0.40 U
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	0.37 U	0.40 U	9.10 U	8.20 U	7.80 U	0.37 U	0.76 U	0.37 U	0.40 U	0.41 U	0.80 U	0.40 U
Dibenz[a,h]anthracene**	.014	mg/kg	0.37 U	0.40 U	9.10 U	8.20 U	7.80 U	0.37 U	**0.097 J***	**0.042 J***	0.40 U	0.41 U	**0.34 J***	0.40 U
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	0.37 U	0.11 J	13	27	28	0.046 J	3.2	1.4	0.40 U	0.41 U	2.3	0.052 J
Fluorene	50	mg/kg	0.37 U	0.40 U	5 J	10	11	0.37 U	0.9	0.14 J	0.40 U	0.41 U	0.80 U	0.40 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	0.37 U	0.042 J	1.9 J	3.2 J	3.2 J	0.37 U	0.4 J	0.18 J	0.40 U	0.41 U	1.4	0.40 U
2-Methylnaphthalene	36.4	mg/kg	0.37 U	0.078 J	9 J	10	6.3 J	0.37 U	0.58 J	0.064 J	0.40 U	0.41 U	0.80 U	0.40 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	0.37 U	0.098 J	**51 ***	**38 ***	**16 ***	0.37 U	1.2	0.12 J	0.40 U	0.41 U	0.80 U	0.40 U
Phenanthrene	50	mg/kg	0.37 U	0.14 J	17	35	42	0.067 J	3.9	1.3	0.40 U	0.41 U	0.11 J	0.40 U
Pyrene	50	mg/kg	0.37 U	0.12 J	12	21	22	0.047 J	2.7	1.2	0.40 U	0.41 U	4.9	0.049 J
Total CPAH**	NC	mg/kg	---	0.481	23.4	44.6	41	---	5.657	2.732	---	---	13.74	---
Total PAH	500	mg/kg	---	1.075	150.5	215.1	195.3	0.16	20.457	7.571	---	---	23.34	0.101

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Date Printed: 4/28/2006
File: SOIL-ALL-Format-hits.xls
Database: NimoFulton_Chem.mdb (EQuIS)

T[illegible]4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-10 2/23/2000 10 12	SB-10 2/23/2000 12 14	SB-10 2/23/2000 18 20	SB-11 2/23/2000 2 4	SB-11 2/23/2000 4 6	SB-11 2/23/2000 8 10	SB-11 2/23/2000 14 16	SB-12 5/8/2001 4 6	SB-12 5/8/2001 8 10	SB-12 5/8/2001 12 14	SB-12 5/8/2001 18 20	SB-13 5/8/2001 2 4
Acenaphthene	50	mg/kg	0.41 U	0.41 U	0.37 U	0.37 U	47 J	0.39 U	0.37 U	18.00 U	0.13 J	0.67	0.06 J	0.93 J
Acenaphthylene	41	mg/kg	0.41 U	0.41 U	0.37 U	0.75 J	32 J	0.39 U	0.37 U	12 J	0.65 J	0.05 J	0.40 U	1.6 J
Anthracene	50	mg/kg	0.41 U	0.41 U	0.37 U	0.35 J	150 *	0.39 U	0.064 J	48	1.4	0.068 J	0.40 U	3.5
Benzo[a]anthracene**	.224	mg/kg	0.41 U	0.41 U	0.37 U	1.1 *	220 *	0.06 J	0.087 J	75 *	2.5 *	0.078 J	0.072 J	11 *
Benzo[a]pyrene**	.061	mg/kg	0.41 U	0.41 U	0.37 U	2.3 *	210 *	0.063 J*	0.078 J*	63 *	2.2 *	0.092 J*	0.081 J*	11 *
Benzo[b]fluoranthene**	.224	mg/kg	0.41 U	0.41 U	0.37 U	3.1 *	270 *	0.1 J	0.095 J	74 *	3 *	0.1 J	0.088 J	15 *
Benzo[g,h,i]perylene	50	mg/kg	0.41 U	0.41 U	0.37 U	3.9	74 J*	0.052 J	0.059 J	28	1	0.054 J	0.053 J	4.1
Benzo[k]fluoranthene**	.224	mg/kg	0.41 U	0.41 U	0.37 U	0.9 *	88 *	0.39 U	0.37 U	23 *	1.2 *	0.41 U	0.40 U	5.4 *
Chrysene**	.4	mg/kg	0.41 U	0.41 U	0.37 U	1 *	190 *	0.056 J	0.07 J	71 *	2.2 *	0.075 J	0.067 J	11 *
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	0.41 U	0.41 U	0.37 U	0.37 U	79.00 U	0.39 U	0.37 U	18.00 U	0.75 U	0.41 U	0.40 U	1.90 U
Dibenz[a,h]anthracene**	.014	mg/kg	0.41 U	0.41 U	0.37 U	0.51 *	22 J*	0.39 U	0.37 U	6.6 J*	0.25 J*	0.41 U	0.40 U	1 J*
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	0.087 J	0.41 U	0.038 J	1	540 *	0.093 J	0.22 J	170 *	4.7	0.17 J	0.12 J	21
Fluorene	50	mg/kg	0.41 U	0.41 U	0.37 U	0.057 J	120 *	0.39 U	0.045 J	8.3 J	0.5 J	0.39 J	0.049 J	1.3 J
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	0.41 U	0.41 U	0.37 U	2.4	76 J*	0.046 J	0.051 J	23 *	0.93	0.049 J	0.045 J	4.1 *
2-Methylnaphthalene	36.4	mg/kg	0.41 U	0.41 U	0.37 U	0.17 J	83 *	0.39 U	0.37 U	3.8 J	0.41 J	0.41 U	0.40 U	0.78 J
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	0.41 U	0.41 U	0.057 J	0.49	210 *	0.046 J	0.039 J	6.6 J	0.54 J	0.41 U	0.40 U	1.2 J
Phenanthrene	50	mg/kg	0.41 U	0.41 U	0.087 J	0.87	590 *	0.088 J	0.22 J	88 *	4.7	0.059 J	0.068 J	13
Pyrene	50	mg/kg	0.088 J	0.41 U	0.37 U	2.7	490 *	0.11 J	0.21 J	270 *	7.8	0.18 J	0.13 J	22
Total CPAH**	NC	mg/kg	---	---	---	11.31	1076	0.325	0.381	335.6	12.28	0.394	0.353	58.5
Total PAH	500	mg/kg	0.175	---	0.182	21.597	3412	0.714	1.238	970.3	34.11	2.035	0.833	127.91

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-13 5/8/2001 8 10	SB-13 5/8/2001 14 16	SB-13 5/8/2001 18 20	SB-14 5/8/2001 2 4	SB-14 5/8/2001 8 10	SB-14 5/8/2001 12 14	SB-14 5/8/2001 16 18	SB-15 5/8/2001 2 4	SB-15 5/8/2001 6 8	SB-15 5/8/2001 12 14	SB-15 5/8/2001 18 20.2	SB-16 5/9/2001 2 4
Acenaphthene	50	mg/kg	0.76 J	0.38 U	0.40 U	3.90 U	1.5 J	19	0.37 U	0.14 J	23 J	0.35 U	0.35 U	0.40 U
Acenaphthylene	41	mg/kg	3.4 J	0.38 U	0.40 U	2.6 J	2.2 J	5.3 J	0.37 U	7.5	**190 ***	0.062 J	0.35 U	0.40 U
Anthracene	50	mg/kg	12	0.054 J	0.40 U	3.6 J	17	28	0.37 U	0.94	**88 J***	0.094 J	0.35 U	0.40 U
Benzo[a]anthracene**	.224	mg/kg	**25 ***	0.15 J	0.40 U	**16 ***	**16 ***	**20 ***	0.37 U	**0.97 ***	**57 J***	0.079 J	0.35 U	0.13 J
Benzo[a]pyrene**	.061	mg/kg	**21 ***	**0.13 J***	0.40 U	**19 ***	**13 ***	**17 ***	0.37 U	**12 ***	**52 J***	**0.072 J***	0.35 U	**0.15 J***
Benzo[b]fluoranthene**	.224	mg/kg	**32 ***	0.17 J	0.40 U	**25 ***	**16 ***	**21 ***	0.37 U	**8.2 ***	**41 J***	0.061 J	0.35 U	0.21 J
Benzo[g,h,i]perylene	50	mg/kg	8	0.078 J	0.40 U	7.7	4.8	6.3 J	0.37 U	10	20 J	0.35 U	0.35 U	0.14 J
Benzo[k]fluoranthene**	.224	mg/kg	**12 ***	0.069 J	0.40 U	**7.8 ***	**4.5 ***	**5.6 J***	0.37 U	**1.6 ***	**16 J***	0.35 U	0.35 U	0.076 J
Chrysene**	4	mg/kg	**23 ***	0.14 J	0.40 U	**14 ***	**14 ***	**19 ***	0.37 U	**1.8 ***	**53 J***	0.078 J	0.35 U	0.14 J
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	3.80 U	0.38 U	0.40 U	3.90 U	4.00 U	8.20 U	0.37 U	0.77 U	97.00 U	0.35 U	0.35 U	0.40 U
Dibenz[a,h]anthracene**	.014	mg/kg	**2.5 J***	0.38 U	0.40 U	**2.1 J***	**1.3 J***	**1.9 J***	0.37 U	**1.3 ***	97.00 U	0.35 U	0.35 U	0.40 U
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	44	0.29 J	0.40 U	23	39	**52 ***	0.37 U	0.56 J	**130 ***	0.19 J	0.057 J	0.19 J
Fluorene	50	mg/kg	3.3 J	0.38 U	0.40 U	1.1 J	7.4	23	0.37 U	0.57 J	**97 ***	0.043 J	0.35 U	0.40 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	**8.7 ***	0.075 J	0.40 U	**7.8 ***	**4.7 ***	**6.4 J***	0.37 U	**8 ***	**17 J***	0.35 U	0.35 U	0.13 J
2-Methylnaphthalene	36.4	mg/kg	0.94 J	0.38 U	0.40 U	0.49 J	4.00 U	1.3 J	0.37 U	0.22 J	**330 ***	0.045 J	0.042 J	0.40 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	1.3 J	0.38 U	0.40 U	1.4 J	1.9 J	11	0.37 U	3.8	**1300 ***	0.092 J	0.097 J	0.40 U
Phenanthrene	50	mg/kg	32	0.18 J	0.40 U	9.6	32	**80 ***	0.37 U	0.35 J	**350 ***	0.38	0.11 J	0.094 J
Pyrene	50	mg/kg	46	0.26 J	0.40 U	27	38	49	0.37 U	1.6	**190 ***	0.26 J	0.08 J	0.21 J
Total CPAH**	NC	mg/kg	124.2	0.734	---	91.7	69.5	90.9	---	33.87	236	0.29	---	0.836
Total PAH	500	mg/kg	275.9	1.596	---	168.19	213.3	365.8	---	59.55	2954	1.456	0.386	1.47

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

T[illegible]4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup													
		Location ID	SB-16	SB-16	SB-16	SB-17	SB-17	SB-17	SB-17	SB-18	SB-18	SB-18	SB-20	SB-20
		Sample Date	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	5/9/2001	2/11/2002	2/11/2002
		Start Depth (ft)	4	8	16	2	6	10	14	0	6	14	8	14
		End Depth (ft)	6	10	16.7	4	8	12	14.4	2	8	14.4	10	16
Acenaphthene	50	mg/kg	0.39 U	0.37 U	0.37 U	0.39 U	0.41 U	0.5	0.37 U	0.39 U	0.041 J	0.36 U	.45 U	**55 ***
Acenaphthylene	41	mg/kg	0.068 J	0.37 U	0.37 U	0.39 U	0.41 U	1.7	0.37 U	0.51	0.37 U	0.36 U	.092 J	13 J
Anthracene	50	mg/kg	0.076 J	0.37 U	0.37 U	0.39 U	0.41 U	3	0.37 U	0.4	0.37 U	0.36 U	.051 J	29 J
Benzo[a]anthracene**	.224	mg/kg	0.12 J	0.37 U	0.37 U	0.39 U	0.41 U	**2.3 ***	0.37 U	**2 ***	0.37 U	0.36 U	.12 J	**16 J***
Benzo[a]pyrene**	.061	mg/kg	**0.15 J***	0.37 U	0.37 U	0.39 U	0.41 U	**2 ***	0.37 U	**1.8 ***	0.37 U	0.36 U	**.091 J***	**11 J***
Benzo[b]fluoranthene**	.224	mg/kg	0.15 J	0.37 U	0.37 U	0.39 U	0.41 U	**1.7 ***	0.37 U	**3.3 ***	0.37 U	0.36 U	.084 J	**9.7 J***
Benzo[g,h,i]perylene	50	mg/kg	0.093 J	0.37 U	0.37 U	0.39 U	0.41 U	0.88	0.37 U	1.4	0.37 U	0.36 U	.45 U	4.6 J
Benzo[k]fluoranthene**	.224	mg/kg	0.044 J	0.37 U	0.37 U	0.39 U	0.41 U	**0.51 ***	0.37 U	**0.93 ***	0.37 U	0.36 U	.45 U	**3.6 J***
Chrysene**	.4	mg/kg	0.13 J	0.37 U	0.37 U	0.39 U	0.41 U	**2 ***	0.37 U	**2 ***	0.37 U	0.36 U	.12 J	**14 J***
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	0.39 U	0.37 U	0.37 U	0.39 U	0.41 U	0.37 U	0.37 U	0.39 U	0.37 U	0.36 U	.45 U	7.6 U
Dibenz[a,h]anthracene**	.014	mg/kg	0.39 U	0.37 U	0.37 U	0.39 U	0.41 U	**0.19 J***	0.37 U	**0.37 J***	0.37 U	0.36 U	.45 U	**1.2 J***
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	0.2 J	0.37 U	0.37 U	0.39 U	0.41 U	5	0.37 U	3.8	0.37 U	0.36 U	.39 J	32
Fluorene	50	mg/kg	0.39 U	0.37 U	0.37 U	0.39 U	0.41 U	1.2	0.37 U	0.092 J	0.37 U	0.36 U	.45 U	40
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	0.08 J	0.37 U	0.37 U	0.39 U	0.41 U	0.73	0.37 U	1.3	0.37 U	0.36 U	.45 U	**3.7 J***
2-Methylnaphthalene	36.4	mg/kg	0.39 U	0.37 U	0.37 U	0.39 U	0.41 U	0.37 U	0.37 U	0.39 U	0.37 U	0.36 U	.45 U	**130 ***
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	0.39 U	0.37 U	0.37 U	0.39 U	0.41 U	0.37 U	0.37 U	0.11 J	0.37 U	0.36 U	.45 U	**180 ***
Phenanthrene	50	mg/kg	0.26 J	0.37 U	0.37 U	0.39 U	0.41 U	9.7	0.37 U	1.5	0.37 U	0.36 U	.074 J	**97 ***
Pyrene	50	mg/kg	0.36 J	0.37 U	0.37 U	0.39 U	0.41 U	6.6	0.37 U	3.7	0.37 U	0.36 U	0.59	47
Total CPAH**	NC	mg/kg	0.674	---	---	---	---	9.43	---	11.7	---	---	0.415	59.2
Total PAH	500	mg/kg	1.731	---	---	---	---	38.01	---	23.212	0.041	---	1.61	687

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

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Database: NimoFulton_Chem.mdb (EQuIS)

T[illegible] 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-20	SB-21	SB-21	SB-21	SB-22	SB-22	SB-22	SB-23	SB-23	SB-23	SB-24	SB-24
		Sample Date	2/11/2002	2/11/2002	2/11/2002	2/11/2002	2/12/2002	2/12/2002	2/12/2002	2/12/2002	2/12/2002	2/12/2002	2/12/2002	2/12/2002
		Start Depth (ft)	20	4	8	16	6	12	18	4	10	16	4	10
		End Depth (ft)	22	6	10	18	8	14	20	6	12	18	6	12
Acenaphthene	50	mg/kg	2.8	**59 ***	**55 ***	.084 J	.066 J	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Acenaphthylene	41	mg/kg	0.89	14 J	14	.078 J	.26 J	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Anthracene	50	mg/kg	1.9	35	32	.24 J	.23 J	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Benzo[a]anthracene**	.224	mg/kg	**1.3 ***	**23 J***	**21 J***	.16 J	**1.7 ***	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Benzo[a]pyrene**	.061	mg/kg	**.91 ***	**17 J***	**16 J***	**.12 J***	**1.3 ***	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Benzo[b]fluoranthene**	.224	mg/kg	**.73 ***	**17 J***	**16 ***	.11 J	**3.2 ***	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Benzo[g,h,i]perylene	50	mg/kg	.28 J	6.8 J	7 J	.045 J	1.3	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Benzo[k]fluoranthene**	.224	mg/kg	**.29 J***	**5.4 J***	**4.6 J***	.36 U	**.93 ***	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Chrysene**	.4	mg/kg	**.99 ***	**20 J***	**17 J***	.14 J	**1.6 ***	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	.4 U	7.9 U	7.7 U	.36 U	.42 U	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Dibenz[a,h]anthracene**	.014	mg/kg	**.078 J***	**1.8 J***	**1.7 J***	.36 U	**.3 J***	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	2.4	48	48	.33 J	2.6	.038 J	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Fluorene	50	mg/kg	2.4	41	39	.16 J	.07 J	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	.24 J	**6.1 J***	**5.8 J***	.038 J	1.3	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
2-Methylnaphthalene	36.4	mg/kg	3.6	**130 ***	**110 ***	.052 J	.14 J	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	3.2	**200 ***	**200 ***	.053 J	.27 J	.37 U	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Phenanthrene	50	mg/kg	5.8	**100 ***	**100 ***	0.92	0.92	.062 J	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Pyrene	50	mg/kg	3.9	**55 ***	**54 ***	0.44	2.8	.04 J	.37 U	.48 U	.4 U	.38 U	.41 U	.41 U
Total CPAH**	NC	mg/kg	4.54	90.3	82.1	0.568	10.3	---	---	---	---	---	---	---
Total PAH	500	mg/kg	31.7	779	741	2.97	19	0.14	---	---	---	---	---	---

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

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Database: NimoFulton_Chem.mdb (EQuIS)

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

	TAGM 4046	Location ID	SB-24	SB-25	SB-25	SB-25	SB-26	SB-26	SB-26	SB-27	SB-27	SB-27	SB-28	SB-28
	Recommended	Sample Date	2/12/2002	2/13/2002	2/13/2002	2/13/2002	2/13/2002	2/13/2002	2/13/2002	2/13/2002	2/13/2002	2/13/2002	2/14/2002	2/14/2002
	Soil Cleanup	Start Depth (ft)	18	4	10	18	4	12	18	4	12	18	4	12
Chemical Name		End Depth (ft)	20	6	12	20	6	14	20	6	14	20	6	14
Acenaphthene	50	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Acenaphthylene	41	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Anthracene	50	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Benzo[a]anthracene**	.224	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Benzo[a]pyrene**	.061	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Benzo[b]fluoranthene**	.224	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Benzo[g,h,i]perylene	50	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Benzo[k]fluoranthene**	.224	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Chrysene**	.4	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Dibenz[a,h]anthracene**	.014	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	.37 U	.066 J	.041 J	.049 J	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Fluorene	50	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
2-Methylnaphthalene	36.4	mg/kg	.37 U	.43 U	.38 U	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	.37 U	.059 J	.039 J	.37 U	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Phenanthrene	50	mg/kg	.37 U	.43 U	.041 J	.04 J	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Pyrene	50	mg/kg	.37 U	.068 J	.38 U	.042 J	.4 U	.38 U	.36 U	.41 U	.39 U	.38 U	.38 U	.37 U
Total CPAH**	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Total PAH	500	mg/kg	---	0.193	0.121	0.131	---	---	---	---	---	---	---	---

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-28 2/14/2002 18 20	SB-29 2/14/2002 4 6	SB-29 2/14/2002 10 12	SB-29 2/14/2002 16 18	SB-30 2/14/2002 6 8	SB-30 2/14/2002 12 14	SB-30 2/14/2002 18 20	SB-31 2/15/2002 4 6	SB-31 2/15/2002 12 14	SB-31 2/15/2002 18 20	SB-32 2/15/2002 6 8	SB-32 2/15/2002 12 14
Acenaphthene	50	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	10 U	.37 U	.37 U	.049 J	.39 U
Acenaphthylene	41	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	5.4 J	.37 U	.37 U	.13 J	.39 U
Anthracene	50	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	3.5 J	.37 U	.37 U	.23 J	.39 U
Benzo[a]anthracene**	.224	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	**33 ***	.37 U	.37 U	**.77 ***	.041 J
Benzo[a]pyrene**	.061	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	**29 ***	.37 U	.37 U	**.55 ***	.39 U
Benzo[b]fluoranthene**	.224	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	**54 ***	.37 U	.37 U	**.67 ***	.042 J
Benzo[g,h,i]perylene	50	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	18	.37 U	.37 U	.2 J	.39 U
Benzo[k]fluoranthene**	.224	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	**14 ***	.37 U	.37 U	**.26 J***	.39 U
Chrysene**	.4	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	**31 ***	.37 U	.37 U	**.64 ***	.39 U
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	10 U	.37 U	.37 U	.37 U	.39 U
Dibenz[a,h]anthracene**	.014	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	**4.6 J***	.37 U	.37 U	**.066 J***	.39 U
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	.36 U	.046 J	.38 U	.37 U	.4 U	.37 U	.36 U	50	.37 U	.37 U	1.6	.069 J
Fluorene	50	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	10 U	.37 U	.37 U	.09 J	.39 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	**20 ***	.37 U	.37 U	.22 J	.39 U
2-Methylnaphthalene	36.4	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	10 U	.37 U	.37 U	.37 U	.39 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	3.1 J	.37 U	.37 U	.37 U	.39 U
Phenanthrene	50	mg/kg	.36 U	.38 U	.38 U	.37 U	.4 U	.37 U	.36 U	9.2 J	.37 U	.37 U	0.63	.039 J
Pyrene	50	mg/kg	.36 U	.094 J	.38 U	.37 U	.4 U	.084 J	.36 U	**51 ***	.37 U	.37 U	1.4	.067 J
Total CPAH**	NC	mg/kg	---	---	---	---	---	---	---	186	---	---	3.18	0.083
Total PAH	500	mg/kg	---	0.14	---	---	---	0.084	---	326	---	---	7.51	0.258

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Date Printed: 4/28/2006
File: SOIL-ALL-Format-hits.xls
Database: NimoFulton_Chem.mdb (EQuIS)

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-32	SB-33	SB-33	SB-33	SB-34	SB-34	SB-34	SB-35	SB-35	SB-35	SB-36	SB-36
		Sample Date	2/15/2002	2/15/2002	2/15/2002	2/15/2002	6/6/2003	6/6/2003	6/6/2003	3/14/2004	3/14/2004	3/14/2004	3/15/2004	3/15/2004
		Start Depth (ft)	18	4	12	18	2	6	14	2	6	8	8	14
		End Depth (ft)	20	6	14	20	4	8	16	4	8	10	10	16
Acenaphthene	50	mg/kg	.4 U	.38 U	.36 U	.35 U	.44 U	.41 U	.38 U	7.2 J	2 J	.045 J	9.9 J	.57 J
Acenaphthylene	41	mg/kg	.4 U	.38 U	.36 U	.35 U	.44 U	.41 U	.38 U	29	3.9	.19 J	28	1.5
Anthracene	50	mg/kg	.4 U	.38 U	.36 U	.35 U	.44 U	.41 U	.38 U	20	9.5	.32 J	45	2.1
Benzo[a]anthracene**	.224	mg/kg	.4 U	.067 J	.36 U	.35 U	.074 J	.41 U	.38 U	**13 J***	**6.2 ***	**.44 ***	**49 ***	**1.7 ***
Benzo[a]pyrene**	.061	mg/kg	.4 U	.041 J	.36 U	.35 U	**.074 J***	.41 U	.38 U	**11 J***	**6 ***	**.43 ***	**40 ***	**1.2 ***
Benzo[b]fluoranthene**	.224	mg/kg	.4 U	.06 J	.36 U	.35 U	.13 J	.41 U	.38 U	**5.5 J***	**3.3 J***	**.23 J***	**40 ***	**1 ***
Benzo[g,h,i]perylene	50	mg/kg	.4 U	.38 U	.36 U	.35 U	.06 J	.41 U	.38 U	4.8 J	2.5 J	.2 J	21	.48 J
Benzo[k]fluoranthene**	.224	mg/kg	.4 U	.38 U	.36 U	.35 U	.44 U	.41 U	.38 U	**7.5 J***	**3.9 ***	**.28 J***	**37 ***	**1.1 ***
Chrysene**	.4	mg/kg	.4 U	.05 J	.36 U	.35 U	.44 J	.41 U	.38 U	**12 J***	**6.4 ***	**.46 ***	**46 ***	**1.5 ***
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	.4 U	.38 U	.36 U	.35 U	.44 U	.41 U	.38 U	18 U	3.9 U	.4 U	20 U	.84 U
Dibenz[a,h]anthracene**	.014	mg/kg	.4 U	.38 U	.36 U	.35 U	.44 U	.41 U	.38 U	18 U	**.51 J***	.4 U	**6.4 J***	**.15 J***
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	.4 U	.13 J	.36 U	.35 U	.1 J	.41 U	.38 U	32	16	0.97	**110 ***	4.1
Fluorene	50	mg/kg	.4 U	.38 U	.36 U	.35 U	.44 U	.41 U	.38 U	22	2.3 J	.065 J	40	2
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	.4 U	.38 U	.36 U	.35 U	.051 J	.41 U	.38 U	**3.9 J***	2 J	.15 J	**20 ***	.49 J
2-Methylnaphthalene	36.4	mg/kg	.4 U	.38 U	.36 U	.35 U	.44 U	.41 U	.38 U	8.4 J	.82 J	.4 U	**53 ***	1.5
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	.4 U	.38 U	.36 U	.35 U	.44 U	.41 U	.38 U	**89 ***	3.7 J	.078 J	**180 ***	3.9
Phenanthrene	50	mg/kg	.4 U	.12 J	.36 U	.35 U	.049 J	.41 U	.38 U	**76 ***	36	0.81	**140 ***	6.1
Pyrene	50	mg/kg	.4 U	.097 J	.36 U	.35 U	.13 J	.41 U	.38 U	45	23	1.5	**97 ***	3.5
Total CPAH**	NC	mg/kg	---	0.218	---	---	0.329	---	---	52.9	28.3	1.99	238	7.14
Total PAH	500	mg/kg	---	0.565	---	---	0.668	---	---	386	128	6.17	962	32.9

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-36	SB-36	SB-37	SB-37	SB-37	SB-37	SB-38	SB-38	SB-38	SB-39	SB-39	SB-39
		Sample Date	5/15/2004	5/15/2004	5/15/2004	5/15/2004	5/15/2004	5/15/2004	5/16/2004	5/16/2004	5/16/2004	5/16/2004	5/16/2004	5/16/2004
		Start Depth (ft)	16	22	10	14	18	26	2	4	8	0	6	10
		End Depth (ft)	18	24	12	16	20	28	4	8	12	4	8	12
Acenaphthene	50	mg/kg	.51 J	**76 ***	51 J*	.083 J	.057 J	.38 U	26	1.9 U	.51 J	1.9 U	.41 U	.39 U
Acenaphthylene	41	mg/kg	1.8 J	19 J	**270 ***	.17 J	.16 J	.039 J	**46 ***	1.5 J	3	1.3 J	.41 U	.39 U
Anthracene	50	mg/kg	2.8	44	**280 ***	.29 J	.28 J	.075 J	28	3.4	4.2	1.8 J	.41 U	.39 U
Benzo[a]anthracene**	.224	mg/kg	**2.3 ***	**23 J***	**180 J***	**.25 J***	**.27 J***	.073 J	**31 ***	**4 ***	**4.3 ***	**5.4 ***	.41 U	.39 U
Benzo[a]pyrene**	.061	mg/kg	**1.6 J***	**18 J***	**150 J***	**.23 J***	**.23 J***	**.063 J***	**62 ***	**3.9 ***	**4.4 ***	**5.1 ***	.41 U	.39 U
Benzo[b]fluoranthene**	.224	mg/kg	**1.4 J***	**9.6 J***	**120 J***	.19 J	.18 J	.043 J	**32 ***	**2 ***	**3 ***	**4.9 ***	.41 U	.39 U
Benzo[g,h,i]perylene	50	mg/kg	.66 J	6.2 J	**63 J***	.12 J	.13 J	.38 U	47	1.9	2.7	3.1	.41 U	.39 U
Benzo[k]fluoranthene**	.224	mg/kg	**1.5 J***	**14 J***	**130 J***	.2 J	.18 J	.056 J	**35 ***	**2.6 ***	**3.7 ***	**4.7 ***	.41 U	.39 U
Chrysene**	.4	mg/kg	**2 ***	**23 J***	**180 J***	.22 J	.27 J	.073 J	**36 ***	**4.2 ***	**4.6 ***	**5.4 ***	.41 U	.39 U
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	2 U	40 U	230 U	.41 R	.44 UJ	.38 U	21 U	1.9 U	1.9 U	1.9 U	.41 U	.39 U
Dibenz[a,h]anthracene**	.014	mg/kg	**.21 J***	40 U	230 U	.41 R	.44 UJ	.38 U	**9.8 J***	**.36 J***	**.54 J***	**.72 J***	.41 U	.39 U
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	5.9	**55 ***	**510 ***	.71 J	.78 J	.23 J	**71 ***	10	11	12	.41 U	.39 U
Fluorene	50	mg/kg	2.6	49	**220 J***	.21 J	.18 J	.047 J	25	.55 J	2.4	.74 J	.41 U	.39 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	.68 J	**5.4 J***	**62 J***	.11 J	.11 J	.38 U	**36 ***	1.5 J	2.2	2.8	.41 U	.39 U
2-Methylnaphthalene	36.4	mg/kg	2.6	**170 ***	**270 ***	.27 J	.093 J	.38 U	**50 ***	1.9 U	.89 J	.46 J	.41 U	.39 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	8.1	**340 ***	**1400 ***	1.6 J	.65 J	.054 J	**110 ***	1.9 U	1.4 J	.41 J	.41 U	.39 U
Phenanthrene	50	mg/kg	8.7	**170 ***	**780 ***	.82 J	.87 J	.3 J	**100 ***	8.8	15	7.5	.41 U	.39 U
Pyrene	50	mg/kg	4.8	**70 ***	**430 ***	.56 J	.65 J	.17 J	**90 ***	14	13	9.9	.41 U	.39 U
Total CPAH**	NC	mg/kg	9.69	93	822	1.2	1.24	0.308	242	18.6	22.7	29	---	---
Total PAH	500	mg/kg	48.2	1090	5100	6.03	5.09	1.22	835	58.7	76.8	66.2	---	---

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Date Printed: 4/28/2006
File: SOIL-ALL-Format-hits.xls
Database: NimoFulton_Chem.mdb (EQuIS)

T[illegible] 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup													
		Location ID	SB-39	SB-40	SB-40	SB-40	SB-41	SB-41	SB-41	SB-41	SB-42	SB-42	SB-43	SB-43
		Sample Date	5/16/2004	5/17/2004	5/17/2004	5/17/2004	5/18/2004	5/18/2004	5/18/2004	5/18/2004	5/23/2004	5/23/2004	5/23/2004	5/23/2004
		Start Depth (ft)	12	0	4	10	8	12	16	30	0	4	0	4
		End Depth (ft)	16	2	8	12	12	16	20	34	4	8	4	8
Acenaphthene	50	mg/kg	.41 U	4.1 U	.39 U	.37 U	110 J*	.38 J	.059 J	.063 J	17 J	.61 J	.18 J	.38 U
Acenaphthylene	41	mg/kg	.41 U	7.7	.057 J	.04 J	**540 ***	.38 J	.14 J	.21 J	**64 ***	2.5	0.77	.075 J
Anthracene	50	mg/kg	.41 U	3.6 J	.39 U	.37 U	**460 ***	0.68	.26 J	0.47	**110 ***	4.8	2.5	.15 J
Benzo[a]anthracene**	.224	mg/kg	.16 J	**9.5 ***	.082 J	.062 J	**290 ***	**.54 ***	**.23 J***	**.4 ***	**100 ***	**5.3 ***	**4.8 ***	**.48 ***
Benzo[a]pyrene**	.061	mg/kg	**.2 J***	**9.7 ***	**.069 J***	.056 J	**210 J***	**.47 J***	**.19 J***	**.39 ***	**89 ***	**4.6 ***	**3.6 ***	**.34 J***
Benzo[b]fluoranthene**	.224	mg/kg	.21 J	**19 ***	.13 J	.099 J	**160 J***	**.37 J***	.15 J	**.28 J***	**75 ***	**4.1 ***	**8 ***	**.62 ***
Benzo[g,h,i]perylene	50	mg/kg	.22 J	14	.15 J	.098 J	**73 J***	.24 J	.096 J	.27 J	45	2.1	2.9	.35 J
Benzo[k]fluoranthene**	.224	mg/kg	.2 J	**17 ***	.11 J	.083 J	**180 J***	**.41 J***	.18 J	**.36 J***	**79 ***	**3.9 ***	**6.4 ***	**.69 ***
Chrysene**	.4	mg/kg	.17 J	**14 ***	.11 J	.079 J	**260 ***	**.49 J***	.2 J	0.38	**100 ***	**5 ***	**5.5 ***	**.55 ***
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Chloronaphthalene	NC	mg/kg	.41 U	4.1 U	.39 U	.37 U	230 U	.51 U	.42 U	.37 U	43 U	2 U	.73 U	.38 U
Dibenz[a,h]anthracene**	.014	mg/kg	.41 U	**2.7 J***	.39 U	.37 U	230 U	.51 U	.42 U	.37 U	**11 J***	**.52 J***	**.86 ***	**.08 J***
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	.26 J	16	.16 J	.15 J	**810 ***	1.6	0.58	0.94	**350 ***	16	5.6	0.68
Fluorene	50	mg/kg	.41 U	4.1 U	.39 U	.37 U	**490 ***	0.71	.22 J	.26 J	**76 ***	2.8	.21 J	.38 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	.19 J	**13 ***	.13 J	.082 J	**84 J***	.23 J	.099 J	.23 J	**42 J***	2	3.1	.35 J
2-Methylnaphthalene	36.4	mg/kg	.41 U	4.1 U	.39 U	.37 U	**640 ***	.17 J	.17 J	.16 J	9.3 J	.64 J	.22 J	.38 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	.41 U	1.1 J	.39 U	.37 U	**2100 ***	.38 J	0.52	.32 J	11 J	.77 J	.62 J	.093 J
Phenanthrene	50	mg/kg	.11 J	6.4	.061 J	.044 J	**1300 ***	2	0.68	1.1	**390 ***	17	2.6	.28 J
Pyrene	50	mg/kg	.28 J	25	.24 J	.17 J	**580 ***	1.2	0.46	0.73	**290 ***	14	6.2	0.66
Total CPAH**	NC	mg/kg	1.13	84.9	0.631	0.461	1180	2.51	1.05	2.04	496	25.4	32.3	3.11
Total PAH	500	mg/kg	2	159	1.3	0.963	8290	10.3	4.23	6.56	1860	86.6	54.1	5.4

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Date Printed: 4/28/2006
File: SOIL-ALL-Format-hits.xls
Database: NimoFulton_Chem.mdb (EQuIS)

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-44	SB-44	SB-45	SB-45	SB-45	SB-45	SB-46	SB-46	SB-46	SB-47	SB-47	SB-47
		Sample Date	5/23/2004	5/23/2004	5/24/2004	5/24/2004	5/24/2004	5/24/2004	5/24/2004	5/24/2004	5/24/2004	0/14/2005	0/14/2005	0/14/2005
		Start Depth (ft)	0	4	2	4	8	12	0	4	8	0	2	4
		End Depth (ft)	4	8	4	8	12	16	4	8	12	2	4	6
Acenaphthene	50	mg/kg	21 U	2.1 U	2 U	.4 U	.39 U	.42 U	18 J	.29 J	.35 U	.44 U	.39 U	.41 U
Acenaphthylene	41	mg/kg	10 J	.89 J	2 U	.4 U	.39 U	.42 U	25	0.37	.054 J	.17 J	.046 J	.19 J
Anthracene	50	mg/kg	9.5 J	1.2 J	2 U	.4 U	.39 U	.42 U	26	0.73	.085 J	.1 J	.39 U	.091 J
Benzo[a]anthracene**	.224	mg/kg	**70 ***	**8.3 ***	**.31 J***	.4 U	.063 J	.054 J	**52 ***	**.98 ***	.15 J	**.4 J***	.1 J	.19 J
Benzo[a]pyrene**	.061	mg/kg	**43 ***	**6.7 ***	**.34 J***	.4 U	.059 J	.049 J	**74 ***	**1 ***	**.14 J***	**.48 ***	**.13 J***	**.24 J***
Benzo[b]fluoranthene**	.224	mg/kg	**94 ***	**8.3 ***	**.23 J***	.4 U	.076 J	.068 J	**69 ***	**.71 ***	.11 J	**.76 ***	.16 J	**.53 ***
Benzo[g,h,i]perylene	50	mg/kg	48	3.9	.23 J	.4 U	.048 J	.042 J	49	0.64	.092 J	.33 J	.12 J	.38 J
Benzo[k]fluoranthene**	.224	mg/kg	**100 ***	**9 ***	**.3 J***	.4 U	.079 J	.061 J	**61 ***	**.88 ***	.13 J	**.24 J***	.057 J	.17 J
Chrysene**	.4	mg/kg	**84 ***	**8.4 ***	.38 J	.4 U	.081 J	.064 J	**64 ***	**1.1 ***	.17 J	**.53 ***	.14 J	.33 J
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Carbazole	NC	mg/kg	---	---	---	---	---	---	---	---	---	.063 J	.39 U	.41 U
2-Chloronaphthalene	NC	mg/kg	21 U	2.1 U	2 U	.4 U	.39 U	.42 U	20 U	.35 U	.35 U	.44 U	.39 U	.41 U
Dibenz[a,h]anthracene**	.014	mg/kg	**12 J***	**1.1 J***	2 U	.4 U	.39 U	.42 U	**10 J***	**.12 J***	**1 ***	**.092 J***	.39 U	**.071 J***
Dibenzofuran	6.2	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	mg/kg	**110 ***	17	.92 J	.043 J	.12 J	.09 J	**110 ***	2.5	0.37	0.67	.15 J	.32 J
Fluorene	50	mg/kg	21 U	2.1 U	2 U	.4 U	.39 U	.42 U	18 J	0.49	.042 J	.44 U	.39 U	.41 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	**50 ***	**4.3 ***	2 U	.4 U	.042 J	.42 U	**41 ***	0.52	.07 J	.21 J	.065 J	.2 J
2-Methylnaphthalene	36.4	mg/kg	6.7 J	2.1 U	2 U	.4 U	.39 U	.42 U	8 J	.057 J	.35 U	.11 J	.39 U	.41 U
4-Methylphenol	.9	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	.1	mg/kg	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	13	mg/kg	**17 J***	.65 J	2 U	.4 U	.39 U	.42 U	9.3 J	.04 J	.35 U	.097 J	.39 U	.41 U
Phenanthrene	50	mg/kg	**53 ***	5.6	.33 J	.4 U	.043 J	.42 U	**100 ***	3	0.37	.41 J	.08 J	.15 J
Pyrene	50	mg/kg	**110 ***	14	1.1 J	.4 U	.11 J	.089 J	**150 ***	3.4	0.5	0.85	.23 J	0.55
Total CPAH**	NC	mg/kg	453	46.1	1.56	---	0.4	0.296	371	5.31	1.77	2.71	0.652	1.73
Total PAH	500	mg/kg	817	89.3	4.14	0.043	0.721	0.517	884	16.8	3.28	5.45	1.28	3.41

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Table 4-7
Niagara Mohawk
Fulton, New York
Subsurface Soil Samples - Semivolatile Organic Compounds

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth (ft) / End Depth (ft)	SB-48	SB-48	SB-48
		Sample Date	)/14/2005	)/14/2005	)/14/2005
		Start Depth (ft)	0	2	4
		End Depth (ft)	2	4	6
Acenaphthene	50	mg/kg	.045 J	.39 UJ	.39 U
Acenaphthylene	41	mg/kg	2.3	0.62J	.39 U
Anthracene	50	mg/kg	0.68	.21 J	.39 U
Benzo[a]anthracene**	.224	mg/kg	**3.7 ***	**.63 J***	.39 U
Benzo[a]pyrene**	.061	mg/kg	**5.8 J***	**1.2 J***	.39 U
Benzo[b]fluoranthene**	.224	mg/kg	**8.7 J***	**2 J***	.39 U
Benzo[g,h,i]perylene	50	mg/kg	5.2 J	1.3 J	.39 U
Benzo[k]fluoranthene**	.224	mg/kg	**2.2 J***	**.51 J***	.39 U
Chrysene**	.4	mg/kg	**4.6 ***	**.91 J***	.39 U
di-n-Butyl Phthalate	8.1	mg/kg	---	---	---
Carbazole	NC	mg/kg	.14 J	.048 J	.39 U
2-Chloronaphthalene	NC	mg/kg	.43 U	.39 UJ	.39 U
Dibenz[a,h]anthracene**	.014	mg/kg	**.96 J***	**.22 J***	.39 U
Dibenzofuran	6.2	mg/kg	---	---	---
2,4-Dimethylphenol	NC	mg/kg	---	---	---
Fluoranthene	50	mg/kg	4.8	0.87 J	.39 U
Fluorene	50	mg/kg	.2 J	.065 J	.39 U
Indeno[1,2,3-cd]pyrene**	3.2	mg/kg	2.3 J	0.59 J	.39 U
2-Methylnaphthalene	36.4	mg/kg	.11 J	.39 UJ	.39 U
4-Methylphenol	.9	mg/kg	---	---	---
2-Methylphenol	.1	mg/kg	---	---	---
Naphthalene	13	mg/kg	.14 J	.39 UJ	.39 U
Phenanthrene	50	mg/kg	0.88	.3 J	.39 U
Pyrene	50	mg/kg	10	1.7 J	.39 U
Total CPAH**	NC	mg/kg	28.3	6.06 J	---
Total PAH	500	mg/kg	52.6	11.1 J	---

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Table 4-8
National Grid
Fulton, New York
Subsurface Soil Samples - Metals

Chemical Name	TAGM 4046 Recommended Soil Cleanup		MW-01	MW-02	MW-03	MW-04	MW-05	PZ-01	SB-01
		Location ID	MW-01	MW-02	MW-03	MW-04	MW-05	PZ-01	SB-01
		Sample Date	07/09/96	07/09/96	07/12/96	07/11/96	07/11/96	07/10/96	07/12/96
		Start Depth	6	6	22	8	8	6	6
		End Depth	8	8	24	10	10	10	8
Aluminum	SB	mg/kg	6500	4200	2000	390 J	2000	4800	4600
Antimony	SB	mg/kg	15 UJ	15 UJ	13 UJ	25 UJ	17 UJ	14 UJ	14 UJ
Arsenic	7.5 or SB	mg/kg	4	1	2	**86 J ***	3	3	2
Barium	300 or SB	mg/kg	140	40	60	70 J	90	50	70
Beryllium	0.16 (HEAST) or SB	mg/kg	1 U	1 U	1 U	2 UJ	1 U	1 U	1 U
Cadmium	1 or SB	mg/kg	1 U	1 U	1 U	2 UJ	1 U	1 U	1 U
Calcium Metal	SB	mg/kg	4100 J	6100 J	12000 J	2800 J	1900 J	22000 J	4100 J
Chromium	10 or SB	mg/kg	**12 ***	7	4	**16 J ***	5	8	8
Cobalt	30 or SB	mg/kg	10 U	10 U	10 U	20 UJ	10 U	10 U	10 U
Copper	25 or SB	mg/kg	15	14	5	**73 J ***	20	18	10
Iron	2,000 or SB	mg/kg	**17000 J ***	**11000 J ***	**4500 J ***	**128521.472 J ***	**10000 J ***	**13000 J ***	**11000 J ***
Lead	SB	mg/kg	4 J	2.8 J	1.1 J	590 J	560 J	4.6 J	2.6 J
Magnesium	SB	mg/kg	3800	3000	2400	400	400	6400	2400
Manganese	SB	mg/kg	330 J	500 J	200 J	189.2781 J	60 J	430 J	170 J
Mercury	0.1	mg/kg	0.1 U	0.1 U	0.1 U	**0.6851 ***	0.1 U	0.1 U	0.1 U
Nickel	13 or SB	mg/kg	10 J	10 UJ	10 UJ	16 UJ	10 UJ	10 UJ	10 UJ
Potassium	SB	mg/kg	1200 U	1200 U	1100 U	2000 UJ	1400 U	1200 U	1200 U
Selenium	2 or SB	mg/kg	1 U	1 U	1 U	**12 J ***	1 U	1 U	1 U
Silver	SB	mg/kg	2 U	2 U	2 U	4 UJ	3 U	2 U	2 U
Sodium	SB	mg/kg	200 U	200 U	200 U	400 UJ	300 U	200 U	200 U
Thallium	SB	mg/kg	1 UJ	1 UJ	1 UJ	2 UJ	1 UJ	1 UJ	1 UJ
Vanadium	150 or SB	mg/kg	10	10 U	10 U	70 J	10 U	10 U	10 U
Zinc	20 or SB	mg/kg	**29 J ***	**21 J ***	10 R	**100 J ***	**37 J ***	**23 J ***	20 J

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

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Table 4-9
National Grid
Fulton, New York
Subsurface Soil Samples - Cyanide

	TAGM 4046	Location ID	MW-01	MW-01	MW-01	MW-02	MW-02	MW-02	MW-03	MW-03	MW-03
	Recommended	Sample Date	07/09/96	07/09/96	07/09/96	07/09/96	07/09/96	07/10/96	07/12/96	07/12/96	07/12/96
	Soil Cleanup	Start Depth	6	14	24	6	14	20	4	8	18
Chemical Name		**End Depth**	8	16	26	8	16	22	6	10	20
Cyanide	NC	mg/kg	0.6 UJ	0.6 U	0.6 U	3 J	0.6 U	0.6 U	0.9	1.1	0.6 U

	TAGM 4046	Location ID	MW-03	MW-03	MW-04	MW-04	MW-04	MW-04	MW-05	MW-05	MW-05
	Recommended	Sample Date	07/12/96	07/12/96	07/11/96	07/11/96	07/11/96	07/11/96	07/11/96	07/11/96	07/11/96
	Soil Cleanup	Start Depth	22	26	0	8	18	26	2	8	15.5
Chemical Name		**End Depth**	24	28	6	10	20	28	4	10	16
Cyanide	NC	mg/kg	0.6 UJ	0.6 U	0.5 U	2000 J	1.7	1	0.6 U	0.7 J	0.7 U

	TAGM 4046	Location ID	PZ-01	PZ-01	PZ-01	SB-01	SB-01	SB-01	SB-01	SB-01
	Recommended	Sample Date	07/10/96	07/10/96	07/10/96	07/12/96	07/12/96	07/12/96	07/12/96	07/12/96
	Soil Cleanup	Start Depth	6	14	24	6	12	18	28	2
Chemical Name		**End Depth**	10	16	26	8	14	20	30	4
Cyanide	NC	mg/kg	0.6 UJ	0.6 U	0.6 U	4.2 J	0.6 U	0.6 U	0.6 U	1.3

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

Table 4-10
National Grid
Fulton, New York
Subsurface Soil Samples - Pesticides PCBs

Chemical Name	TAGM 4046 Recommended Soil Cleanup	Location ID / Sample Date / Start Depth / End Depth	MW-01 7/9/1996 6 8	MW-02 7/9/1996 6 8	MW-03 7/12/1996 22 24	MW-04 7/11/1996 8 10	MW-05 7/11/1996 8 10	PZ-01 7/10/1996 6 10	SB-01 7/12/1996 6 8
Aldrin	0.041	mg/kg	0.0021 U	0.0021 UJ	0.019 U	0.34 UJ	0.0036 U	0.002 U	0.02 U
alpha-BHC	0.11	mg/kg	0.0021 U	0.0021 UJ	0.019 U	0.34 UJ	0.0023 U	0.002 U	0.02 U
alpha-Chlordane	0.54	mg/kg	0.0021 U	0.0021 UJ	0.019 U	0.34 UJ	0.0023 U	0.002 U	0.02 U
Aroclor 1260	10	mg/kg	0.041 U	0.041 UJ	0.37 U	6.8 UJ	0.046 U	0.04 U	0.4 U
Aroclor 1254	10	mg/kg	0.041 U	0.041 UJ	0.37 U	6.8 UJ	0.046 U	0.04 U	0.4 U
Aroclor 1221	10	mg/kg	0.082 U	0.083 UJ	0.75 U	14 UJ	0.092 U	0.079 U	0.81 U
Aroclor 1232	10	mg/kg	0.041 U	0.041 UJ	0.37 U	6.8 UJ	0.046 U	0.04 U	0.4 U
Aroclor 1248	10	mg/kg	0.041 U	0.041 UJ	0.37 U	6.8 UJ	0.046 U	0.04 U	0.4 U
Aroclor 1016	10	mg/kg	0.041 U	0.041 UJ	0.37 U	6.8 UJ	0.046 U	0.04 U	0.4 U
Aroclor 1242	10	mg/kg	0.041 U	0.041 UJ	0.37 U	6.8 UJ	0.046 U	0.04 U	0.4 U
beta-BHC	0.2	mg/kg	0.0021 U	0.0021 UJ	0.019 U	0.34 UJ	0.0023 U	0.002 U	0.02 U
Camphechlor	NC	mg/kg	0.21 U	0.21 UJ	1.9 U	34 UJ	0.23 U	0.2 U	2 U
delta-BHC	0.3	mg/kg	0.0021 U	0.0021 UJ	0.019 U	0.34 UJ	0.0023 U	0.002 U	0.02 U
4,4'-DDD	2.9	mg/kg	0.0041 U	0.0041 UJ	0.037 U	0.68 UJ	0.0046 U	0.004 U	0.04 U
4,4'-DDE	2.1	mg/kg	0.0041 U	0.00097 BJ	0.037 U	0.68 UJ	0.0046 U	0.004 U	0.04 U
4,4'-DDT	2.1	mg/kg	0.0041 U	0.0041 UJ	0.047 U	1.5 J	0.0046 U	0.004 U	0.04 U
Dieldrin	0.044	mg/kg	0.0041 U	0.0041 UJ	0.037 U	0.68 UJ	0.0046 U	0.004 U	**0.053 J ***
Endosulfan I	0.9	mg/kg	0.0021 U	0.0021 UJ	0.019 U	0.34 UJ	0.0023 U	0.002 U	0.02 U
Endosulfan II	0.9	mg/kg	0.0041 U	0.0041 UJ	0.037 U	1.4 UJ	0.0059 J	0.004 U	0.04 U
Endosulfan Sulfate	0.1	mg/kg	0.0041 U	0.0041 UJ	0.037 U	0.68 UJ	0.0046 U	0.004 U	0.04 U
Endrin	0.1	mg/kg	0.0041 U	0.0041 UJ	0.037 U	0.68 UJ	0.0057 U	0.004 U	0.04 U
Endrin Aldehyde	NC	mg/kg	0.0041 U	0.0041 UJ	0.037 U	0.68 UJ	0.0046 U	0.004 U	0.04 U
Endrin Ketone	NC	mg/kg	0.0041 U	0.0041 UJ	0.037 U	1.3 UJ	0.0076 U	0.004 U	0.04 U
gamma-Chlordane	0.54	mg/kg	0.0021 U	0.0021 UJ	0.019 U	0.34 UJ	0.0062 J	0.002 U	0.02 U
Heptachlor	0.1	mg/kg	0.0021 U	0.0021 UJ	0.0021 U	0.34 UJ	0.0042 U	0.002 U	0.02 U
Heptachlor Epoxide	0.02	mg/kg	0.0021 U	0.0021 UJ	0.019 U	0.34 UJ	0.0023 U	0.002 U	0.02 U
Lindane	0.06	mg/kg	0.0021 U	0.0021 UJ	0.019 U	0.34 UJ	0.0023 U	0.002 U	0.02 U
Methoxychlor	10	mg/kg	0.021 U	0.021 UJ	0.19 U	4.7 J	0.023 U	0.02 U	0.2 U

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

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Table 4-11
Niagara Mohawk
Fulton, New York
Groundwater Samples - Volatile Organic Compounds

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-01 7/24/1996	MW-01 9/4/1996	MW-01 7/16/1998	MW-01 5/31/2001	MW-01 7/12/2004	MW-01 11/3/2005	MW-02 7/24/1996	MW-02 9/4/1996	MW-02 7/16/1998	MW-02 7/12/2004	MW-02 11/3/2005	MW-03 7/24/1996	MW-03 9/4/1996
Benzene	1	ug/l	0.7 U	0.7 U	10 U	10 U	0.50 U	0.50 U	0.7 U	0.7 U	10 U	0.50 U	0.50 U	0.7 U	0.77 J
Ethylbenzene	5	ug/l	5 U	5 U	10 U	10 U	0.50 U	0.50 U	5 U	5 U	10 U	0.50 U	**0.50 U**	5 U	**20 ***
Toluene	5	ug/l	5 U	5 U	---	---	---	---	5 U	5 U	---	---	---	5 U	5 U
Styrene (monomer)	5	ug/l	5 U	5 U	10 U	10 U	0.50 U	0.50 U	5 U	5 U	10 U	0.50 U	0.50 U	5 U	1.4 J
Xylene (total)	5	ug/l	5 U	5 U	10 U	10 U	0.50 U	1.00 U	5 U	5 U	10 U	0.50 U	**1.00 U**	5 U	**51 ***
Total BTEX	NC	ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	73.17

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-03 7/16/1998	MW-03 8/4/1999	MW-03 7/8/2004	MW-03 11/3/2005 12 - 12	MW-03 11/3/2005 8.5 - 8.5	MW-04 7/24/1996	MW-04 9/4/1996	MW-04 7/16/1998	MW-04 8/4/1999	MW-04 5/31/2001	MW-04 7/9/2004	MW-04 11/2/2005 8 - 8	MW-04 11/2/2005 12 - 12
Benzene	1	ug/l	10 U	10 U	0.50 U	0.50 U	0.50 U	**980 ***	**650 ***	**450 ***	**730 ***	**520 ***	**380. J***	**530 ***	**734 ***
Ethylbenzene	5	ug/l	10 U	10 U	0.50 U	0.50 U	0.50 U	**690 ***	**530 ***	**390 ***	**570 ***	**340 ***	**66. J***	**228 ***	**380 ***
Toluene	5	ug/l	---	---	---	---	---	50 U	25 U	---	---	---	---	---	---
Styrene (monomer)	5	ug/l	10 U	10 U	0.50 U	0.50 U	0.50 U	**93 ***	**57 ***	**60 J***	**66 J***	**48 J***	**19. J***	**33.2 ***	**42.0 ***
Xylene (total)	5	ug/l	10 U	10 U	0.50 U	1.00 U	1.00 U	**420 ***	**420 ***	**350 ***	**400 ***	**300 ***	**120. J***	**167 ***	**268 ***
Total BTEX	NC	ug/l	ND	ND	ND	ND	ND	2083	1657	1250	1766	1208	585	958.2	1424

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-05 7/24/1996	MW-05 9/4/1996	MW-05 7/16/1998	MW-05 8/4/1999	MW-05 6/1/2001	MW-05 7/12/2004	MW-05 11/2/2005	MW-06 7/16/1998	MW-06 8/4/1999	MW-06 7/9/2004	MW-06 11/2/2005	MW-07 7/16/1998	MW-07 8/5/1999
Benzene	1	ug/l	**6.5 J***	**23 ***	**21 J***	**10 J***	**9 J***	**7. J***	**7.20 J***	**140 ***	**7 J***	4 J	0.92	10 U	10 U
Ethylbenzene	5	ug/l	**310 ***	**62 ***	**230 ***	**440 ***	**390 J***	**350. J***	**243 ***	**54 ***	4 J	.1 J	**0.24 J**	10 U	10 U
Toluene	5	ug/l	25 U	**7.3 J***	---	---	---	---	---	---	---	---	---	---	---
Styrene (monomer)	5	ug/l	**35 ***	**27 ***	**13 J***	**11 J***	**13 J***	**9. J***	**9.80 J***	**91 ***	4 J	0.50 U	0.50 U	10 U	10 U
Xylene (total)	5	ug/l	**410 ***	**800 ***	**550 ***	**570 ***	**560 ***	**360. J***	**483 ***	**260 ***	**21 ***	0.50 U	**1.00 U**	10 U	10 U
Total BTEX	NC	ug/l	761.5	912	814	1031	972	726	743	545	36	0.5	1.28	ND	ND

Notes - Data Qualifier Definitions:
NC-No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**

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Table 4-11
Niagara Mohawk
Fulton, New York
Groundwater Samples - Volatile Organic Compounds

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-07	MW-07	MW-07D	MW-07D	MW-07S	MW-08	MW-08	MW-08	MW-08	MW-08D	MW-08D	MW-08S	MW-09D
		Sample Date	11/1/2005	11/1/2005	7/9/2004	11/2/2005	7/9/2004	7/16/1998	8/5/1999	5/31/2001	11/1/2005	7/8/2004	11/2/2005	7/8/2004	7/16/1998
		Depth	11 - 11	7 - 7											
Benzene	1	ug/l	0.50 U	0.50 U	1 J	0.50 U	0.50 U	10 U	10 U	10 U	0.50 U	1 J	0.50 U	0.50 U	10 U
Ethylbenzene	5	ug/l	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	10 U	10 U	10 U	0.50 U	0.50 U	0.50 U	0.50 U	10 U
Toluene	5	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
Styrene (monomer)	5	ug/l	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	10 U	10 U	10 U	0.50 U	.2 J	0.50 U	0.50 U	10 U
Xylene (total)	5	ug/l	1.00 U	1.00 U	4 J	1.00 U	0.50 U	10 U	10 U	10 U	1.00 U	0.50 U	**1.00 U**	0.50 U	10 U
Total BTEX	NC	ug/l	ND	ND	0.5	ND	ND	ND	ND	ND	ND	0.3	ND	ND	ND

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-09D	MW-09D	MW-09D	MW-09S	MW-09S	MW-09S	MW-09S	MW-09S	MW-10	MW-10	MW-10	MW-11	MW-11
		Sample Date	8/5/1999	7/8/2004	11/2/2005	7/16/1998	8/5/1999	6/1/2001	7/8/2004	11/3/2005	7/16/1998	7/9/2004	11/1/2005	6/1/2001	7/12/2004
		Depth											11 - 11		
Benzene	1	ug/l	10 U	0.50 U	0.50 U	10 U	10 U	10 U	0.50 U	0.50 U	10 U	0.50 U	0.50 U	**2 J***	0.50 U
Ethylbenzene	5	ug/l	10 U	0.50 U	0.50 U	10 U	10 U	10 U	0.50 U	0.50 U	10 U	0.50 U	**0.50** U	**6 J***	0.50 U
Toluene	5	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
Styrene (monomer)	5	ug/l	10 U	0.50 U	0.50 U	10 U	10 U	10 U	0.50 U	0.50 U	10 U	0.50 U	0.50 U	0.5 J	0.50 U
Xylene (total)	5	ug/l	10 U	0.50 U	1.00 U	10 U	10 U	10 U	0.50 U	1.00 U	10 U	0.50 U	**1.00 U**	2 J	0.50 U
Total BTEX	NC	ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.5	ND

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-11	MW-11	MW-12D	MW-12D	MW-12S	MW-12S	MW-12S
		Sample Date	11/2/2005	11/2/2005	7/7/2004	11/2/2005	7/7/2004	11/3/2005	11/3/2005
		Depth	5 - 5	10 - 10				12 - 12	8.5 - 8.5
Benzene	1	ug/l	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Ethylbenzene	5	ug/l	0.20 J	0.34 J	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Toluene	5	ug/l	---	---	---	---	---	---	---
Styrene (monomer)	5	ug/l	0.50 U	0.50 U	.2 J	0.50 U	0.50 U	0.50 U	0.50 U
Xylene (total)	5	ug/l	0.14 J	1.00 U	0.50 U	1.00 U	0.50 U	1.00 U	1.00 U
Total BTEX	NC	ug/l	0.34	0.34	0.2	ND	ND	ND	ND

Notes - Data Qualifier Definitions:
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B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)**

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Table 4-12
Niagara Mohawk
Fulton, New York
Groundwater Samples - Semivolatile Organic Compounds

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-01 /24/1996	MW-01 9/4/1996	MW-01 /16/1998	MW-01 /31/2001	MW-01 /12/2004	MW-01 1/3/2005	MW-02 /24/1996	MW-02 9/4/1996	MW-02 /16/1998	MW-02 /12/2004	MW-02 11/3/2005	MW-03 /24/1996	MW-03 9/4/1996
Acenaphthene	20	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	350 *	460 *
Acenaphthylene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	7.6 J	12
Anthracene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	46	57 *
Benz(a)anthracene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	14 *	42 *
Benzo(a)pyrene	D	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	11	35
Benzo(b)fluoranthene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	14 *	42 *
Benzo(g,h,i)perylene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	5.8 J	15
Benzo(k)fluoranthene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	3.7 J*	16 *
Chrysene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	12 *	38 *
Carbazole	NC	ug/l	10 U	10 U	---	---	---	10 U	10 U	11 U	---	---	10 U	54	73
2-Chloronaphthalene	10	ug/l	5 U	5.1 U	10 U	10 U	10 U	10 U	5.1 U	5.4 U	10 U	10 U	10 U	5.3 U	5.6 U
Dibenz[a,h]anthracene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	11 U	11 U
Dibenzofuran	NC	ug/l	10 U	10 U	---	---	---	---	10 U	11 U	---	---	---	120	86
2,4-Dimethylphenol	50	ug/l	10 U	10 U	---	---	---	---	10 U	11 U	---	---	---	11 U	11 U
2,4-Dinitrotoluene	5	ug/l	10 U	10 U	---	---	---	---	10 U	11 U	---	---	---	11 U	11 U
Fluoranthene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	1.3 J	11 U	10 U	10 U	10 U	70 *	170 *
Fluorene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	120 *	190 *
Indeno (1,2,3-cd)pyrene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	5.4 J*	14 *
2-Methylnaphthalene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	140	280
4-Methylphenol	1	ug/l	10 U	10 U	---	---	---	---	10 U	11 U	---	---	---	11 U	1.5 J*
2-Methylphenol	1	ug/l	10 U	10 U	---	---	---	---	10 U	11 U	---	---	---	11 U	11 U
Naphthalene	10	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	660 J*	2500 J*
Phenanthrene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	260 *	410 *
Phenol	1	ug/l	1 U	1 U	---	---	---	---	1 U	1.1 U	---	---	---	1.1 U	1.1 U
Pyrene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	2.1 J	1.3 J	10 U	10 U	10 U	64 *	150 *
Total CPAH	NC	ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	60.1	187
Total PAH	NC	ug/l	ND	ND	ND	ND	ND	ND	3.4	1.3	ND	ND	ND	1783.5	4431

Notes - Data Qualifier Definitions:
NC-No criteria established, U - Not Detected,
J - Estimated, B- Blank contamination, R -Rejected
--- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

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Table 4-12
Niagara Mohawk
Fulton, New York
Groundwater Samples - Semivolatile Organic Compounds

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-03 /16/1998	MW-03 8/4/1999	MW-03 7/8/2004	MW-03 1/3/2005 12 - 12	MW-03 1/3/2005 8.5 - 8.5	MW-04 /24/1996	MW-04 9/4/1996	MW-04 /16/1998	MW-04 8/4/1999	MW-04 /31/2001	MW-04 7/9/2004	MW-04 1/2/2005 8 - 8	MW-04 1/2/2005 12 - 12
Acenaphthene	20	ug/l	**80 ***	**41 J***	10 U	10 U	10 U	4 J	**29 ***	**37 J***	**27 J***	19 J	**23 ***	**21 J***	19 J
Acenaphthylene	NC	ug/l	5 J	4 J	10 U	10 U	10 U	1 J	8 J	7 J	210 U	100 U	3 J	6.1 J	100 UR
Anthracene	50	ug/l	33	16 J	10 U	10 U	10 U	1 J	9.2 J	21 J	31 J	15 J	10 U	1.7 J	100 UR
Benz(a)anthracene	0.002	ug/l	**22 ***	**21 J***	10 U	10 U	10 U	53 U	**2.5 J***	50 U	210 U	100 U	10 U	10 UR	100 UR
Benzo(a)pyrene	D	ug/l	28	29 J	10 U	10 U	10 U	53 U	10 U	50 U	210 U	100 U	10 U	10 UR	100 UR
Benzo(b)fluoranthene	0.002	ug/l	**32 ***	**32 J***	10 U	10 U	10 U	53 U	**1.6 J***	50 U	210 U	100 U	10 U	10 UR	100 UR
Benzo(g,h,i)perylene	NC	ug/l	19 J	13 J	10 U	10 U	10 U	53 U	10 U	50 U	210 U	100 U	10 U	10 UR	100 UR
Benzo(k)fluoranthene	0.002	ug/l	**10 ***	**13 J***	10 U	10 U	10 U	53 U	10 U	50 U	210 U	100 U	10 U	10 UR	100 UR
Chrysene	0.002	ug/l	**20 ***	**22 J***	10 U	10 U	10 U	**5.7 J***	**2.8 J***	50 U	210 U	100 U	10 U	10 UR	100 UR
Carbazole	NC	ug/l	---	---	---	10 U	10 U	5 J	24	---	---	---	---	22 J	22 J
2-Chloronaphthalene	10	ug/l	10 U	10 UJ	10 U	10 U	10 U	26 U	5.1 U	50 U	210 U	100 U	10 U	10 UR	100 UR
Dibenz[a,h]anthracene	NC	ug/l	10 U	2 J	10 U	10 U	10 U	53 U	10 U	50 U	210 U	100 U	10 U	10 UR	100 UR
Dibenzofuran	NC	ug/l	---	---	---	---	---	3 J	23	---	---	---	---	---	---
2,4-Dimethylphenol	50	ug/l	---	---	---	---	---	**150 ***	**97 ***	---	---	---	---	---	---
2,4-Dinitrotoluene	5	ug/l	---	---	---	---	---	53 U	1 J	---	---	---	---	---	---
Fluoranthene	50	ug/l	**60 ***	**60 J***	10 U	10 U	10 U	2 J	16	18 J	22 J	100 U	10 U	2.5 J	100 UR
Fluorene	50	ug/l	29	13 J	10 U	10 U	10 U	**59 ***	33	**57 J***	44 J	27 J	7 J	7.6 J	100 UR
Indeno (1,2,3-cd)pyrene	0.002	ug/l	**16 ***	**13 J***	10 U	10 U	10 U	53 U	10 U	50 U	210 U	100 U	10 U	10 UR	100 UR
2-Methylnaphthalene	NC	ug/l	10 U	10 UJ	10 U	10 U	10 U	3 J	37	14 J	210 U	16 J	10 U	3.2 J	100 UR
4-Methylphenol	1	ug/l	---	---	---	---	---	**5.6 J***	10 U	---	---	---	---	---	---
2-Methylphenol	1	ug/l	---	---	---	---	---	1 J	10 U	---	---	---	---	---	---
Naphthalene	10	ug/l	1 J	1 J	10 U	10 U	10 U	**2000 ***	**1100 ***	**1200 ***	**1000 ***	**830 ***	**140 ***	**680 J***	**750 J***
Phenanthrene	50	ug/l	**140 ***	45 J	10 U	10 U	10 U	**55 ***	28	**56 J***	47 J	26 J	1 J	2.6 J	100 UR
Phenol	1	ug/l	---	---	---	---	---	**24 J***	**9.6 J***	---	---	---	---	---	---
Pyrene	50	ug/l	**59 ***	**55 J***	10 U	10 U	10 U	2 J	20	19 J	210 U	100 U	10 U	2.8 J	100 UR
Total CPAH	NC	ug/l	128	132	ND	ND	ND	5.7	6.9	ND	ND	ND	ND	ND	ND
Total PAH	NC	ug/l	554	380	ND	ND	ND	2132.7	1287.1	1429	1171	933	174	727.5	779

Notes - Data Qualifier Definitions:
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J - Estimated, B- Blank contamination, R -Rejected
--- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

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Database: NimoFulton_Chem.mdb (EQuIS)

Ta[illegible]4-12
Niagara Mohawk
Fulton, New York
Groundwater Samples - Semivolatile Organic Compounds

Chemical Name	NYS Class GA	Location ID	MW-05	MW-05	MW-05	MW-05	MW-05	MW-05	MW-05	MW-06	MW-06	MW-06	MW-06	MW-07	MW-07
		Sample Date	/24/1996	9/4/1996	/16/1998	8/4/1999	6/1/2001	/12/2004	1/2/2005	/16/1998	8/4/1999	7/9/2004	11/2/2005	/16/1998	8/5/1999
		Depth													
Acenaphthene	20	ug/l	100 U	10 U	19	1000 U	**33 J***	**29 ***	**41 ***	**270 J***	**110 ***	2 J	**22 ***	10 U	10 U
Acenaphthylene	NC	ug/l	4 J	26	61	1000 U	39 J	10	8.2 J	270 J	90 J	10 U	5.8 J	10 U	10 U
Anthracene	50	ug/l	100 U	4.3 J	5 J	1000 U	100 U	3 J	4.1 J	**220 J***	**60 J***	10 U	9.2 J	10 U	10 U
Benz(a)anthracene	0.002	ug/l	100 U	10 U	10 U	1000 U	100 U	10 R	10 U	**200 J***	**34 J***	10 U	**3.3 J***	10 U	10 U
Benzo(a)pyrene	D	ug/l	100 U	10 U	10 U	1000 U	100 U	10 R	10 U	190 J	34 J	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	0.002	ug/l	100 U	10 U	10 U	1000 U	100 U	10 R	10 U	**190 J***	**36 J***	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	NC	ug/l	100 U	10 U	10 U	1000 U	100 U	10 R	10 U	100 J	200 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	0.002	ug/l	100 U	10 U	10 U	1000 U	100 U	10 R	10 U	**72 ***	200 U	10 U	10 U	10 U	10 U
Chrysene	0.002	ug/l	100 U	10 U	10 U	1000 U	100 U	10 R	10 U	**180 J***	**35 J***	10 U	**2.9 J***	10 U	10 U
Carbazole	NC	ug/l	1 J	19	---	---	---	---	7.7 J	---	---	---	3.4 J	---	---
2-Chloronaphthalene	10	ug/l	52 U	5.1 U	10 U	1000 U	100 U	10 R	10 U	100 U	200 U	10 U	10 U	10 U	10 U
Dibenz[a,h]anthracene	NC	ug/l	100 U	10 U	10 U	1000 U	100 U	10 R	10 U	100 U	200 U	10 U	10 U	10 U	10 U
Dibenzofuran	NC	ug/l	100 U	14	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	50	ug/l	1 J	49	---	---	---	---	---	---	---	---	---	---	---
2,4-Dinitrotoluene	5	ug/l	100 U	10 U	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	ug/l	100 U	3.7 J	2 J	1000 U	100 U	2 J	2.6 J	**430 ***	**100 ***	1 J	19	10 U	10 U
Fluorene	50	ug/l	100 U	14	34	1000 U	35 J	21	30	**290 J***	**100 ***	1 J	24	10 U	10 U
Indeno (1,2,3-cd)pyrene	0.002	ug/l	100 U	10 U	10 U	1000 U	100 U	10 R	10 U	**110 J***	200 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	NC	ug/l	8 J	100	160 J	140 J	87 J	26	43	530	200	10 U	10 U	10 U	10 U
4-Methylphenol	1	ug/l	100 U	**23 ***	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	1	ug/l	100 U	10 U	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	10	ug/l	**1900 ***	**1600 ***	**4500 ***	**4800 ***	**2100 ***	**760 ***	**1000 ***	**4800 ***	**900 ***	10 U	5.2 J	10 U	10 U
Phenanthrene	50	ug/l	100 U	17	32	1000 U	37 J	21	34	**680 ***	**240 ***	10 U	**62 ***	10 U	10 U
Phenol	1	ug/l	10 U	1 U	---	---	---	---	---	---	---	---	---	---	---
Pyrene	50	ug/l	100 U	2.9 J	2 J	1000 U	100 U	1 J	2.1 J	**440 J***	**85 J***	10 U	19	10 U	10 U
Total CPAH	NC	ug/l	ND	ND	ND	ND	ND	ND	ND	942	139	ND	6.2	ND	ND
Total PAH	NC	ug/l	1912	1767.9	4815	4940	2331	873	1165	8972	2024	4	172.4	ND	ND

Notes - Data Qualifier Definitions:
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--- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

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Table 4-12
Niagara Mohawk
Fulton, New York
Groundwater Samples - Semivolatile Organic Compounds

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-07 1/1/2005 11 - 11	MW-07 1/1/2005 7 - 7	MW-07D 7/9/2004	MW-07D 1/2/2005	MW-07S 7/9/2004	MW-08 /16/1998	MW-08 8/5/1999	MW-08 /31/2001	MW-08 1/1/2005	MW-08D 7/8/2004	MW-08D 11/2/2005	MW-08S 7/8/2004	MW-09D /16/1998
Acenaphthene	20	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Acenaphthylene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Anthracene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Benz(a)anthracene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Benzo(a)pyrene	D	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Benzo(b)fluoranthene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Benzo(g,h,i)perylene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Benzo(k)fluoranthene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Chrysene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Carbazole	NC	ug/l	10 U	10 U	---	10 U	---	---	---	---	10 U	---	11 U	---	---
2-Chloronaphthalene	10	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Dibenz[a,h]anthracene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Dibenzofuran	NC	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	50	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dinitrotoluene	5	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	1.3 J	10 U	10 U
Fluorene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Indeno (1,2,3-cd)pyrene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
2-Methylnaphthalene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
4-Methylphenol	1	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	1	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	10	ug/l	10 U	10 U	2 J	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	11 U	10 U	10 U
Phenanthrene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	2.7 J	10 U	10 U
Phenol	1	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
Pyrene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	1.2 J	10 U	10 U
Total CPAH	NC	ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total PAH	NC	ug/l	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	5.2	ND	ND

Notes - Data Qualifier Definitions:
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--- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

Table 4-12
Niagara Mohawk
Fulton, New York
Groundwater Samples - Semivolatile Organic Compounds

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-09D 8/5/1999	MW-09D 7/8/2004	MW-09D 1/2/2005	MW-09S /16/1998	MW-09S 8/5/1999	MW-09S 6/1/2001	MW-09S 7/8/2004	MW-09S 1/3/2005	MW-10 /16/1998	MW-10 7/9/2004	MW-10 11/1/2005 11 - 11	MW-11 6/1/2001	MW-11 /12/2004
Acenaphthene	20	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benz(a)anthracene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	D	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole	NC	ug/l	---	---	10 U	---	---	---	---	10 U	---	---	10 U	---	---
2-Chloronaphthalene	10	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenz[a,h]anthracene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	NC	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dimethylphenol	50	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
2,4-Dinitrotoluene	5	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Indeno (1,2,3-cd)pyrene	0.002	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	NC	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	1	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
2-Methylphenol	1	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	10	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 J	10 U
Phenanthrene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2 J	10 U
Phenol	1	ug/l	---	---	---	---	---	---	---	---	---	---	---	---	---
Pyrene	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Total CPAH	NC	ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total PAH	NC	ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND

Notes - Data Qualifier Definitions:
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--- Not Analyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

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Table 4-12
Niagara Mohawk
Fulton, New York
Groundwater Samples - Semivolatile Organic Compounds

Chemical Name	NYS Class GA	Location ID / Sample Date / Depth	MW-11 1/2/2005 5 - 5	MW-11 1/2/2005 10 - 10	MW-12D 7/7/2004	MW-12D 1/2/2005	MW-12S 7/7/2004	MW-12S 1/3/2005 12 - 12	MW-12S 1/3/2005 8.5 - 8.5
Acenaphthene	20	ug/l	10 U	11 U	10 U	10 U	2 J	10 U	10 U
Acenaphthylene	NC	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Anthracene	50	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Benz(a)anthracene	0.002	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	D	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	0.002	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	NC	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	0.002	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Chrysene	0.002	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Carbazole	NC	ug/l	10 U	11 U	---	10 U	---	10 U	10 U
2-Chloronaphthalene	10	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Dibenz[a,h]anthracene	NC	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	NC	ug/l	---	---	---	---	---	---	---
2,4-Dimethylphenol	50	ug/l	---	---	---	---	---	---	---
2,4-Dinitrotoluene	5	ug/l	---	---	---	---	---	---	---
Fluoranthene	50	ug/l	10 U	11 U	10 U	10 U	1 J	10 U	10 U
Fluorene	50	ug/l	10 U	11 U	10 U	10 U	2 J	10 U	10 U
Indeno (1,2,3-cd)pyrene	0.002	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	NC	ug/l	10 U	11 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	1	ug/l	---	---	---	---	---	---	---
2-Methylphenol	1	ug/l	---	---	---	---	---	---	---
Naphthalene	10	ug/l	10 U	11 U	10 U	10 U	2 J	10 U	10 U
Phenanthrene	50	ug/l	10 U	11 U	10 U	10 U	4 J	10 U	10 U
Phenol	1	ug/l	---	---	---	---	---	---	---
Pyrene	50	ug/l	10 U	11 U	10 U	10 U	1 J	10 U	10 U
Total CPAH	NC	ug/l	ND	ND	ND	ND	ND	ND	ND
Total PAH	NC	ug/l	ND	ND	ND	ND	12	ND	ND

Notes - Data Qualifier Definitions:
NC-No criteria established, U - Not Detected,
J - Estimated, B- Blank contamination, R -Rejected
--- Not Arialyzed/No results.
*** Exceedances (bold)**
** Carcinogenic PAHs

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Ta[illegible]4-13
National Grid
Fulton, New York
Groundwater Samples - Metals

Chemical Name	NYS Class GA	Location ID / Sample Date	MW-01 07/24/96	MW-01 09/04/96	MW-02 07/24/96	MW-02 09/04/96	MW-03 07/24/96	MW-03 09/04/96	MW-04 07/24/96	MW-04 09/04/96	MW-05 07/24/96	MW-05 09/04/96
Aluminum	NC	ug/l	37000	11000	44000	170000	110000	68000	140000	130000	27000	38000
Antimony	3	ug/l	60 UJ	60 U	60 UJ	60 U	60 UJ	60 U	60 UJ	60 U	60 UJ	60 U
Arsenic	25	ug/l	**26 ***	10 U	**26 ***	**100 ***	**47 ***	**29 ***	**72 ***	**60 ***	15	23
Barium	1000	ug/l	800	400	**1300 ***	**4900 ***	**2400 ***	**1600 ***	**3000 ***	**2700 ***	500	700
Beryllium	3	ug/l	5 U	5 U	5 U	**8 ***	**5 ***	5 U	**6 ***	**6 ***	5 U	5 U
Cadmium	5	ug/l	5 U	5 U	**7 ***	**31 ***	5 U	5 U	5 U	**7 ***	5 U	5 U
Calcium Metal	NC	ug/l	130000	86000	240000	570000	500000	330000	380000	370000	140000	210000
Chromium	50	ug/l	**70 J ***	30	**90 J ***	**350 ***	**170 J ***	**110 ***	**290 J ***	**270 ***	50 J	**60 ***
Cobalt	NC	ug/l	50 U	50 U	50 U	130	60	50 U	80	90	50 U	50 U
Copper	200	ug/l	110 J	40	130 J	**650 ***	200 J	120	**440 J ***	**380 ***	60 J	100
Iron	300	ug/l	**69000 ***	**22000 ***	**82000 ***	**320000 ***	**170000 ***	**110000 ***	**350000 ***	**310000 ***	**80000 ***	**94000 ***
Lead	25	ug/l	**30 ***	12	**57 ***	**260 ***	**110 ***	**64 ***	**370 ***	**320 ***	**110 ***	**120 ***
Magnesium	35000	ug/l	**43000 ***	29000	**48000 ***	**140000 ***	**110000 ***	**69000 ***	**97000 ***	**90000 ***	27000	**39000 ***
Manganese	3000	ug/l	**3200 J ***	2100	**4500 J ***	**15000 ***	**5900 J ***	**3800 ***	**7900 J ***	**7700 ***	**4600 J ***	**6600 ***
Mercury	0.7	ug/l	.2 UJ	.2 U	.5 J	**2.1 ***	.2 UJ	.2 U	.6 J	.7	.2 UJ	.2
Nickel	100	ug/l	**110**	40 U	70	**270**	**140**	90	**200**	**180**	40 U	60
Potassium	NC	ug/l	13000	7000	15000	32000	18000	13000	22000	20000	6000	6000
Selenium	10	ug/l	5 U	5 U	5	7	**11 ***	6	**15 ***	**14 ***	5 U	5 U
Silver	50	ug/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	20000	ug/l	**47000 ***	**38000 ***	**84000 ***	**74000 ***	**43000 ***	**45000 ***	**74000 ***	**67000 ***	**33000 ***	**28000 ***
Thallium	0.5	ug/l	5 U	10 U	5 U	10 U	5 U	10 U	5 U	10 U	5 U	10 U
Vanadium	NC	ug/l	60	50 U	70	270	180	110	240	220	50 U	70
Zinc	2000	ug/l	150	60 J	190	800 J	400	250 J	610	510 J	110	150 J

Notes - Data Qualifier Definitions:
NC-No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

Table 4-14
National Grid
Fulton, New York
Groundwater Samples - Cyanide

Chemical Name	NYS Class GA	Location ID Sample Date	MW-01 07/24/96	MW-01 09/04/96	MW-02 07/24/96	MW-02 09/04/96	MW-03 07/24/96	MW-03 09/04/96	MW-04 07/24/96	MW-04 09/04/96	MW-05 07/24/96	MW-05 09/04/96
Cyanide	200	ug/l	**560 J ***	**601 J ***	140 J	190	**220 J ***	**270 ***	**5300 J ***	**4400 ***	**590 J ***	**660 ***

Notes - Data Qualifier Definitions:
NC-No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold) -** concentration above criterion

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Ta[illegible]4-15
National Grid
Fulton, New York
Groundwater Samples - Pesticides PCBs

Chemical Name	NYS Class GA	Location ID / Sample Date	MW-01 07/24/96	MW-01 09/04/96	MW-02 07/24/96	MW-02 09/04/96	MW-03 07/24/96	MW-03 09/04/96	MW-04 07/24/96	MW-04 09/04/96	MW-05 07/24/96	MW-05 09/04/96
Aldrin	ND	ug/l	0.051 U	0.056 U	0.053 UJ	0.053 U	0.053 UJ	0.053 U	0.054 UJ	0.054 U	0.05 UJ	0.053 U
alpha-BHC	0.01	ug/l	0.051 U	0.056 U	0.053 UJ	0.007 J	0.053 UJ	0.053 U	0.054 UJ	0.054 U	0.051 UJ	0.053 U
alpha-Chlordane	NC	ug/l	0.051 U	0.056 U	0.053 UJ	0.053 U	0.053 UJ	0.053 U	0.054 UJ	0.054 U	0.05 UJ	0.053 U
Aroclor 1260	0.09	ug/l	1 U	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1 UJ	1.1 U
Aroclor 1254	0.09	ug/l	1 U	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1 UJ	1.1 U
Aroclor 1221	0.09	ug/l	2 U	2.2 U	2.1 UJ	2.1 U	2.1 UJ	2.1 U	2.2 UJ	2.1 U	2 UJ	2.1 U
Aroclor 1232	0.09	ug/l	1 U	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1 UJ	1.1 U
Aroclor 1248	0.09	ug/l	1 U	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1 UJ	1.1 U
Aroclor 1016	0.09	ug/l	1 U	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1 UJ	1.1 U
Aroclor 1242	0.09	ug/l	**1.4** *	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1.1 UJ	1.1 U	1 UJ	1.1 U
beta-BHC	0.04	ug/l	0.051 U	0.056 U	0.053 UJ	0.053 U	0.053 UJ	0.053 U	0.054 UJ	0.054 U	0.051 UJ	0.053 U
Camphechlor	0.06	ug/l	5.1 U	5.6 U	5.3 U	5.3 U	5.3 UJ	5.3 U	5.4 UJ	5.4 U	5.1 UJ	5.3 U
delta-BHC	0.04	ug/l	0.051 U	0.056 U	0.053 UJ	0.053 U	0.053 UJ	0.053 U	0.054 UJ	0.054 U	0.051 UJ	0.053 U
4,4'-DDD	0.3	ug/l	0.1 U	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.1 UJ	0.11 U
4,4'-DDE	0.2	ug/l	0.1 U	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.013 BJ	0.11 UJ	0.11 U	0.1 UJ	0.11 U
4,4'-DDT	0.2	ug/l	0.1 U	0.11 U	0.008 BJ	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.1 UJ	0.032 J
Dieldrin	0.004	ug/l	0.1 U	0.11 U	0.11 UJ	0.11 U	UJ	**0.015 J** *	0.011 UJ	0.11 U	0.1 UJ	0.11 U
Endosulfan I	NC	ug/l	0.051 U	0.056 U	0.053 UJ	0.053 U	0.053 UJ	0.053 U	0.053 UJ	0.033 J	0.051 UJ	0.053 U
Endosulfan II	NC	ug/l	0.051 U	0.11 U	0.006 BJ	0.11 U	0.11 UJ	0.11 U	0.099 J	0.04 J	0.1 UJ	0.038 J
Endosulfan Sulfate	NC	ug/l	0.1 U	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.1 UJ	0.11 U
Endrin	ND	ug/l	0.1 U	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.22 UJ	0.11 U	0.05 UJ	0.11 U
Endrin Aldehyde	5	ug/l	0.1 U	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.1 UJ	0.11 U
Endrin Ketone	5	ug/l	0.1 U	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.1 UJ	0.11 U
gamma-Chlordane	NC	ug/l	0.051 U	0.056 U	0.053 UJ	0.053 U	0.053 UJ	0.053 U	0.054 UJ	0.054 U	0.051 UJ	0.053 U
Heptachlor	0.04	ug/l	0.051 U	0.009 J	0.053 UJ	0.053 U	0.053 UJ	0.053 U	0.054 UJ	0.054 U	0.051 UJ	0.053 U
Heptachlor Epoxide	0.03	ug/l	0.051 U	0.007 J	0.053 UJ	0.053 U	0.053 UJ	0.053 U	0.054 UJ	**0.051 J** *	0.051 UJ	0.013 BJ
Lindane	0.05	ug/l	0.051 U	0.056 U	0.053 UJ	0.053 U	0.053 UJ	0.053 U	0.054 UJ	0.054 U	0.05 UJ	0.053 U
Methoxychlor	35	ug/l	0.51 U	0.56 U	0.53 UJ	0.53 U	0.53 UJ	0.53 U	0.22 J	0.54 U	0.5 UJ	0.53 U

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

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Database: NimoFulton_Chem.mdb (EQuIS)

Table 4-16
National Grid
Fulton, New York
Sediment Samples - BTEX

Chemical Name	NYSDEC Sediment Screening Value	Location ID / Sample Date	SD-2-10 5/24/2001	SD-2-22 5/24/2001	SD-3-25 5/24/2001	SD-4-0 5/24/2001	SD-7-5 5/24/2001	BK-01 5/24/2001	BK-02 5/24/2001	BK-03 5/24/2001	BK-04 5/24/2001
Benzene	0.06	mg/kg	0.012 U	0.014 U	0.013 U	0.012 U	0.015 U	0.01 U	0.01 U	0.01 U	0.01 U
Ethylbenzene	5.5	mg/kg	0.012 U	0.014 U	0.013 U	0.012 U	0.015 U	0.01 U	0.01 U	0.01 U	0.01 U
Toluene	1.5	mg/kg	0.012 U	0.014 U	0.013 U	0.012 U	0.015 U	0.01 U	0.01 U	0.01 U	0.01 U
Xylene (total)	1.2	mg/kg	0.012 U	0.014 U	0.013 U	0.012 U	0.015 U	0.01 U	0.01 U	0.01 U	0.01 U
Total BTEX	NC	mg/kg	---	---	---	---	---	---	---	---	---

Notes - Data Qualifier Definitions:
NC - No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
* **Exceedances (bold)** - concentration above criterion

Date Printed: 5/1/2006
File: SED-ALL-Format-hits 2-24-05.xls
Database: NimoFulton_Chem.mdb (EQuIS)

Table 4-17
National Grid
Fulton, New York
Sediment Samples - PAHs

Sediment data (mg/kg) compared to sediment screening values (ug/gOC).

Sample ID	Units	Human Health Bioaccumulation	Benthic Aquatic Life Acute Toxicity	Benthic Aquatic Life Chronic Toxicity	SD2-10	SC	SD2-22	SC	SD3-25	SC	SD4-0	SC	SD7-5	SC	BK1	SC
TOC	mg/kg				6251		5410		6031		12238		17018		8787	
TOC	%OC/kg				0.63		0.54		0.60		1.22		1.70		0.88	
foc	gOC/kg				6.25		5.41		6.03		12.24		17.02		8.79	
Benzo[a]anthracene	ug/gOC	1.3	94	12	0.17	27.2	0.059	10.9	0.062	10.3	0.13	10.6	0.088	5.2	ND	-
Benzo[a]pyrene	ug/gOC	1.3	94	12	0.15	24.0	0.052	9.6	ND		0.099	8.1	0.083	4.9	1.1	125.2
Benzo[b]fluoranthene	ug/gOC	1.3	94	12	0.19	30.4	0.081	15.0	0.058	9.6	0.14	11.4	0.14	8.2	ND	-
Benzo[g,h,i]perylene	ug/gOC	NC	NC	NC	0.087	13.9	ND	-	ND	-	0.067	5.5	0.062	3.6	ND	-
Benzo[k]fluoranthene	ug/gOC	1.3	94	12	0.072	11.5	ND	-	ND	-	0.054	4.4	ND	-	ND	-
Chrysene	ug/gOC	1.3	94	12	0.16	25.6	0.066	12.2	0.051	8.5	0.12	9.8	0.086	5.1	ND	-
Fluoranthene	ug/gOC	NC	NC	1020	0.26	41.6	0.11	20.3	0.093	15.4	0.25	20.4	0.14	8.2	ND	-
Indeno[1,2,3-cd]pyrene	ug/gOC	1.3	94	12	0.078	12.5	ND	-	ND	-	0.061	5.0	0.055	3.2	ND	-
Phenanthrene	ug/gOC	NC	NC	120	0.14	22.4	0.049	9.1	ND	-	0.14	11.4	ND	-	ND	-
Pyrene	ug/gOC	NC	8775	961	0.28	44.8	0.13	24.0	0.092	15.3	0.24	19.6	0.17	10.0	ND	-

Notes:

Technical Guidance for Screening Contaminated Sediments. NYSDEC 1999.

Fresh water screenig values used.

SC = screening concentration which normalizes concentration presented in units of mg/Kg to screening values presented in units of ug/gOC consistent with guidance values. For example, to evaluate benzo[a]anthracene in SD2-10, the sample concentration (170 ug/Kg) is divided by the fraction of organic carbon (foc, 6.25 gOC/kg) to obtain a SC of 27 ug/gOC.
TOC = total organic carbon; foc = fraction of organic carbon.

Table 4-18
National Grid
Fulton, New York
Sediment and Surface Soil Samples - Total Organic Carbon

Sample Location	Sample Date	TOC Concentration (ppm)
Sediment		
BK1	5/24/2001	8787
SD2-10	5/24/2001	6251
SD2-22	5/24/2001	5410
SD3-25	5/24/2001	6031
SD4-0	5/24/2001	12238
SD7-5	5/24/2001	17018
Surface Soils		
SS-10	5/14/2001	13629
SS-11	5/14/2001	62855
SS-12	5/14/2001	39093
SS-13	5/14/2001	39538
SS-14	5/14/2001	56457
SS-15	5/14/2001	42450
SS-16	5/14/2001	10332
SS-17	5/14/2001	26032
SS-18	4/16/2002	17238
SS-19	4/16/2002	29299
SS-20	4/16/2002	22385
SS-21	4/16/2002	30236
SS-22	4/16/2002	39434
SS-23	4/16/2002	15211
SS-24	4/16/2002	26258
SS-25	4/16/2002	17801
SS-26	4/16/2002	23825
SS-27	4/16/2002	11840

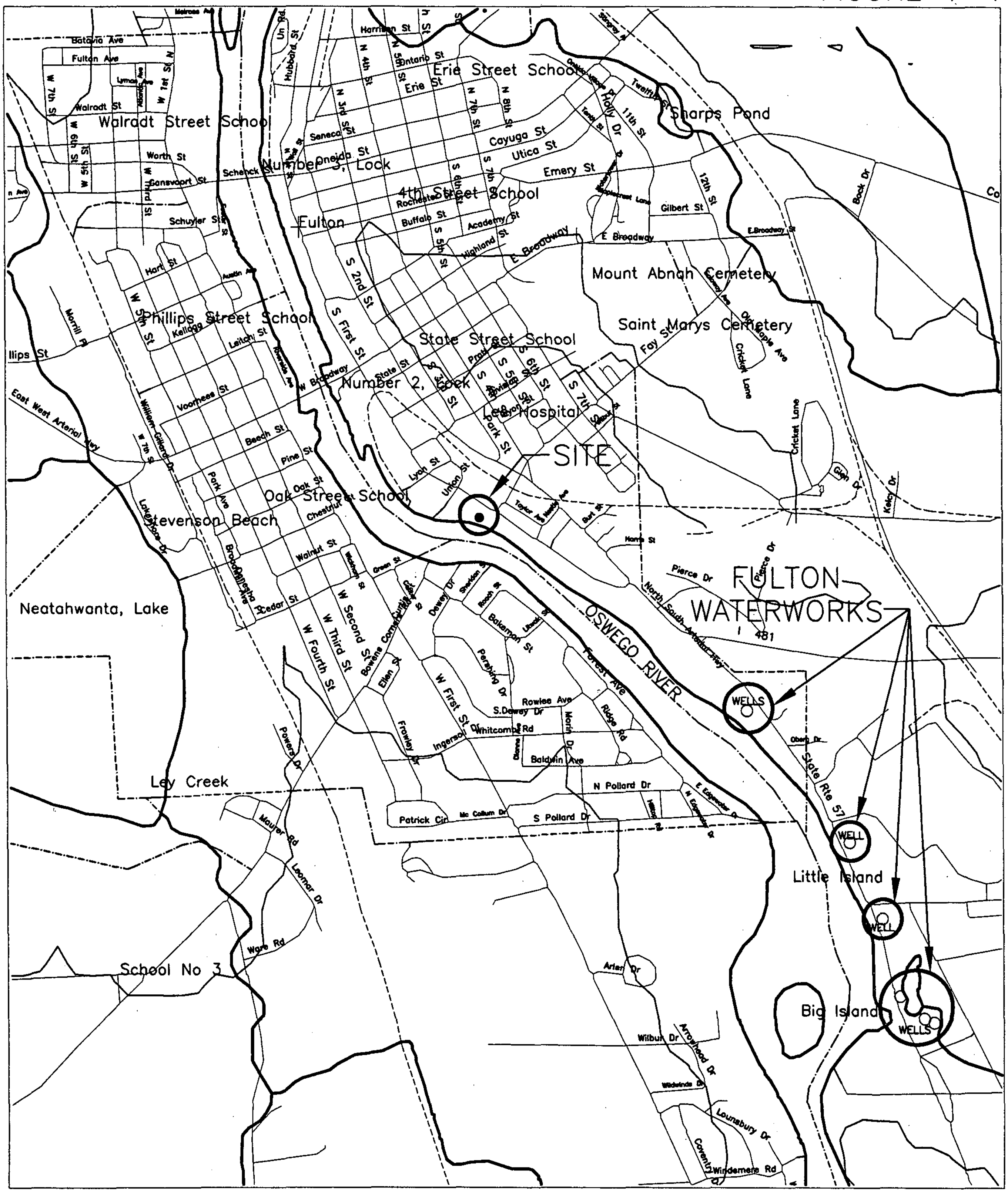
Table 4-19
National Grid
Fulton, New York
Storm sewer water sampling results

Chemical Name	Location ID / Sample Date	Storm - Upgradient 6/20/01	Storm - Downgradient 6/20/01
Volatile Organic Compounds			
Benzene	ug/l	<0.50	1.6
Ethylbenzene	ug/l	<0.50	<0.50
Toluene	ug/l	<0.50	0.69
Xylene (total)	ug/l	<0.50	0.68
Total BTEX	ug/l	---	2.97
Semivolatile Organic Compounds			
Acenaphthene	ug/l	<10.	<10.
Acenaphthylene	ug/l	<10.	<10.
Anthracene	ug/l	<10.	<10.
Benzo[a]anthracene**	ug/l	<10.	<10.
Benzo[a]pyrene**	ug/l	<10.	<10.
Benzo[b]fluoranthene**	ug/l	<10.	<10.
Benzo[g,h,i]perylene	ug/l	<10.	<10.
Benzo[k]fluoranthene**	ug/l	<10.	<10.
Chrysene**	ug/l	<10.	<10.
Carbazole	ug/l	<10.	<10.
2-Chloronaphthalene	ug/l	<10.	<10.
Dibenz[a,h]anthracene**	ug/l	<10.	<10.
Dibenzofuran	ug/l	<10.	<10.
2,4-Dimethylphenol	ug/l	<10.	<10.
2,4-Dinitrotoluene	ug/l	<10.	<10.
Fluoranthene	ug/l	<10.	<10.
Fluorene	ug/l	<10.	<10.
Indeno[1,2,3-cd]pyrene**	ug/l	<10.	<10.
2-Methylnaphthalene	ug/l	<10.	<10.
4-Methylphenol	ug/l	<10.	<10.
2-Methylphenol	ug/l	<10.	<10.
Naphthalene	ug/l	<10.	<10.
Phenanthrene	ug/l	<10.	<10.
Phenol	ug/l	<10.	<10.
Pyrene	ug/l	<10.	<10.
Total CPAH	ug/l	---	---
Total PAH	ug/l	---	---

Notes - Data Qualifier Definitions:
NC-No criteria established, U - Not Detected, J - Estimated,
B- Blank contamination, --- Not Analyzed/No results.
*** Exceedances (bold)** - concentration above criterion

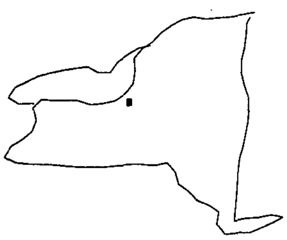
Date Printed: 4/28/2006
File: Table 4-19 Storm sewer water sampling results.xls

FIGURE 1-1



NATIONAL GRID
SOUTH FIRST STREET SITE
FULTON, NEW YORK

SITE LOCATION MAP



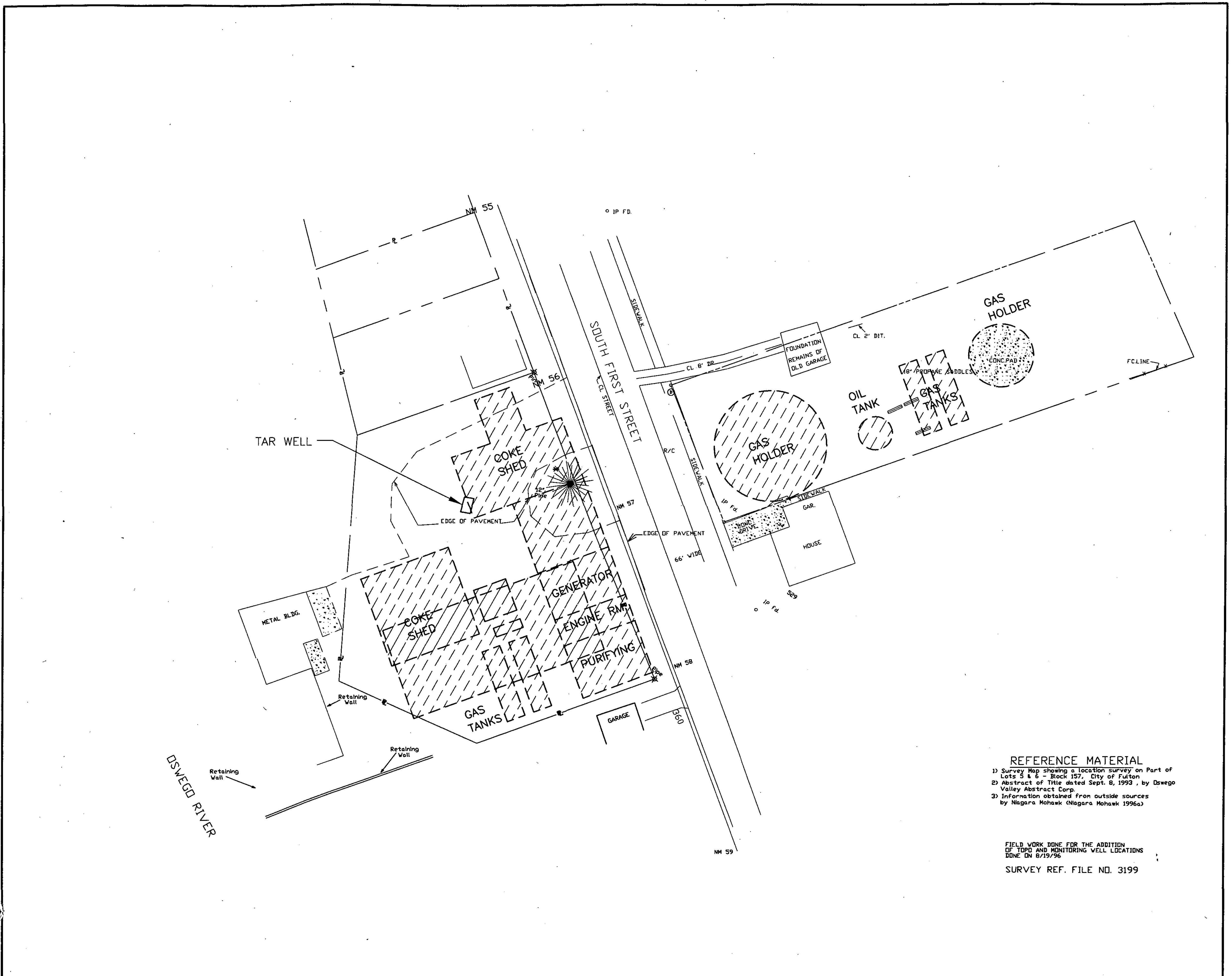
QUADRANGLE LOCATION

2000 0 2000
SCALE IN FEET

O'BRIEN & GERE ENGINEERS, INC.

FILE NO. 1118-35165.002

FIGURE 1–3



LEGEND

—PL- - - — PROPERTY LINES

HISTORICAL STRUCTURES

NATIONAL GRID
SOUTH FIRST STREET SITE
FULTON, NEW YORK

HISTORICAL FEATURES

1"=50' 50 0 50

FILE NO. 1118.35165.004

FEBRUARY 2005

O'BRIEN & GERE ENGINEERS, INC.

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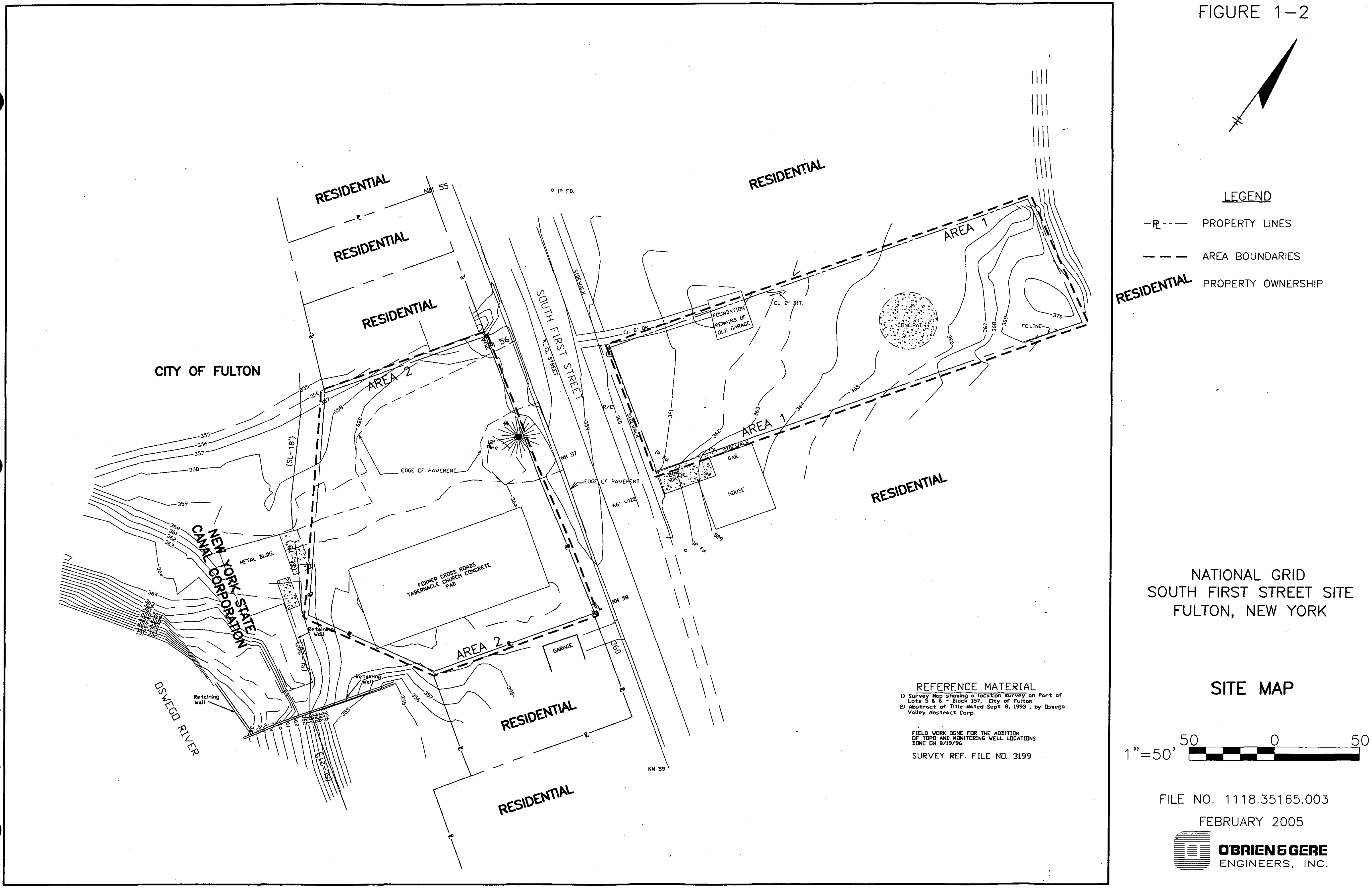

FIGURE 1-2

NATIONAL GRID
SOUTH FIRST STREET SITE
FULTON, NEW YORK

SITE MAP

FILE NO. 1118.35165.003

FEBRUARY 2005

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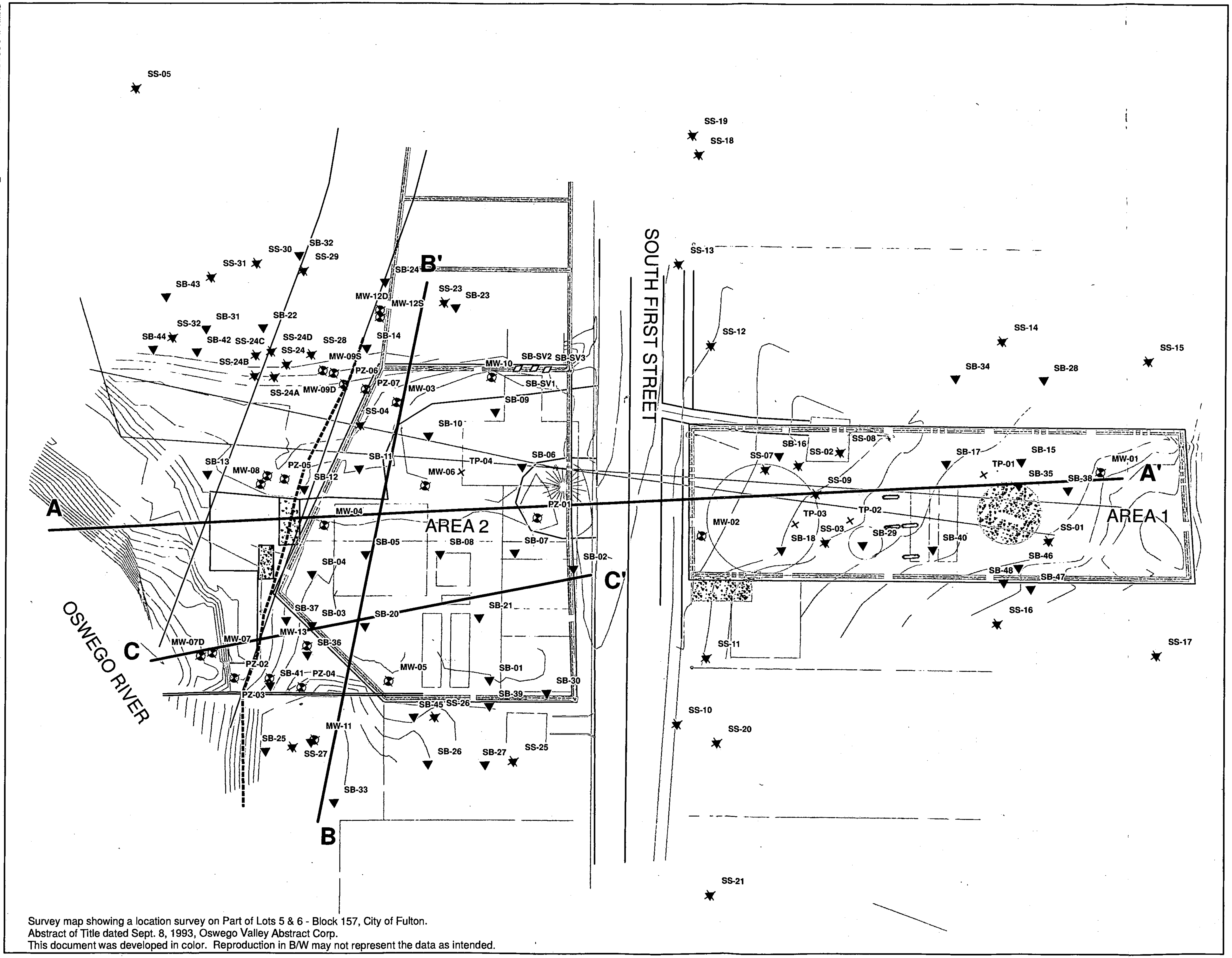
FIGURE 2-1



LEGEND

- CROSS SECTION LINES
- APPROX CANAL BOUNDARY
- SEWER LINE

Sample Locations

- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SOIL VAPOR
- SURFACE SOIL
- TEST PIT

NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

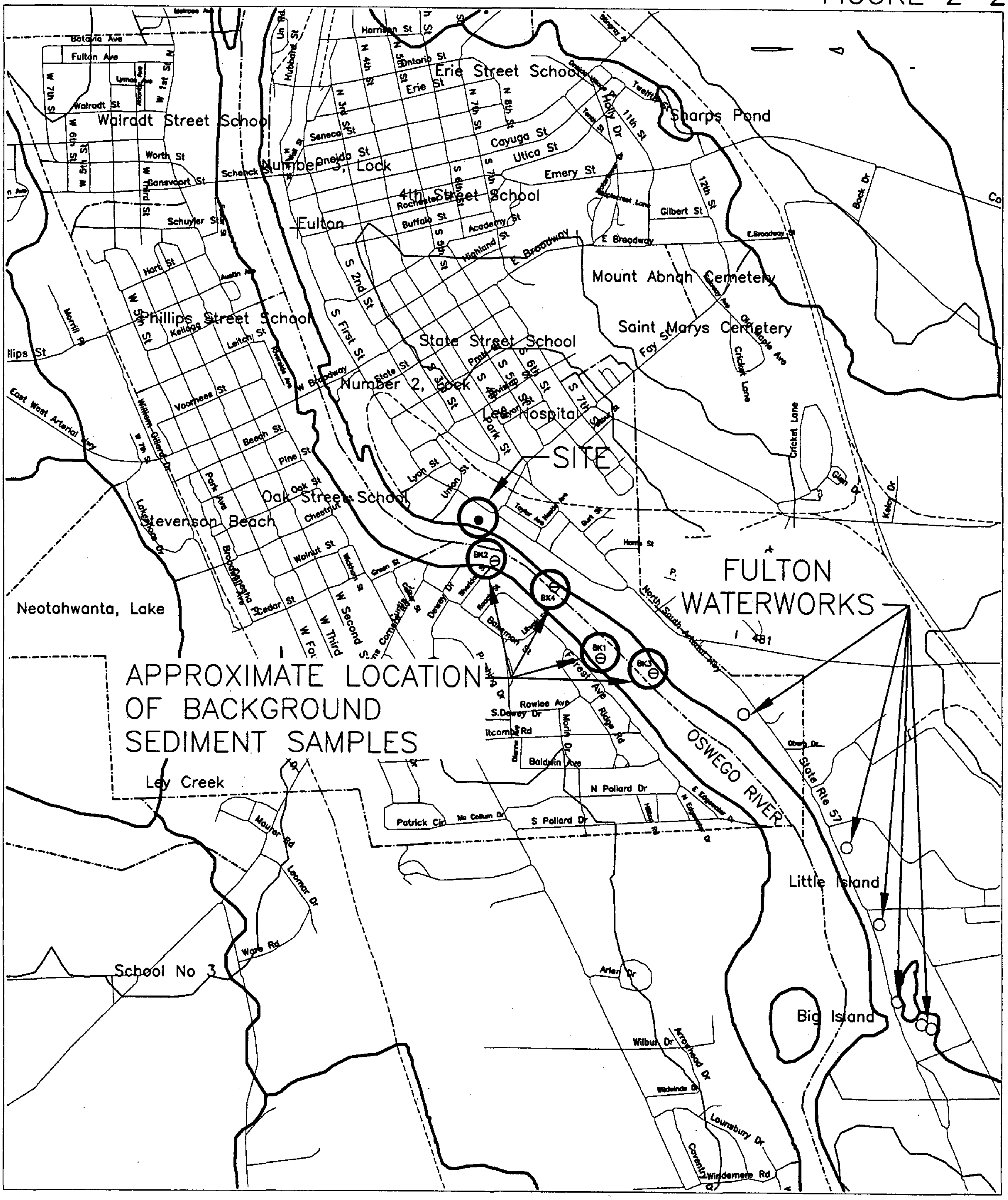
SAMPLE LOCATIONS

0 25 50 100
Feet

MARCH 2005
1118.35165

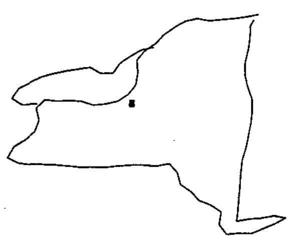
O'BRIEN & GERE ENGINEERS, INC.

FIGURE 2-2



NATIONAL GRID
SOUTH FIRST STREET SITE
FULTON, NEW YORK

BACKGROUND SEDIMENT SAMPLE LOCATIONS



QUADRANGLE LOCATION

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SCALE IN FEET

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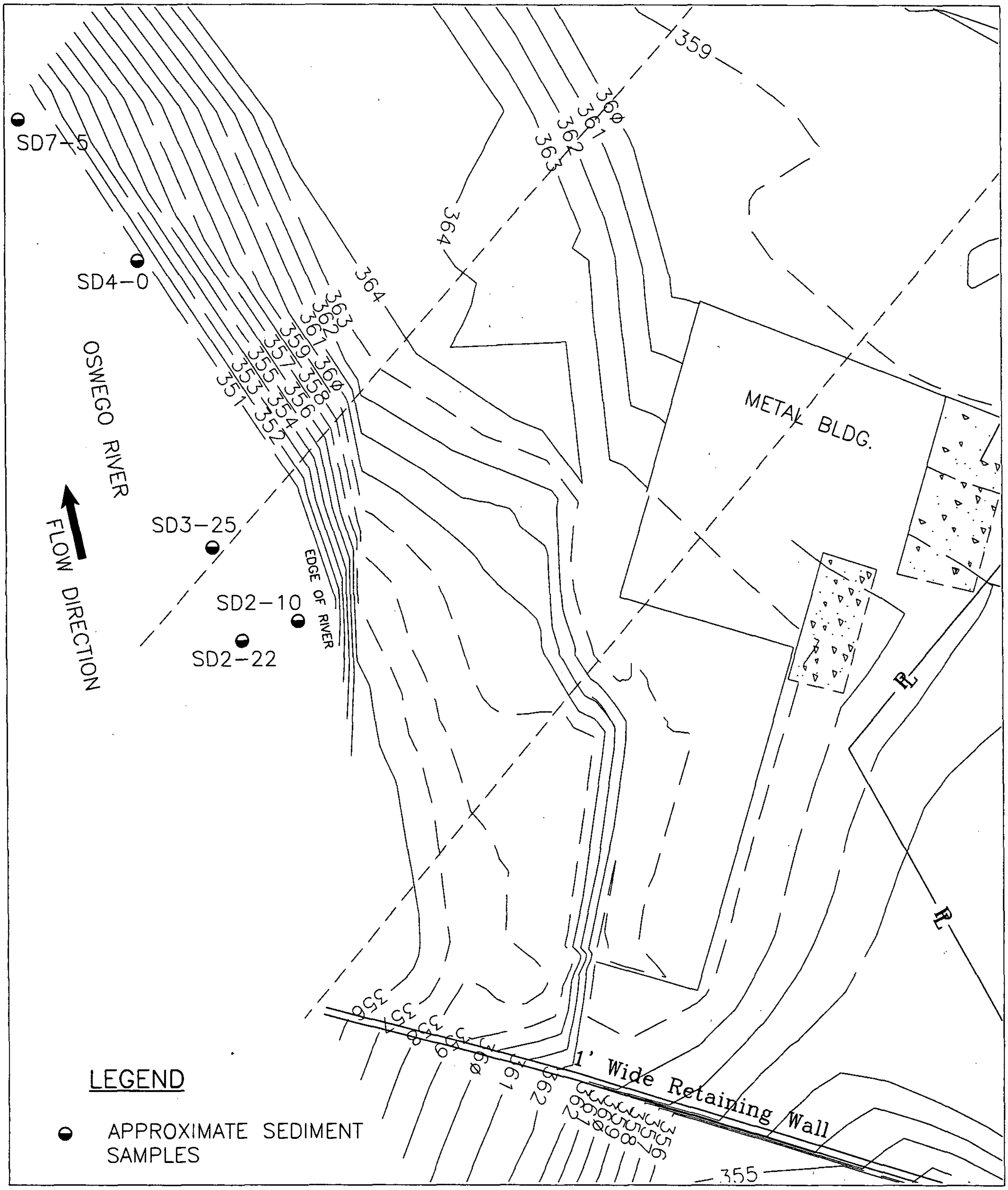
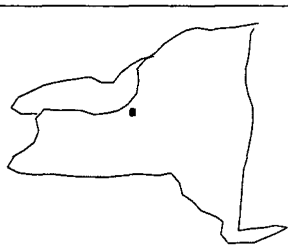
FILE NO. 1118-35165.006



NATIONAL GRID
SOUTH FIRST STREET SITE
FULTON, NEW YORK

SEDIMENT SAMPLE LOCATIONS



0 20 40

SCALE IN FEET

FILE NO. 1118-35165.006

O'BRIEN & GERE ENGINEERS, INC.

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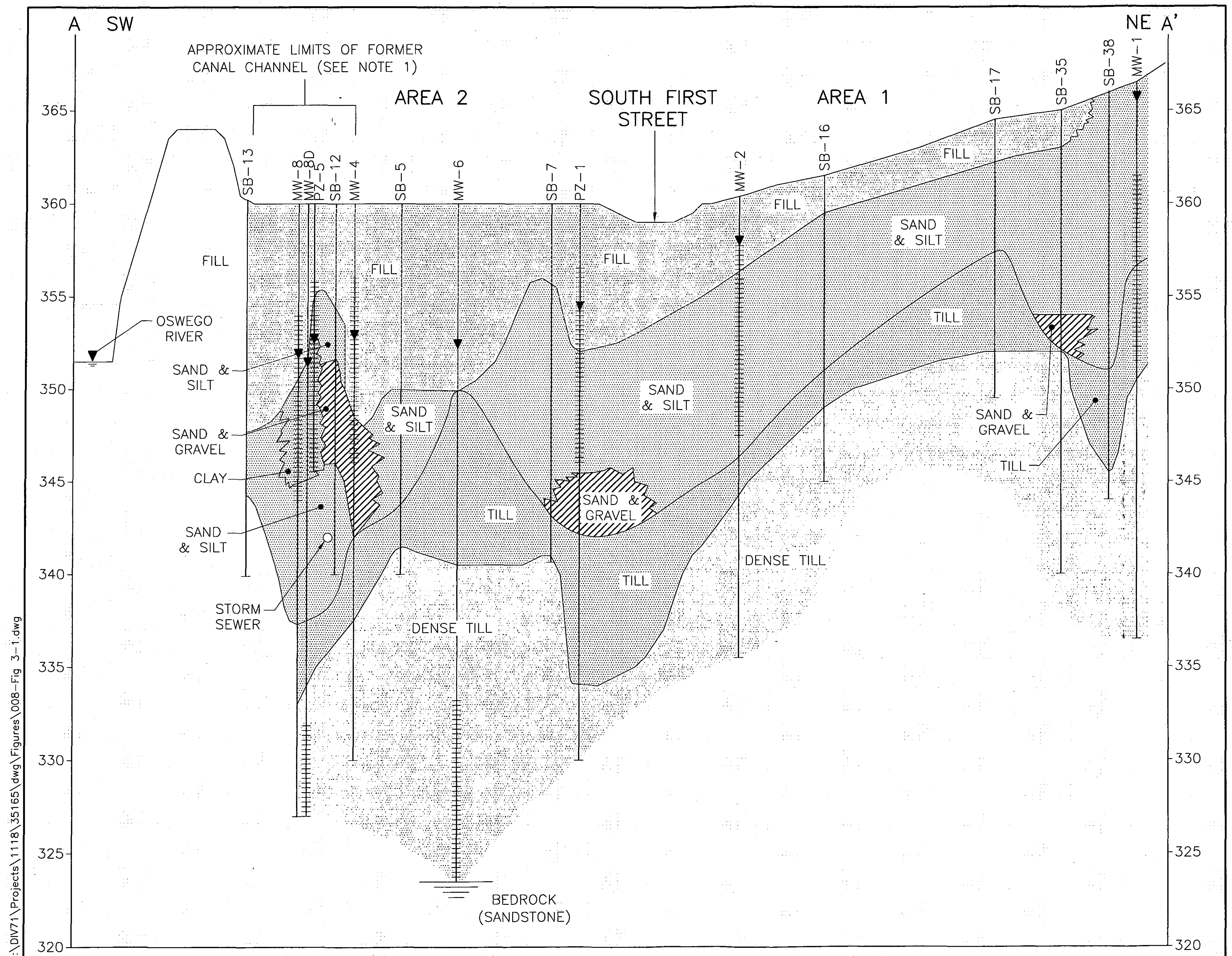
FIGURE 3-1



LEGEND

WELL SCREEN

▼ GROUND WATER ELEVATION (MARCH 31, 2006)

NOTE:

1. CANAL LIKELY DID NOT HAVE CONSTRUCTED WALLS ADJACENT TO THE SITE.
2. OSWEGO RIVER WATER ELEVATION IS APPROXIMATE.
3. POSITION AND DEPTH OF STORM SEWER IS APPROXIMATE.

NATIONAL GRID
SOUTH FIRST STREET SITE
FULTON, NEW YORK

CROSS SECTION A–A'

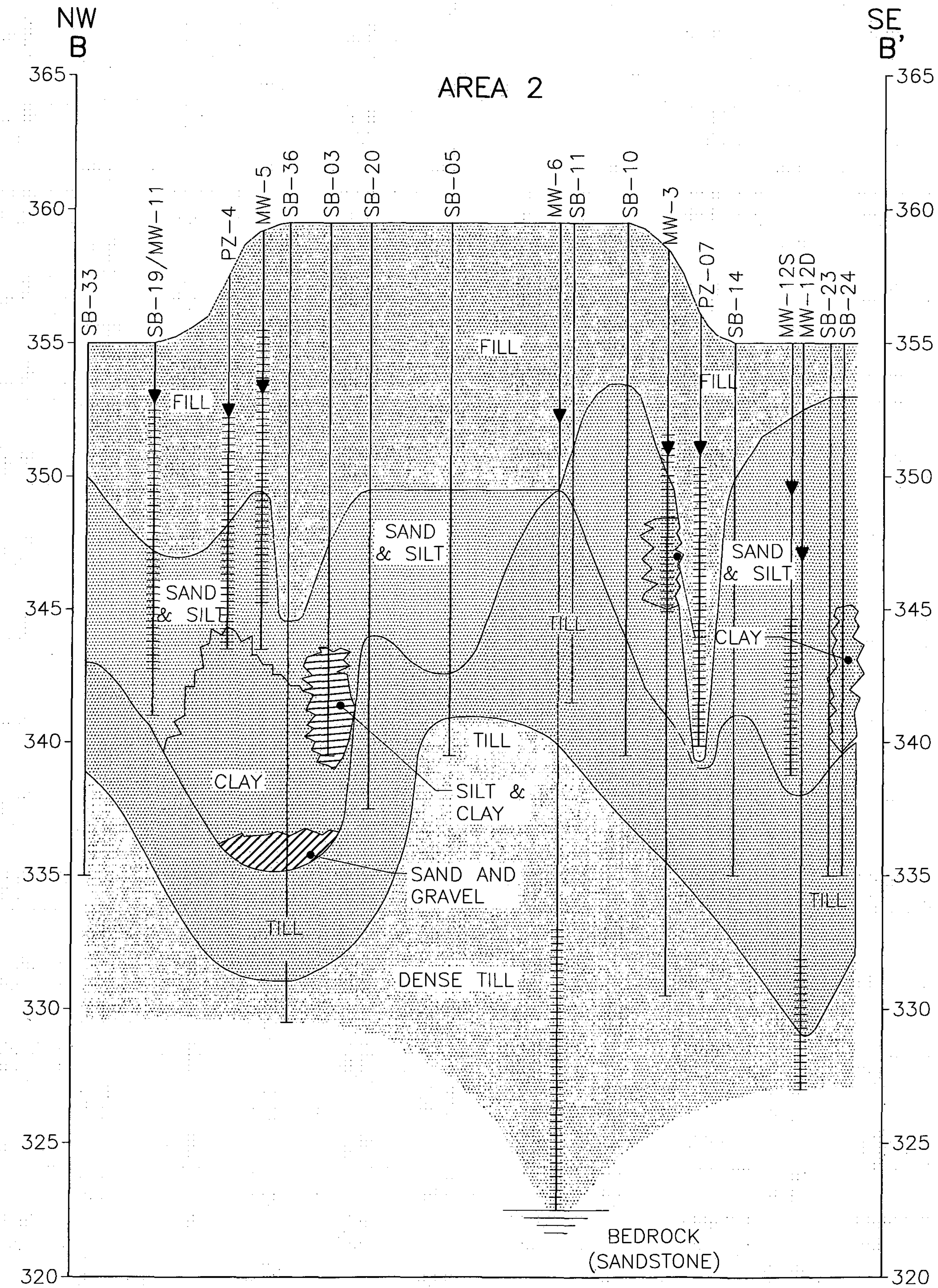
50 0 50
1"=50'
HORIZONTAL SCALE IN FEET

5 0 5
1"=5'
VERTICAL SCALE IN FEET

FILE NO. 1118.35165.008
APRIL 2006

O'BRIEN & GERE ENGINEERS INC.

FIGURE 3-2



LEGEND

WELL SCREEN

▼ GROUND WATER ELEVATION (MARCH 31, 2006)

NATIGNAL GRID
SOUTH FIRST STREET SITE
FULTON, NEW YORK

CROSS SECTION
B-B'

1"=50' 50 0 50
HORIZONTAL SCALE IN FEET

1"=5' 5 0 5
VERTICAL SCALE IN FEET

FILE NO. 1118.35165.009
APRIL 2006

O'BRIEN & GERE ENGINEERS INC.

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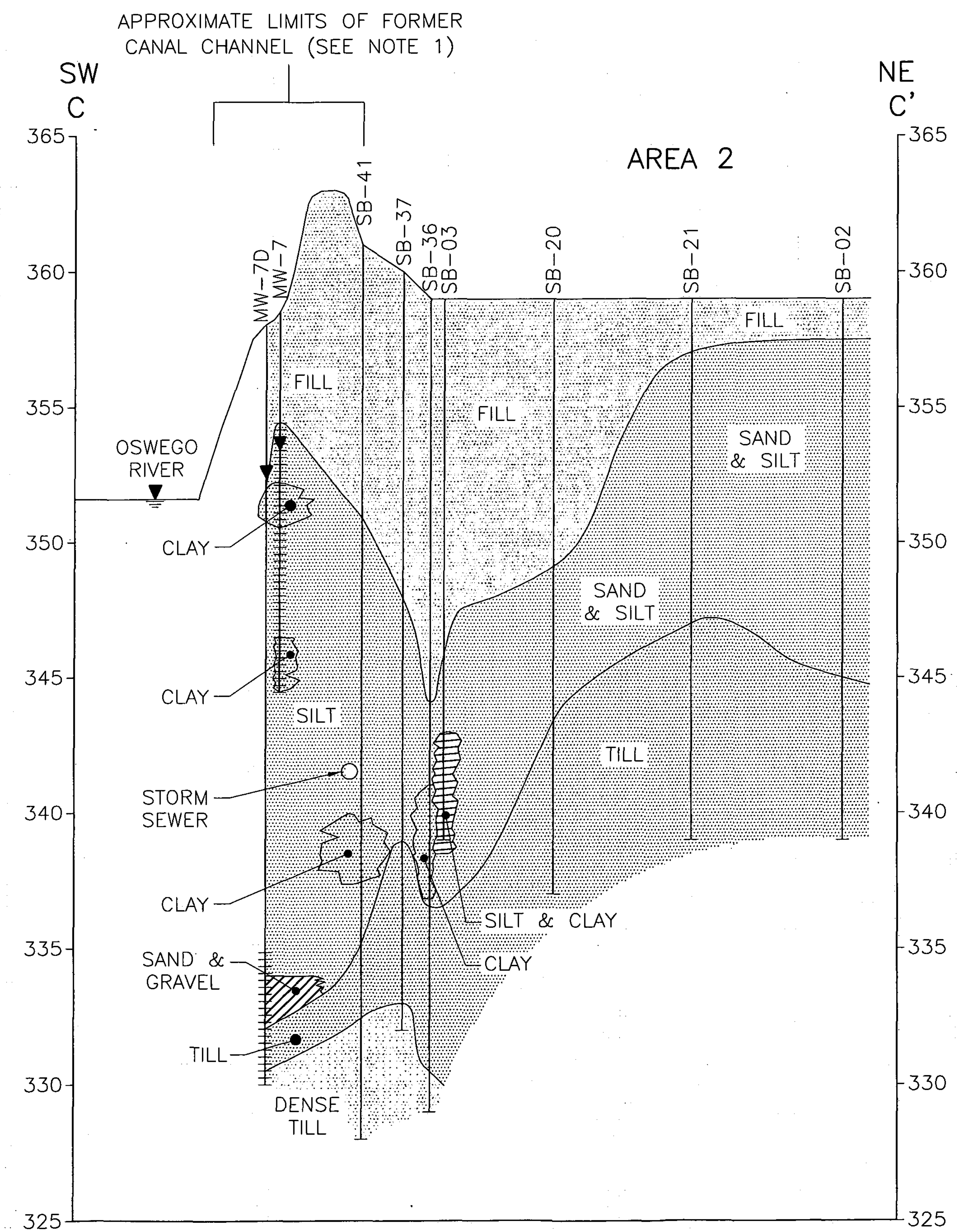
FIGURE 3-3



LEGEND

WELL SCREEN

▼ GROUND WATER ELEVATION (MARCH 31, 2006)

NOTE:

1. CANAL LIKELY DID NOT HAVE CONSTRUCTED WALLS ADJACENT TO THE SITE.
2. OSWEGO RIVER WATER ELEVATION IS APPROXIMATE.
3. POSITION AND DEPTH OF STORM SEWER IS APPROXIMATE.

NATIONAL GRID
SOUTH FIRST STREET SITE
FULTON, NEW YORK

CROSS SECTION
C–C'

1"=50' 50 0 50
HORIZONTAL SCALE IN FEET

1"=5' 5 0 5
VERTICAL SCALE IN FEET

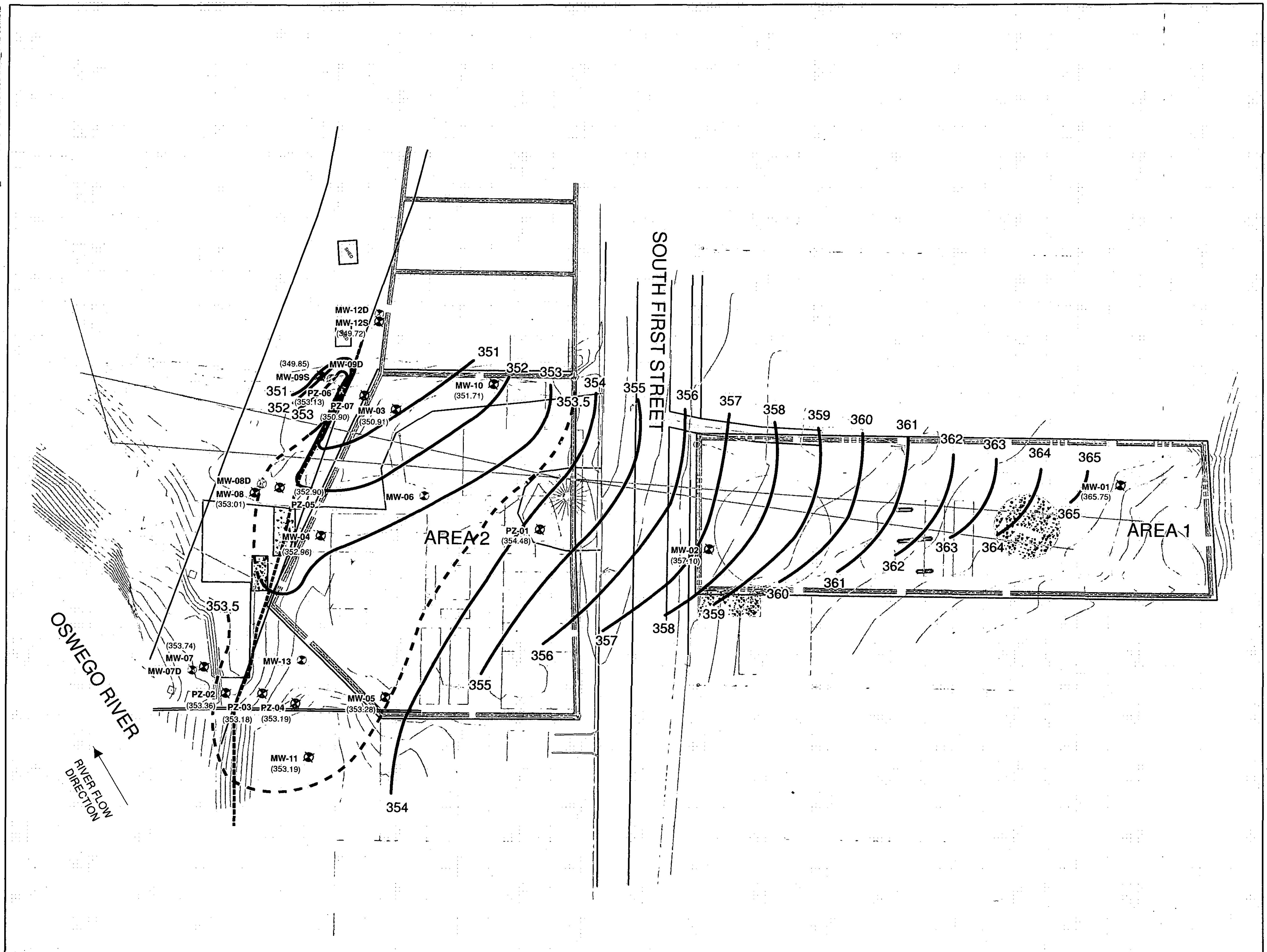
FILE NO. 1118.35165.010
APRIL 2006

O'BRIEN & GERE ENGINEERS INC.

I:\DIV71\Projects\1118\35165\dwg\Figures\010-Fig 3-3.dwg

T:\1118_NIMO\FULTON\MXD\35165\FINAL_4-12-06.MXD

FIGURE 3-4



Symbols in color indicate well was used to create ground water elevation contours.
This document was developed in color. Reproduction in B/W may not represent the data as intended.

LEGEND

- MONITORING WELL
- PIEZOMETER
- ▲ SOIL BORING
- ◊ SOIL VAPOR
- SURFACE SOIL
- + TEST PIT
- APPROX BOUNDARY OF FORMER CANAL
- SEWER LINE
- GROUND WATER CONTOUR
- GROUND WATER CONTOUR ESTIMATED

NOTES:

(365.75) SHALLOW GROUND WATER ELEVATION (FT, NAVD 1988)

NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

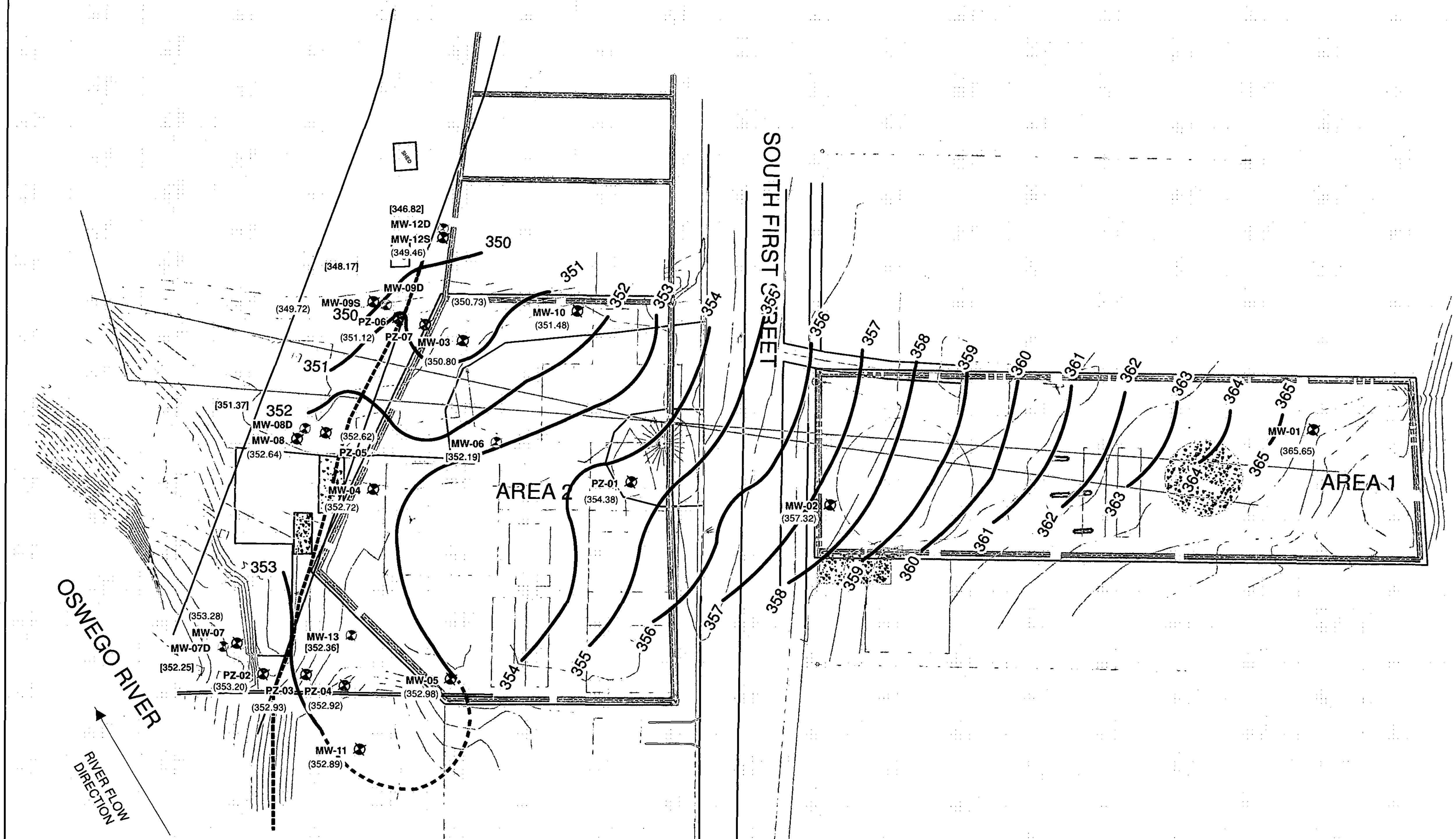
SHALLOW GROUND WATER ELEVATION CONTOURS (11/5/05)

0 25 50 100
Feet

April 2006
1118.35165

O'BRIEN & GERE ENGINEERS, INC.

FIGURE 3-5



Symbols in color indicate well was used to create ground water elevation contours.
This document was developed in color. Reproduction in B/W may not represent the data as intended.

LEGEND

- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SOIL VAPOR
- SURFACE SOIL
- TEST PIT
- APPROX BOUNDARY OF FORMER CANAL
- SEWER LINE
- GROUND WATER CONTOUR
- ESTIMATED GROUND WATER CONTOUR

NOTES:

(365.75) SHALLOW GROUND WATER ELEVATION (FT, NAVD 1988)

[365.75] DEEP GROUND WATER ELEVATION (FT, NAVD 1988)

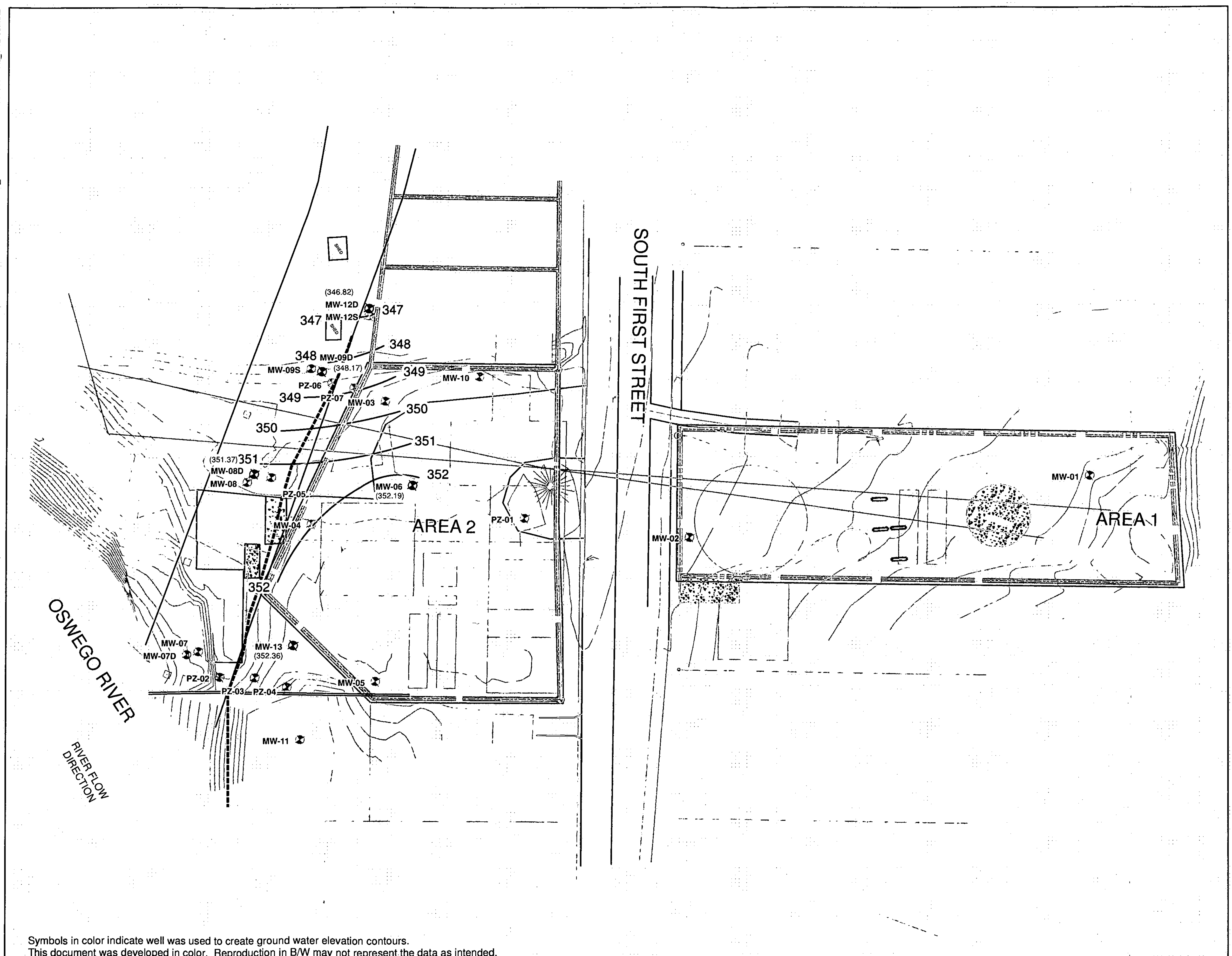
NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

SHALLOW GROUND WATER ELEVATION CONTOURS (3/31/06)

0 25 50 100
Feet

April 2006
1118.35165

O'BRIEN & GERE ENGINEERS, INC.



Symbols in color indicate well was used to create ground water elevation contours.
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FIGURE 3-6

LEGEND

- GROUND WATER CONTOUR
- APPROX BOUNDARY OF FORMER CANAL
- SEWER LINE
- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SOIL VAPOR
- SURFACE SOIL
- TEST PIT

NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

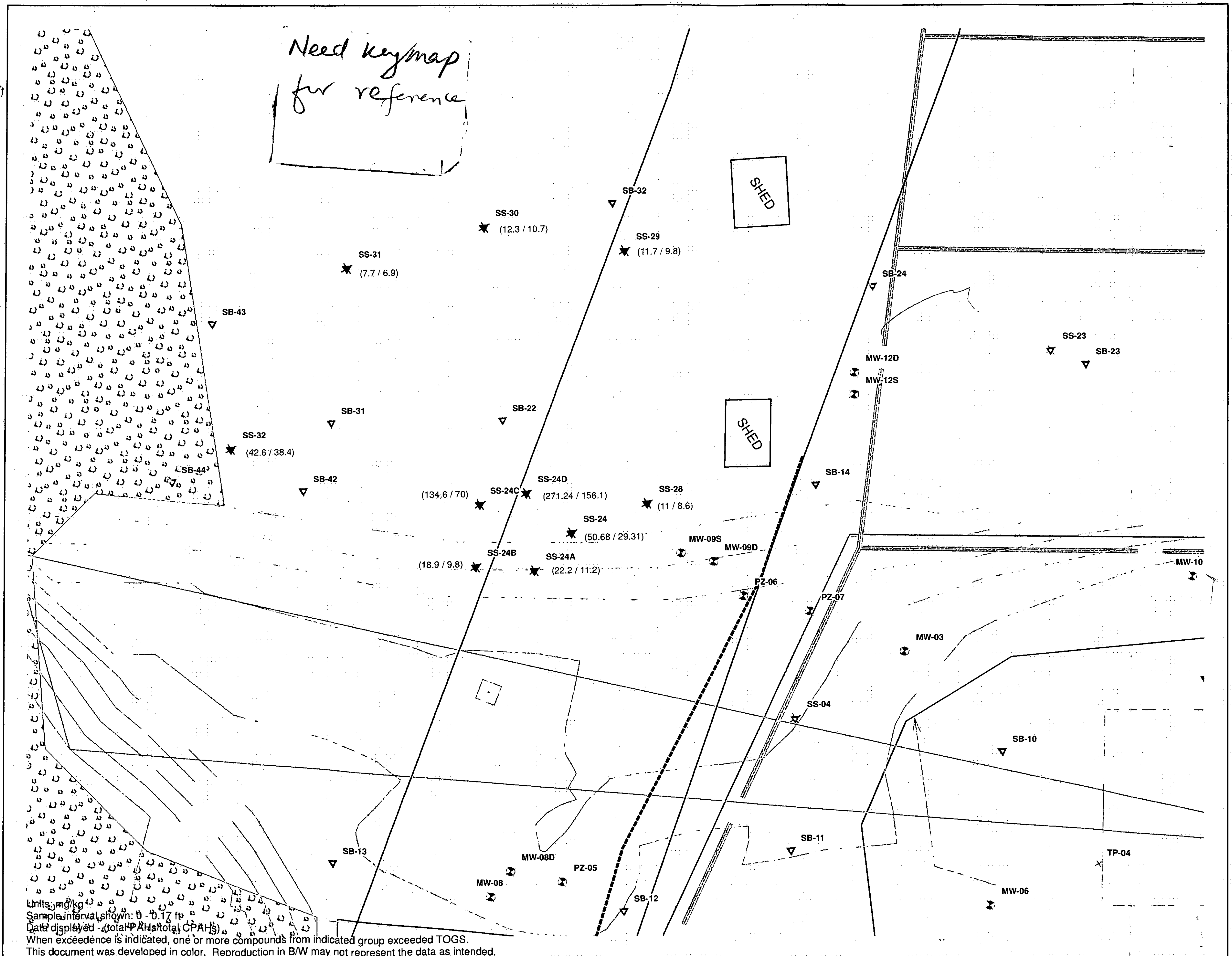
DEEP GROUND WATER ELEVATION CONTOURS (3/31/06)

0 25 50 100
Feet

April 2006
1118.35165

O'BRIEN & GERE ENGINEERS, INC.

FIGURE 4-1



LEGEND

- APPROXIMATE TREE LINE
- APPROX BOUNDARY OF FORMER CANAL
- SEWER LINE

Sample Locations

- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SOIL VAPOR
- SURFACE SOIL
- TEST PIT

NOTES: SEE FOOTNOTE

NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

SURFACE SOIL AREA 2 OFFSITE PAH/CPAH RESULTS

0 10 20 40
Feet

April 2006
1118.35165

O'BRIEN & GERE ENGINEERS, INC.

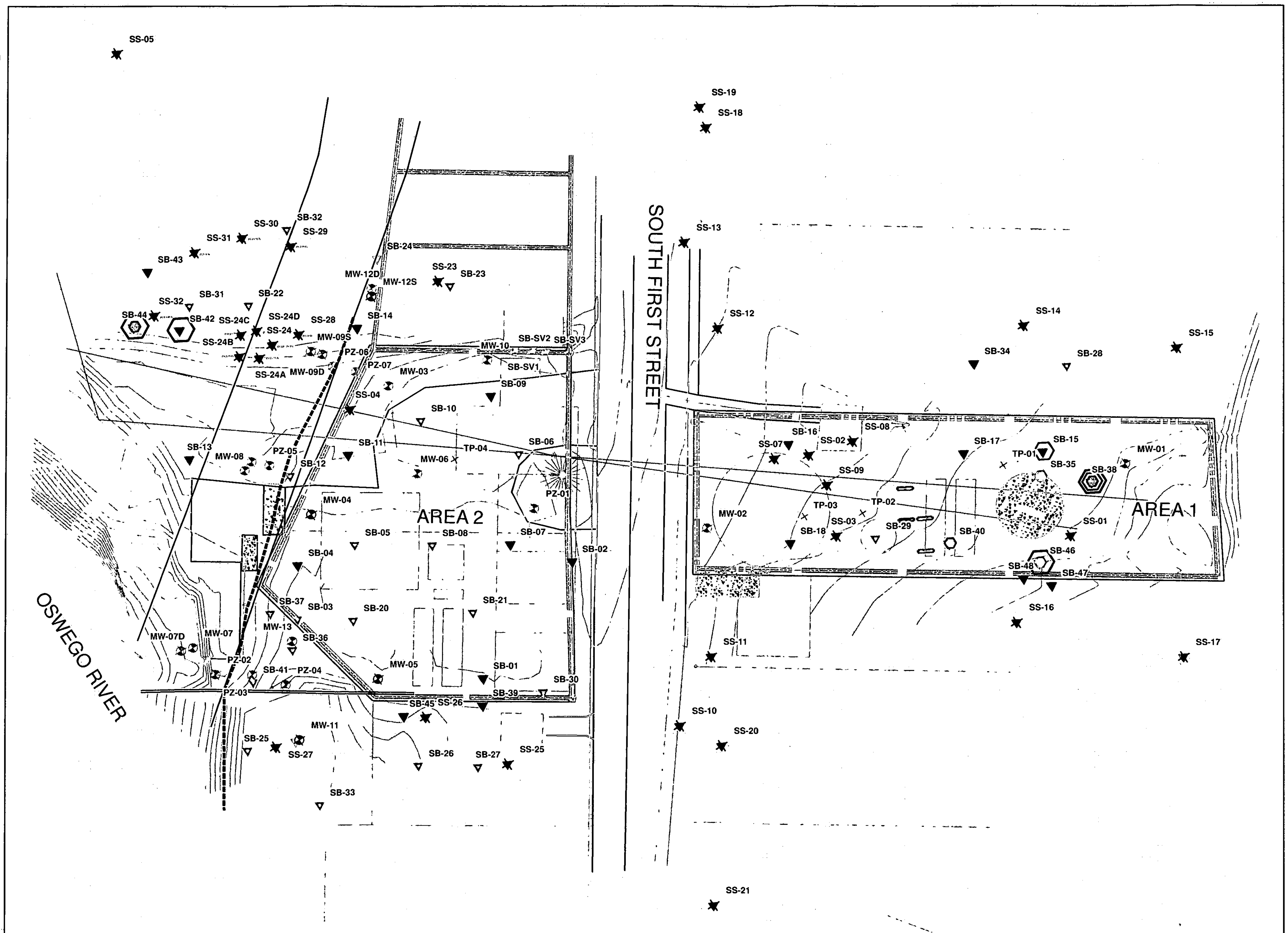


FIGURE 4-2

LEGEND

- APPROX CANAL BOUNDARY
- SEWER LINE
- PAHs >= 500
- BTEX ABOVE CRITERIA
- UV POSITIVE OR NAPL
- STAIN OR SHEEN

SAMPLE TYPE

- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SURFACE SOIL
- TEST PIT

NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

**SOIL SAMPLE LOCATIONS
0-4 FT BGS
TOTAL PAHs >= 500 PPM
BTEX ABOVE CRITERIA**

0 25 50 100
Feet

April 2006
1118.35165

O'BRIEN & GERE ENGINEERS, INC.

Color sample locations indicate analytical data is available for this interval.
Gray sample locations indicate no analytical data are available for this interval
When both UV/NAPL and staining are present, only UV/NAPL is marker on map.
Sheen is only indicated when observed above the water table.
This document was developed in color. Reproduction in B/W may not represent the data as intended.

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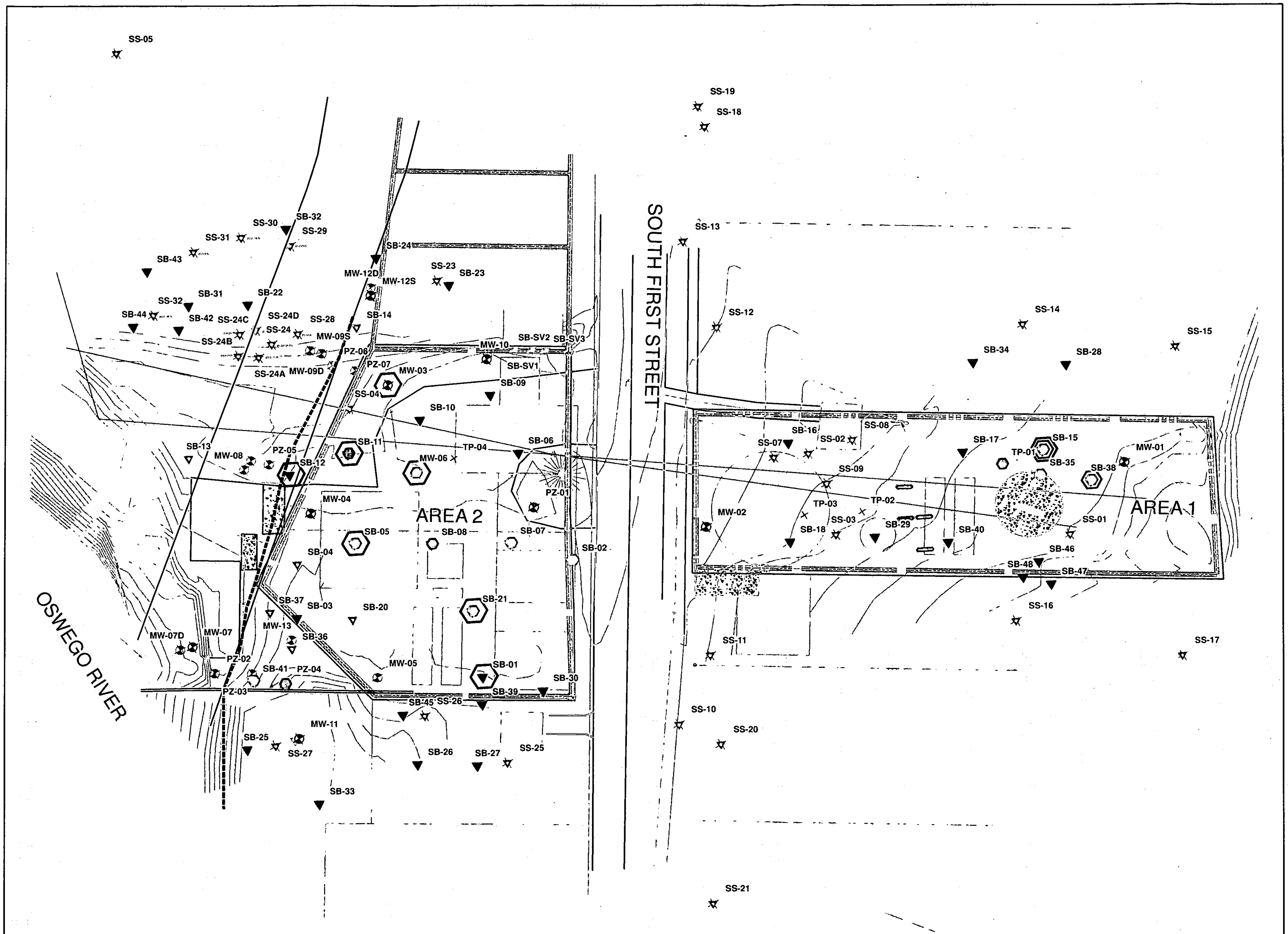


Color sample locations indicate analytical data is available for this interval.
Gray sample locations indicate no analytical data are available for this interval
When both UV/NAPL and staining are present, only UV/NAPL is marker on map.
Sheen is only indicated when observed above the water table.
This document was developed in color. Reproduction in B/W may not represent the data as intended.

FIGURE 4-3

LEGEND

- APPROX CANAL BOUNDARY
- SEWER LINE
- PAHs >= 500
- BTEX ABOVE CRITERIA
- UV POSITIVE OR NAPL
- STAIN OR SHEEN

SAMPLE TYPE

- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SURFACE SOIL
- TEST PIT

NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

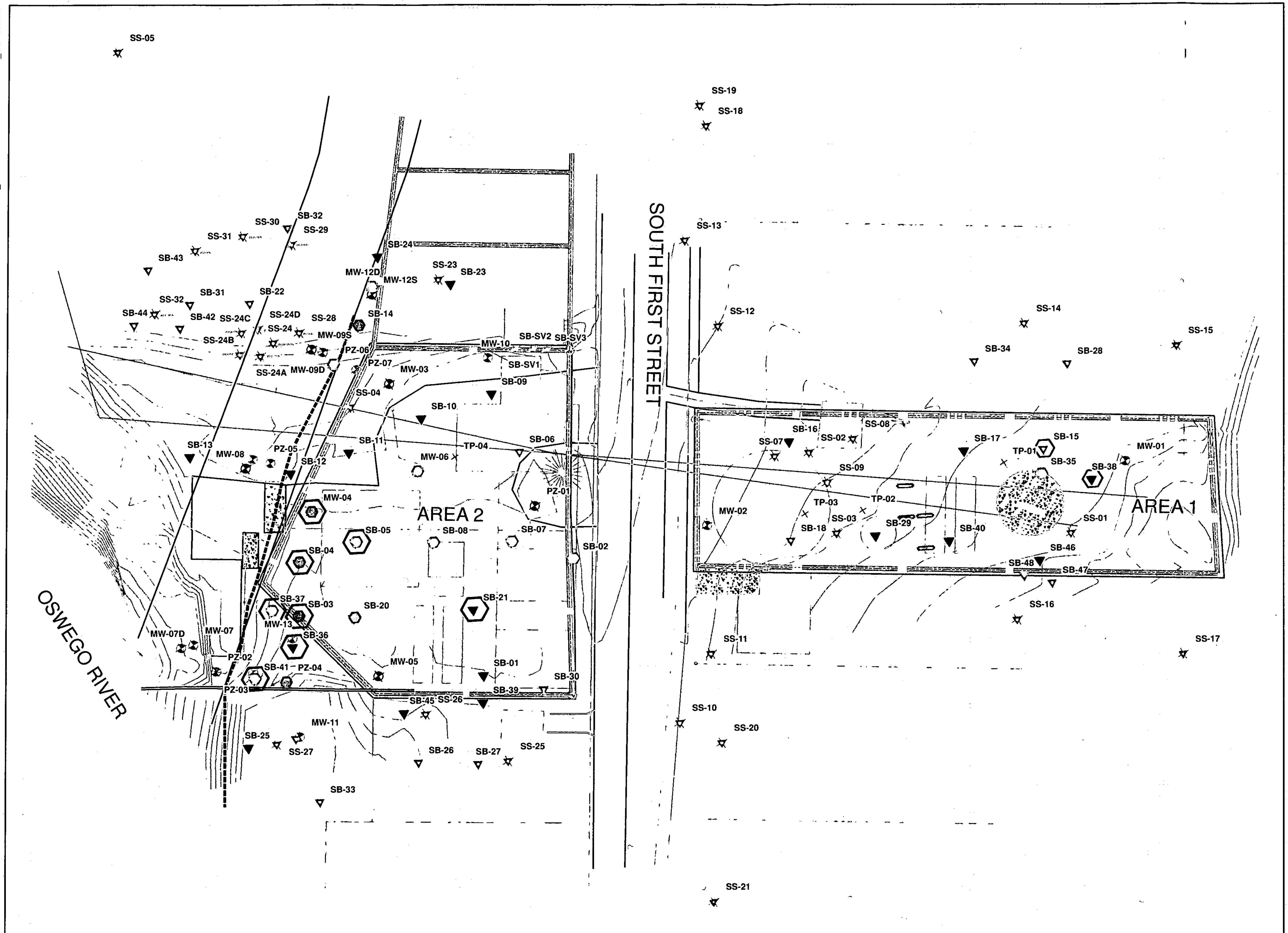
SOIL SAMPLE LOCATIONS
4-8 FT BGS
TOTAL PAHs >= 500 PPM
BTEX ABOVE CRITERIA

0 25 50 100
Feet

April 2006
1118.35165

O'BRIEN & GERE ENGINEERS, INC.

FIGURE 4-4



Color sample locations indicate analytical data is available for this intervai.
Gray sample locations indicate no analytical data are available for this interval
When both UV/NAPL and staining are present, only UV/NAPL is marker on map.
Sheen is only indicated when observed above the water table.
This document was developed in color. Reproduction in B/W may not represent the data as intended.

LEGEND

- APPROX CANAL BOUNDARY
- SEWER LINE
- PAHs >= 500
- BTEX ABOVE CRITERIA
- UV POSITIVE OR NAPL
- STAIN OR SHEEN

SAMPLE TYPE

- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SURFACE SOIL
- TEST PIT

NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

SOIL SAMPLE LOCATIONS
8-12 FT BGS
TOTAL PAHs >= 500 PPM
BTEX ABOVE CRITERIA

0 25 50 100
Feet

April 2006
1118.35165

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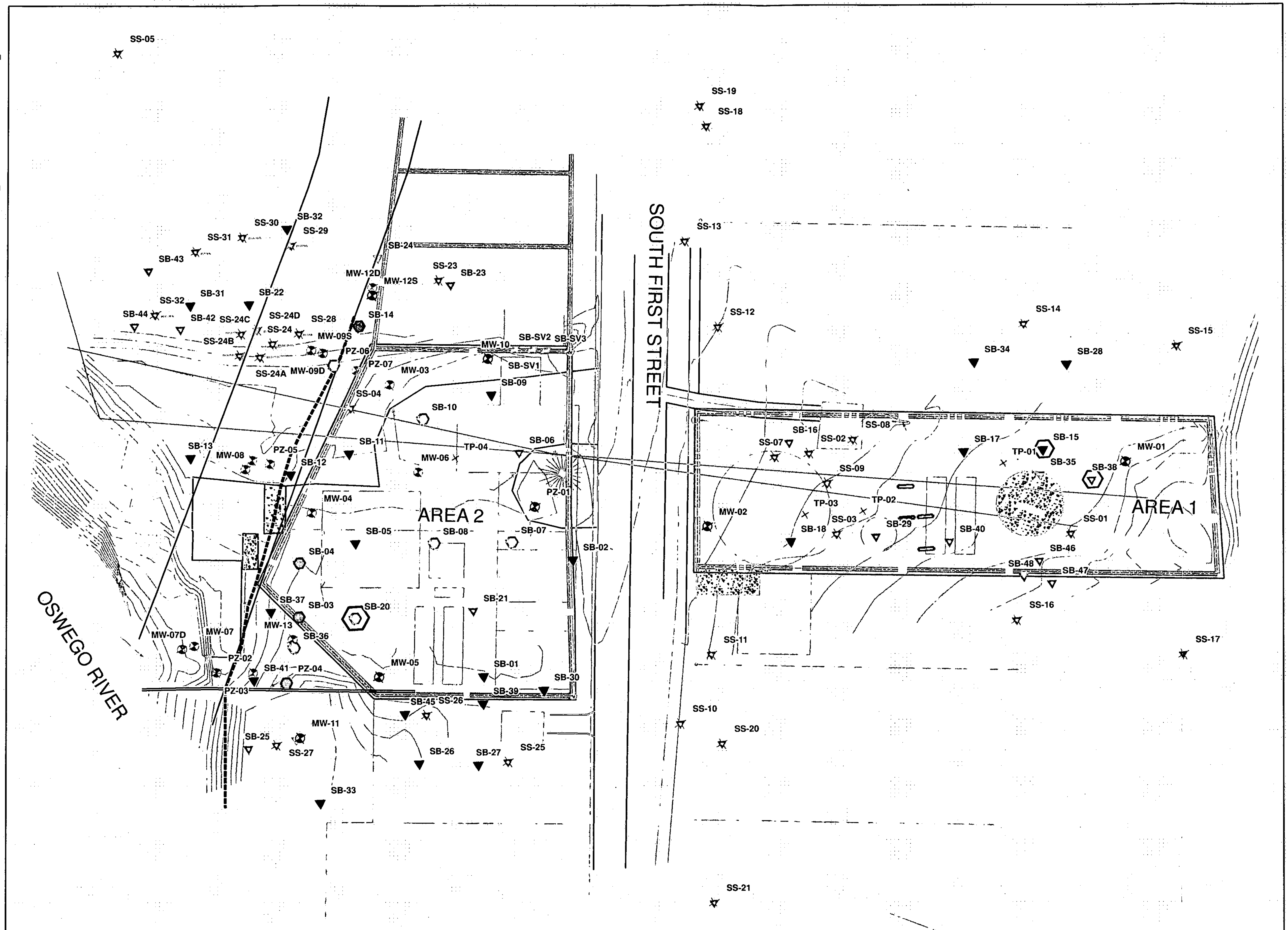


Color sample locations indicate analytical data is available for this interval.
Gray sample locations indicate no analytical data are available for this interval
When both UV/NAPL and staining are present, only UV/NAPL is marker on map.
Sheen is only indicated when observed above the water table.
This document was developed in color. Reproduction in B/W may not represent the data as intended.

FIGURE 4-5

LEGEND

- APPROX CANAL BOUNDARY
- SEWER LINE
- PAHs >= 500
- BTEX ABOVE CRITERIA
- UV POSITIVE OR NAPL
- STAIN OR SHEEN

SAMPLE TYPE

- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SURFACE SOIL
- TEST PIT

NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

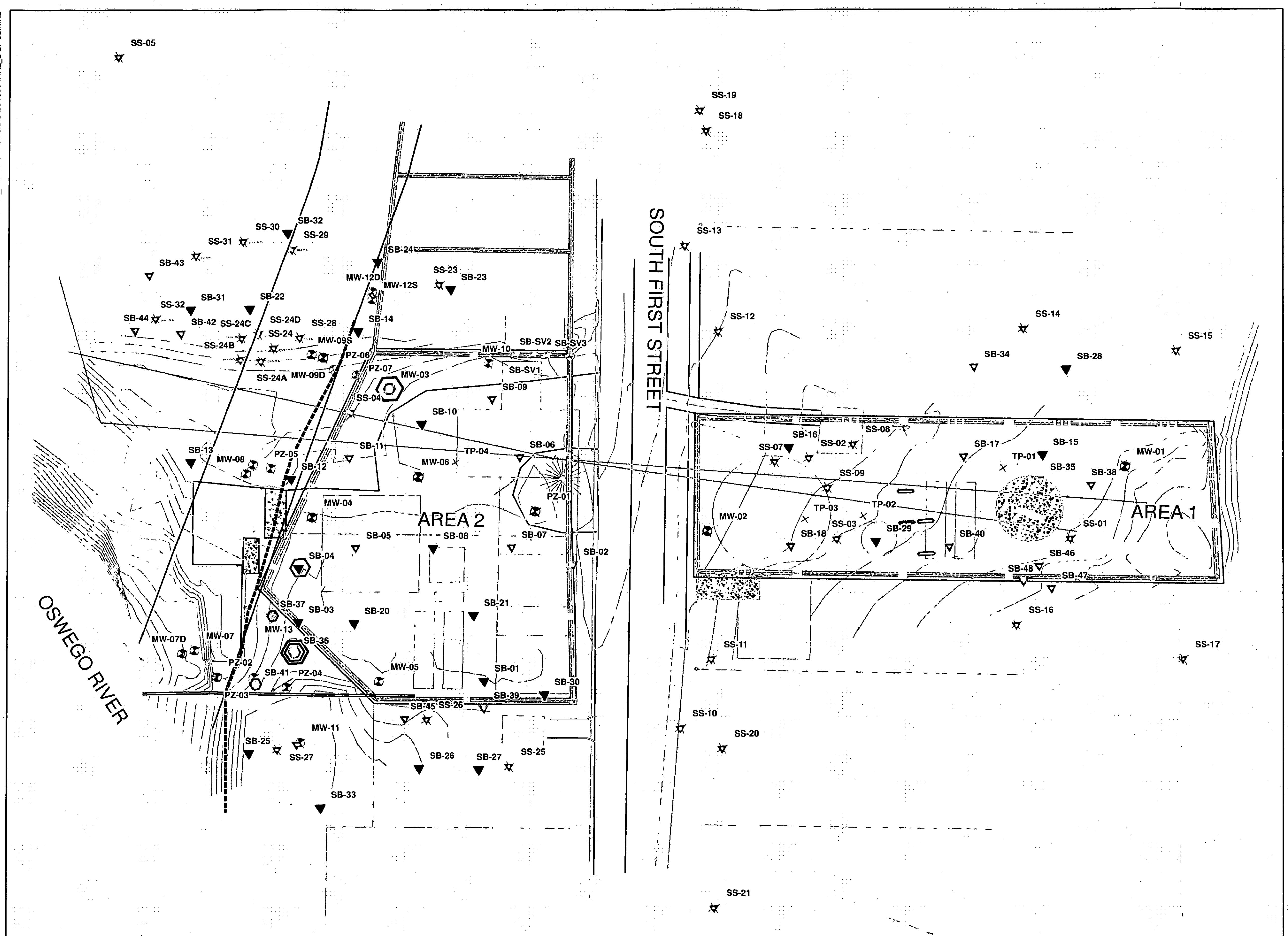
SOIL SAMPLE LOCATIONS
12-16 FT BGS
TOTAL PAHs >= 500 PPM
BTEX ABOVE CRITERIA

0 25 50 100
Feet

April 2006
1118.35165

O'BRIEN & GERE ENGINEERS, INC.

FIGURE 4-6



Color sample locations indicate analytical data is available for this interval.
Gray sample locations indicate no analytical data are available for this interval
When both UV/NAPL and staining are present, only UV/NAPL is marker on map.
Sheen is only indicated when observed above the water table.
This document was developed in color. Reproduction in B/W may not represent the data as intended.

LEGEND

- APPROX CANAL BOUNDARY
- SEWER LINE
- PAHs >= 500
- BTEX ABOVE CRITERIA
- UV POSITIVE OR NAPL
- STAIN OR SHEEN

SAMPLE TYPE

- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SURFACE SOIL
- TEST PIT

NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

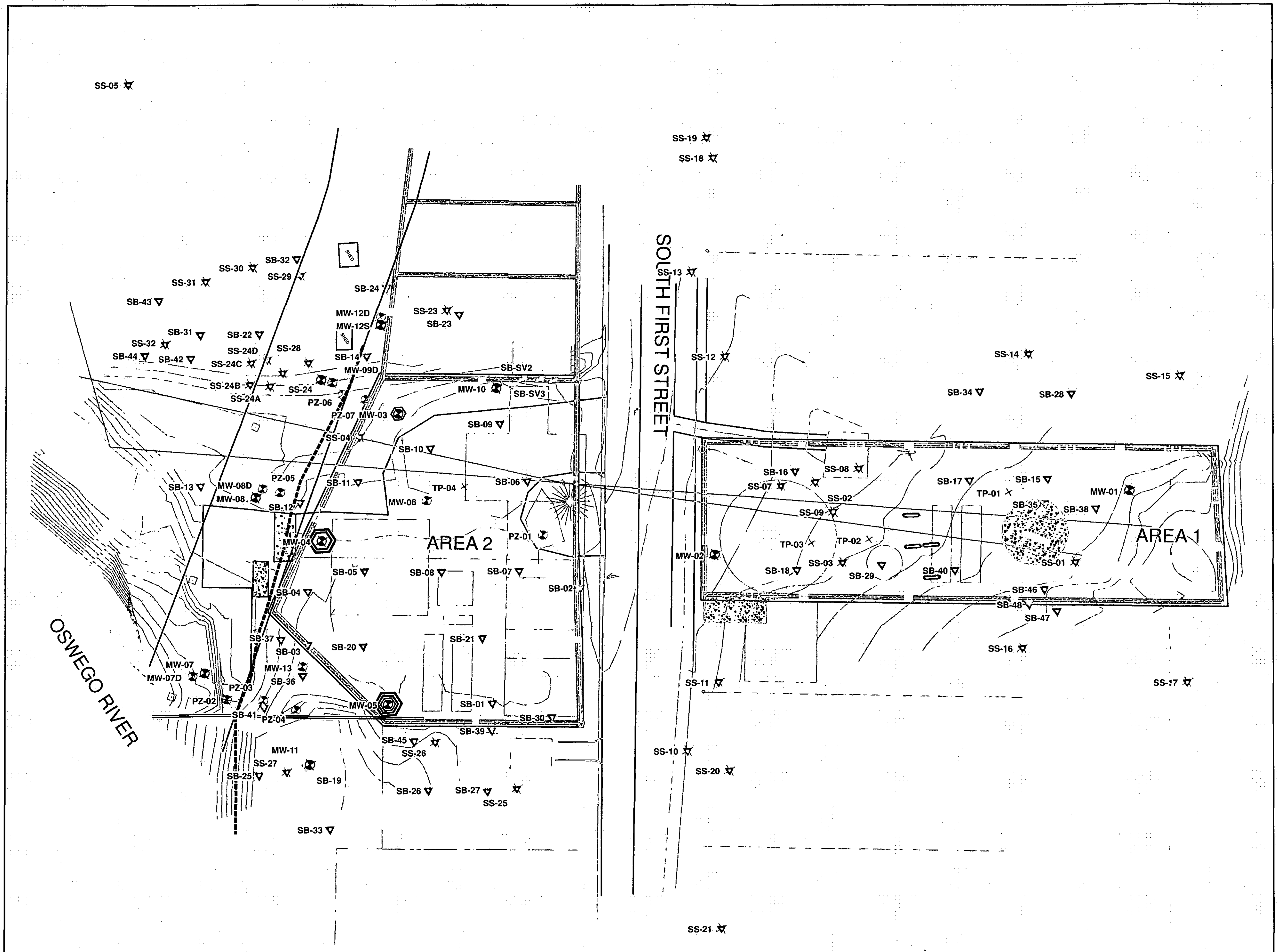
SOIL SAMPLE LOCATIONS GREATER THAN 16 FT BGS TOTAL PAHs >= 500 PPM BTEX ABOVE CRITERIA

0 25 50 100
Feet

April 2006
1118.35165

O'BRIEN & GERE ENGINEERS, INC.

FIGURE 4-7



LEGEND

- ONE OR MORE PAH >= TOGS
- BTEX >= TOGS
- CYANIDE >= TOGS
- APPROX BOUNDARY OF FORMER CANAL
- SEWER LINE
- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SOIL VAPOR
- SURFACE SOIL
- TEST PIT

NATIONAL GRID
SOUTH FIRST STREET
EULTON, NEW YORK

SHALLOW GROUND WATER SAMPLE DATA NOVEMBER 2005 PAHs EXCEEDING TOGS BTEX EXCEEDING TOGS

0 25 50 100
Feet

April 2006
1118.35165

O'BRIEN & GERE ENGINEERS, INC.

When exceedence is indicated, one cr more compcunds from indicated group exceeded TOGS.
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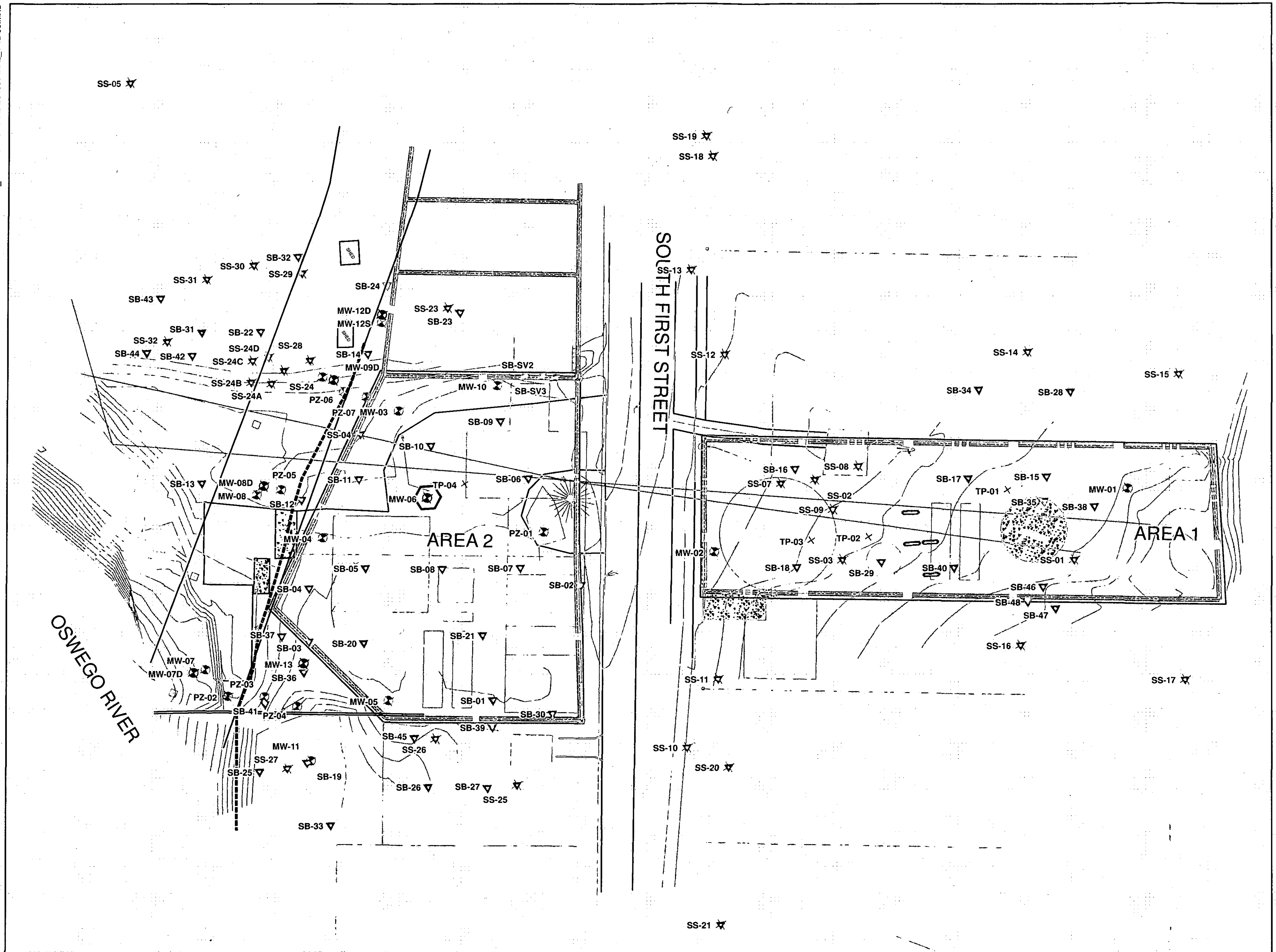

Well MW-13 was not sampled due to NAPL observed on PVC well material and bailer.
When exceedence is indicated, one or more compounds from indicated group exceeded TOGS.
This document was developed in color. Reproduction in B/W may not represent the data as intended.

FIGURE 4-8

LEGEND

- ONE OR MORE PAH >= TOGS
- BTEX >= TOGS
- CYANIDE >= TOGS
- APPROX BOUNDARY OF FORMER CANAL
- SEWER LINE
- MONITORING WELL
- PIEZOMETER
- SOIL BORING
- SOIL VAPOR
- SURFACE SOIL
- TEST PIT

NATIONAL GRID
SOUTH FIRST STREET
FULTON, NEW YORK

DEEP GROUND WATER SAMPLE DATA NOVEMBER 2005 PAHs EXCEEDING TOGS BTEX EXCEEDING TOGS

0 25 50 100
Feet

April 2006
1118.35165

O'BRIEN & GERE ENGINEERS, INC.

APPENDICES

Soil boring logs and monitoring well details

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-1
Client: Niagara Mohawk	Sampler: 2" Split Spoon	Page 1 of 2
Proj. Loc: Fulton, NY	Hammer: 140 lbs	Location:
File No.: 1118.081	Fall: 30"	Start Date: 7/12/96 End Date: 7/12/96

Boring Company:	Parratt Wolff, Inc.	Screen	Grout
Foreman:	Brian Waters	Riser	Sand Pack
OBG Geologist:	Chawn O'Dell		Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. installed	Field Testing PID Over Spoon (PPM)	Field Testing Jar Head Space (PPM)
0	1	0-2	–18	1.5'/0.1'	40	Dense, coarse angular GRAVEL, lodged in			0.0	0.0
			22-5			split spoon tip				
1										
2	2	2-4	3-1	2'/1.2'	6	Light brown (5YR 5/6), moist, loose, fine to			0.0	0.0
			5-6			medium SAND				
3										
4	3	4-6	7-7	2'/0.8'	17	Moderate yellowish brown (10YR 5/4), wet			0.0	0.0
			10-10			medium dense, fine SAND, little silt, trace				
5						medium sand				
6	4	6-8	8-5	2'/1.3'	9	Moderate yellowish brown (10YR 5/4),			65	275
			4-7			saturated, loose fine to medium SAND, little				
7						silt, strong odor			(Dup-64)	(Dup-272)
8	5	8-10	8-10	2'/1.5'	20	Moderate yellowish brown (10YR 5/4), sat-			1.5	6.8
			10-10			urated, medium dense fine SAND, some silt				
9										
10	6	10-12	5-7	2'/0.0'	17	No recovery				
			10-8							
11										
12	7	12-14	10-11	2'/1.5'	23	Pale yellowish brown (10YR 6/2), saturated,			0.0	2.2
			12-10			medium dense, fine SAND, some very fine				
13						sand, little silt				
14	8	14-16	6-7	2'/0.8'	18	Light brown (5YR 5/6), wet, medium dense,			0.0	2.9
			11-7			medium to coarse SAND, some subrounded				
15						to subangular fine to medium gravel, little				
						fine sand to silt				
16	9	16-18	20-25	2'/1.5	60	Light brown (5YR 5/6), moist to wet,			0.0	0.0
			35-29			extremely dense, fine to medium SAND, some				
17						subrounded to subangular fine to coarse				
						gravel, little coarse sand and silt				
18	10	18-20	12-26	1.4'/0.9'	50+	Light brown (5YR 5/6), extremely dense,			0.0	0.0
			50/0.4'			fine to medium SAND, some silt, little fine to				
19						coarse angular gravel, trace coase sand				
20	11	20-22	27-45	1.9'/1.5'	50+	Light brown (5YR 5/6), extremely dense,			0.0	0.0
			49-50/0.4			fine to medium SAND, some silt, little fine to				
21						coarse angular gravel, trace coase sand				

CPO:ers/4 n&d/sb-1

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-1
Client: Niagara Mohawk	Sampler: 2" Split Spoon	Page 2 of 2
		Location:
Proj. Loc: Fulton, NY	Hammer: 140 lbs	Start Date: 7/12/96
File No.: 1118.081	Fall: 30"	End Date: 7/12/96

Boring Company: Parratt Wolff, Inc.
Foreman: Brian Waters
OBG Geologist: Chawn O'Dell

Screen = \ Grout
Riser Sand Pack
Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing: PID Over Spoon (PPM)	Field Testing: Jar Head Space (PPM)
22	12	22-24	5.0/0.2	0.2'/0.2'	50+	Light brown (5YR 5/6), extremely dense, fine to medium SAND, some silt, little fine to coarse angular gravel, trace coarse sand			0.0	0.0
23										
24	13	24-26	50/0.4	0.4'/0.4'	50+	Light brown (5YR 5/6), extremely dense, fine to medium SAND, some silt, little fine to coarse angular gravel, trace coarse sand			0.0	0.0
25										
26	14	26-28	50/0.2	0.2'/0.2'	50+	Light brown (5YR 5/6), extremely dense, fine to medium SAND, some silt, little fine to coarse angular gravel, trace coarse sand			0.0 (dup 0.0)	0.0 (dup 0.0)
27										
28	15	28-30	50/0.2	0.2'/0.2'	50+	Light brown (5YR 5/6), extremely dense, fine to medium SAND, some silt, little fine to coarse angular gravel, trace coarse sand			0.0	0.0

The borehole was backfilled to the surface with cement/bentonite grout. The asphalt was repaired with asphalt patch.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-3
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	3.25 inch HAS Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 02/22/00 End Date: 02/22/00
Boring Company: Parratt-Wolff, Inc. Foreman: Joe Persey Drill Rig: IR OBG Geologist: Peter Bogardus		Screen = ; Riser ; Steel // ; Grout ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0.5		2	40	1.5/1.0	41	Asphalt		0.037/1.0	0.0	none
			29-12			Moderate Brown 10r 4/6, Hard SILT with SAND, and fine to coarse gravel red brick fill				
2		4	14-17	2/1.0	37	Grayish Orange 10 yr 7/4 dense fine to medium SAND to approx. 3 ft.		0.042/1.0	0.0	none
			20-20			Red brick -tile encountered to 3.5'. Then moderate brown silt some sand to fine gravel hard drilling to 5' moderate brown silt same for coarse sand to fine gravel hard drilling to 5' concrete				
4		6	9-9	2/NR	15	No recovery		0.043/1.0	-	-
			6-5							
6		8	4-2	2/1.0		Moderate Brown, moist SILT and fine SAND, some fine to moderate gravel (red brick)		0.043/1.0	0.0	none
			10-14							
8		10	11-5	2/.5	8	Black N3, wet, loose, fine to medium GRAVEL, little silt, odorous (poor recovery)		0.066/1.0	25.0	none
			3-2							
10		12	1-4	2/.5	7	Black N3, wet, loose, fine to medium GRAVEL,little silt, odorous (poor recovery)		0.072/1.0	60.0	none
			3-2							
12		14	2-3	2/1.2	8	Light olive gray 5y 6/2 moist to wet, medium stiff, SILT, some fine sand, little to trace of clay, black streaks throughout, odorous		0.073/1.0	30.0	none
			5-7							
14		16	5-7	2/1.3	17	Light olive gray 5y 5/2 wet, very stiff SILT, some fine sand, coarse sand to medium gravel approx. 15.5 - 15.75 black streaks throughout odorous		0.076/1.0	5.5	none
			10-9							
16		18	1-1	2/1.5	2	Light brown 5y 6/4, wet, soft, SILT and CLAY, little fine sand		0.073/1.0	24.0	none
			1-2							
18		20	1-1	2/1.5		Similar		0.073/1.0	1.2	

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-4
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	3.25 inch HAS Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 02/22/00 End Date: 02/22/00
Boring Company: Parratt-Wolff, Inc. Foreman: Joe Persey Drill Rig: IR OBG Geologist: Peter Bogardus		Screen = / Riser / Steel // ; Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
1		2	40-42	1/.7	42	Asphalt	-.5			
						Brown SAND and GRAVEL, little silt moderate brown, dense dry, coarse sand to medium gravel, some fine to coarse sand, brick fill		.042/1	0.0	none
2		4	10-12	2/1.5	27	Moderate yellowish brown 10yr 5/4 medium dense, coarse SAND to fine gravel little fine to coarse sand, little silt (fill)		.037/1	0.0	none
			15-8							
4		6	13-9	2/NR	14	3" spoon - Drove cobble		.017/.9		-
			6-6			No recovery				
6		8	8-5		31	3" spoon - No Recovery		.023/.9		-
			26-5Q2							
						Slight odor in drill cutting approx. 8 ft.				
8		10	42-14	2/1.7	21	Cobble to 8.5' then grayish black N2 wet, SILT and fine SAND to 9.5' then black wood chips strong odor MS, MSD, and feild dup collected		0.025/.9	5.0	none
			7-7							
10		12	2-2	2/1.5	3	Grayish black, N3, moist fine SAND, some silt, odorous wood fragment in nose of spoon				
			1-3					0.025/.9	1.0	none
12		14	4-4	2/1.5	10	Grayish black, N3, moist to wet silt, some fine sand, little clay		0.015/.7	1.0	none
			6-8							
14		16	4-4	2/1.0	7	Olive gray 5 yr 4/1 moist to wet,SILT, some clay, few layers of fine sand (slight odor)			3.0	none
			3-6							
16		18	1-4	2/1.2	8	Olive gray, wet, medium stiff, fine to medium SAND, little silt, trace of clay approx .17.5. Then moderate brown 5y 4/4 fine to medium sand little silt embedded with coarse sand to fine gravel			18.0	none
			4-3							
18		20	12-9	2/1.3	17	Moderate brown 5y 4/4 fine to medium SAND little silt, embedded with fine to medium gravel			30.0	none
			8-5							

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-5
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	3.25 inch HAS Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 02/20/00 End Date: 02/20/00
Boring Company: Parratt-Wolff, Inc. Foreman: Joe Persey Drill Rig: IR OBG Geologist: Peter Bogardus		Screen = ; Riser ; Steel // ; \ Grout ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		2	12-14	1.5/0.5	33	Asphalt	-.5			
			19			Moderate brown 5yr 4/4 moist dense fine to medium GRAVEL, little medium to coarse sand, trace of silt		0.051/.9	0.0	none
2		4	12-8	2/0.5	15	Moderate brown moist stiff SILT, some fine sand, little coarse sand to fine gravel		0.048/.9	0.0	none
			7-6							
4		6	3-2	2/.7	3	Moderate brown moist, loose fine SAND and SILT, little medium sand, trace of clay		0.037/.9	0.0	none
			1-3							
6		8	5-5	2/1.0	10	Red brick to approx. 7.5'. Then black N4, hard SAND and SILT, asphalt like material, flexible, odorous		0.045/.9	65.0	yes
			5-37							
8		10	15-10	2/.5	18	Similar asphalt like material, odorous	(odor)	0.053/.9	62.0	slight
			8-6							
[illegible]		12	2-1	2/1.2	3	Medium dark gray N4, wet, medium to coarse SAND, trace of silt, approx. 11' medium W5 gray fine sand, little silt, trace of clay odorous	(odor)	0.032/.9	20+	yes to 11.'
			2-1							
12		14	13-11	2/1.0	22	Medium gray N5, wet, stiff fine SAND, some silt, trace of clay		0.037/.9	5.0	none
			11-5							
14		16	2-4	2/1.5	6	Moderate brown 5 yr 4/4, medium stiff, wet fine SAND, little silt embedded with coarse sand to fine gravel.		0.037/.9	0.0	none
			2-3							
16		18	5-7	2/1.4	14	Moderate brown, stiff, wet, fine to medium SAND, little silt, embedded with coarse sand to fine gravel (broken cobble in shoe)		.037/.9	0.0	none
			7-12							
18		20	23-31	2/1.6	69	Similar except dense		0.051/.9	0.0	none
			38-42							

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-6
Client: Niagara Mohawk Power Corporation (South First Street Site)	3.25 inch HAS	Page 1 of 1
	Sampler: 2-inch split spoon	Location:
	Hammer: 140 lbs	
Proj. Loc: Fulton, NY		Start Date: 02/20/00
File No.: 1118/29192	Fall: 30 inches	End Date: 02/20/00
Boring Company: Parratt-Wolff, Inc.		Screen = ; \ Grout
Foreman: Joe Persey		Riser ; Sand Pack
Drill Rig: IR		Steel // ; Bentonite
OBG Geologist: Peter Bogardus		

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2				Asphalt, black crushed stone to 1.5'	-.5			
2		4	3-3	2/1.3	7	Moderate brown 5 yr 4/4 moist, medium stiff SILT and fine SAND, trace of clay		0.023/.9	0.0	none
			4-8							
4		6	4-8	2/1.3	19	Dark yellowish orange 10 yr 6/6 medium dense, moist, fine to medium SAND, little silt, trace of clay		0.024/.9	0.0	none
			11-12							
6		8	9-8	2/1.0	14	Dark yellowish orange, medium dense, wet, fine SAND, some silt, trace of coarse sand to fine gravel		0.024/.9	0.0	none
			6-4							
8		10	13-18	2/1.5	21	Dark yellowish orange, wet, very stiff, SILT and fine, trace of coarse sand to gravel. At approx. 9.8 medium light gray silt and clay.		.023/.9	0.0	none
			8-13							
10		12	3-6	2/1.2	14	Medium light gray, stiff, wet SILT and fine SAND		0.025/.9	0.0	none
			8-6							
12		14	4-5	2/1.5	12	Dark yellowish orange, wet, SILT and fine SAND at approx. 13.2' medium light gray, wet silt, little to trace of clay		.032/1.0	0.0	none
			7-9							
14		16	6-7	2/1.3	15	Moderate brown 5 yr 4/4 wet, medium dense fine to medium SAND, some coarse sand to fine gravel, little silt		.032/1.0	0.0	none
			8-9							
16		18	19-9	2/NR	17	No Recovery			0.0	none
			8-6							
18		20	4-5	2/1.5	12	Moderate brown, wet, medium dense, fine SAND, little silt embedded with coarse sand to fine gravel		.034/1.0	0.0	none
			7-7							

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-7
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	3.25 inch HAS Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 02/21/00 End Date: 02/21/00
Boring Company: Parratt-Wolff, Inc. Foreman: Joe Persey Drill Rig: IR OBG Geologist: Peter Bogardus		Screen = Grout Riser Sand Pack Steel // Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		.5-2	20-49 52	1.5/.5	101	Asphalt Grayish brown 5YR3/2 moist, very moist, dense fine to medium GRAVEL, little fine to coarse sand, trace silt (fill)		.062/.9	0.2	neg
2		4	4-4 2-2	2/.5	6	Grayish brown moist, loose fine to med GRAVEL, little silt, few pieces of black N3 hard asphalt material		.054/.9	0.2	neg
4		6	2-1 1-7	2/1.6	2	Moderate yellowish brown soft, wet, SILT, some fine sand, trace of clay, few fine sand seams, odor and staining in last 0.5 ft of spoon		.069/.9	0.2	yes inseams
6		8	4-4 3-2	2/1.7	7	Dark gray N4, loose, wet, fine SAND and SILT, trace of clay		.057/.9	20.0	yes
[illegible]		10	2-5 7-11	2/1.6	12	Moderate yellowish brown, stiff, moist to wet, SILT, some fine sand, little to trace of clay (varved) UV in seams		0.59/.9	6.0	yes
10		12	8-11 8-10	2/1.5	19	Moderate yellowish brown, very stiff SILT, some fine sand, little to trace of clay, trace of subrounded fine gravel		.030/.9	16.0	yes
12		14	7-10 22-50	2/1.9	32	Similar, broken cobble in shoe		.066/.9	1.3	very slight
14		16	15-8 8-10	2/1.3	16	Medium brown 5YR4/4, wet, medium dense, medium to coarse GRAVEL, subrounded to subangular, fine and medium coarse sand with fine gravel, silt matrix		.066/.9	0.3	none
16		18	7-11 26-33	2/1.7	37	Moderate brown, wet, dense, subrounded to subangular, fine med to coarse SAND, some fine to med gravel, little silt			0.0	none
18		19.3	16-40 50/.3	1.3/1.0	90	Moderate brown, wet, very dense med to coarse sand, some fine to med gravel (subrounded to subangular), little silt, trace of clay			0.0	none

Boring grouted to surface

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-8
Client: Niagara Mohawk Power Corporation (South First Street Site)	3.25 inch HAS Sampler: 2-inch split spoon Hammer: 140 lbs	Page 1 of 1 Location:
Proj. Loc: Fulton, NY File No.: 1118/29192	Fall: 30 inches	Start Date: February 2000 End Date: February 2000
Boring Company: Parratt-Wolff, Inc. Foreman: Joe Persey Drill Rig: IR OBG Geologist: Peter Bogardus		Screen = / Riser / Steel // ; \ Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	44-90/.4		100	Asphalt Dark gray N3 moist, very dense, fine to med sand, little silt, then red brick		.042/.9	0.0	none
2		4	50/.4	.4/.4		Grayish brown 5YR3/2 med to coarse SAND and fine to med GRAVEL, trace of silt (auger refusal ~3.5'), move hole ~3' SW Asphaltish material, dry,	Very Dense	.039/.9	0.0	none
4		6	2-1 2-1	2/.8	3	Similar (FILL)		.040/.9	0.0	none
6		8	2-1 2-2	2/.5	3	Dark gray N3, moist, soft, SILT and fine SAND, trace of clay, root hairs, wood fragments	(mothball odor)	.057/.9	42.0	none
8		10	6-7 10-12	2/1.2	17	Olive gray 5Y3/2 moist to wet, very stiff, SILT, mixed with fine sand, trace of clay, few fine to med sand seams	(mothball odor)	.054/.9	12.0	yes in seams
10		12	20-14 5-10	2/1.5	19	Dark gray N3, wet, very stiff, SILT, little fine sand, trace of clay, very "soupy in spoon".	(mothball odor)	.042/.9	19.0	no
12		14	7-9 9-50/.2	1.7/1.2	18	Similar to ~14.5 then moderate brown dense med to coarse SAND, little fine to med gravel, trace of silt		.043/.9	23.0	yes
14		16	80/.2	NR		No recovery		.032/.9		--
16		18	15-23 27-30		50	Moderate brown 5YR4/4 wet, very dense, fine to med SAND, little to trace of silt, embedded with fine to med gravel		.043/.9	0.5	no
18		20	18-31			Same		.055/.9	0.2	no

Boring grouted to surface

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-9
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	3.25 inch HAS Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 02/23/00 End Date: 02/23/00
Boring Company: Parratt-Wolff, Inc. Foreman: Joe Persey Drill Rig: IR OBG Geologist: Peter Bogardus		Screen = / Riser / Steel // — Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0.5		2	14	2/1.0	11	Asphalt - Fill		.052/.7	0.0	none
			7-4			Grayish Black N3, moist SAND and GRAVEL, little silt, metal pieces				
2		4	4-3	2/1.5	5	Moderate brown 5YR3/4, moist loose		.055/.7	4.2	none
			2-2			fine to coarse GRAVEL, some silt, trace of black asphalt-like material	(slight odor)			
4		6	8-4	2/.5	10	Moderate yellowish brown 10YR5/4		.047/.7	3.4	none
			6-5			moist, SILT and fine SAND, trace of clay,	(slight odor)			
6		8	25-10	2/1.0	18	Moderate yellowish brown, moist med			0.2	none
			8-8			dense, fine SAND, little silt				
8		10	5-5	2/1.4	10	Moderate yellowish brown wet med		.055/.7	12.0	none
			5-5			dense, fine SAND, some silt				
[illegible]		12	2-2	2/.3	7	Dense cobble in nose. Moderate		.056/.7	0.2	none
			5-2			yellowish brown, wet, med stiff SILT, little fine sand, trace of clay				
12		14	14-16	2/1.0	32	Moderate yellowish brown, wet hard		.061/.7	0.2	none
			16-12			SILT, some fine sand, trace of clay, 13.5' moderate brown 5YR4/4 fine to med sand, little silt embedded with coarse sand to med gravel				
14		16	20-14	2/1.0	31	Similar, becomes dense		.065/.7	0.0	none
			17-17							
16		18	17-18	2/0.5	27	Moderate brown, wet med dense, med		.068/.7	0.0	none
			9-4			to coarse SAND, some fine sand, trace of silt, some gravel embedded				
18		20	9-10	2/NR	25	No recovery				
			15-12							

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-10
Client: Niagara Mohawk Power Corporation (South First Street Site)	3.25 inch HAS Sampler: 2-inch split spoon Hammer: 140 lbs	Page 1 of 1 Location:
Proj. Loc: Fulton, NY File No.: 1118/29192	Fall: 30 inches	Start Date: 02/23/00 End Date: 02/23/00
Boring Company: Parratt-Wolff, Inc. Foreman: Joe Persey Drill Rig: IR OBG Geologist: Peter Bogardus		Screen = / Riser / Steel // ; \ Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2				Asphalt Concrete				
2		4	3-1 2-1	2/.5	3	Grayish black N2, moist, very loose med sand to med gravel, asphalt-like material		.072/.9	0.4	none
4		6	2-1 3-7	2/.5	4	Similar to ~5.5, then moderate yellowish brown 10YR5/2 moist SILT and fine SAND		.126/.7	2.0	none
6		8	4-2 3-2	2/1.0	5	Grayish brown 5YR3/2 moist to med stiff SILT, little clay, few fine sand seams throughout		.063/8	0.0	none
8		10	2-2 6-10	2/1.5	8	Dark gray N3, moist, med stiff SILT and fine SAND, ~9.5' dark yellowish orange 10YR6/6, wet fine sand, trace of silt		.075/.8	0.2	none
10		12	5-6 5-3	2/1.3	11	Moderate yellowish brown 10YR5/4 wet, stiff, SILT, some fine sand, trace of clay, few fine sand lenses throughout	(slight odor)	.068/.7	1.0	none
12		14	5-8 7-12	2/1.8	15	Light olive gray 5YR5/2 wet, very stiff, SILT, some clay, little to trace of fine sand		.072/.7	16.0	none
14		16	8-5 14-10	2/1.2	19	Olive gray 5YR4/1, wet, very stiff, fine SAND and SILT, Nose of spoon had slight odor and sheen. Sheen and product noted at top of spoon	(sheen) (product)	.072/.7	0.6	none
16		18	12-17 21-12	2/1.3	34	Moderate brown wet, dense, fine to med SAND, some coarse sand to med gravel, little silt (odorous)	(odor)	.052/.7	30.0	none
18		20	14-23 20-10	2/1.3	43	Moderate brown, wet, dense, fine to med SAND, some coarse sand to med gravel, little silt, odorous. (product noted in wash above sample) 3" spoon	(odor)	.043/.7	22.0	-

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-11
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	3.25 inch HAS Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: February 2000 End Date: February 2000
Boring Company: Parratt-Wolff, Inc. Foreman: Joe Persey Drill Rig: IR OBG Geologist: Peter Bogardus		Screen = ; Riser ; Steel // ; \ Grout ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	3-4	2/.7	7	Moderate brown 5YR4/4, moist to wet med stiff SILT, little fine crushed stone		.036/.8	0.0	none
			3-9							
2		4	6-7	2/.7	16	Golden brown moist, med dense, coarse sand to med gravel, little silt, steel rnd, etc. fill		.039/.8	0.0	none
			9-6							
4		6	3-4	2/0.5	14	Black N3, hard cinders, slag with odor (very poor recovery)	(odor)	.039/.8	20.0	none
			10-30							
6		8	9-10	2/1.5	14	Black N3 med dense, wet, fine to med GRAVEL, some fine to coarse sand (fill, odorous) ~7.5 orange red brick. Then ~7.8' med light gray N6, moist, wet, SILT, some fine sand, little fine gravel	(odor)	.039/.5	1.0	none
			4-2							
8		10	2-2	2/1.0	3	Dark yellowish brown, wet soft SILT and fine SAND, little to trace of clay		.039/.8	1.0	none
			1-3							
10		12	3-7	2/1.5	14	Light olive gray 5Y6/1, stiff, moist, SILT, little clay, trace of fine sand		.037/.5	0.0	none
			7-17							
12		14	20-9	2/1.5	15	Moderate brown 5YR4/4, wet, stiff fine to med, SAND, little silt embedded with fine to med gravel		.033/.5	0.0	none
			6-9							
14		16	10-12	2/1.5	24	3" spoon. Moderate brown 5YR4/4 wet, very stiff, fine to med SAND, little silt, embedded with fine to med gravel (field dup collected)		.033/.5	0.0	none
			12-12							
16		18	5-9	2/.5	13	Similar				
			7-20							

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-11
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	3.25 inch HAS Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: February 2000 End Date: February 2000
Boring Company: Parratt-Wolff, Inc. Foreman: Joe Persey Drill Rig: IR OBG Geologist: Peter Bogardus		Screen = / Riser / Steel // ; Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	3-4	2/.7	7	Moderate brown 5YR4/4, moist to wet		.036/.8	0.0	none
			3-9			med stiff SILT, little fine crushed stone				
2		4	6-7	2/.7	16	Golden brown moist, med dense,		.039/.8	0.0	none
			9-6			coarse sand to med gravel, little silt,				
						steel rnd, etc. fill				
4		6	3-4	2/0.5	14	Black N3, hard cinders, slag with odor	(odor)	.039/.8	20.0	none
			10-30			(very poor recovery)				
6		8	9-10	2/1.5	14	Black N3 med dense, wet, fine to med		.039/.5	1.0	none
			4-2			GRAVEL, some fine to coarse sand (fill,				
						odorous) ~7.5 orange red brick. Then	(odor)			
						~7.8' med light gray N6, moist, wet, SILT,				
						some fine sand, little fine gravel				
8		10	2-2	2/1.0	3	Dark yellowish brown, wet soft SILT and		.039/.8	1.0	none
			1-3			fine SAND, little to trace of clay				
10		12	3-7	2/1.5	14	Light olive gray 5Y6/1, stiff, moist, SILT,		.037/.5	0.0	none
			7-17			little clay, trace of fine sand				
12		14	20-9	2/1.5	15	Moderate brown 5YR4/4, wet, stiff fine		.033/.5	0.0	none
			6-9			to med, SAND, little silt embedded with				
						fine to med gravel				
14		16	10-12	2/1.5	24	3" spoon. Moderate brown 5YR4/4 wet,		.033/.5	0.0	none
			12-12			very stiff, fine to med SAND, little silt,				
						embedded with fine to med gravel				
						(field dup collected)				
16		18	5-9	2/.5	13	Similar				
			7-20							

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-12
Client:Niagara Mohawk Power Corporation South First Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2 inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 5/08/01 End Date: 5/08/01
Boring Company: Parratt-Wolff, Inc. Foreman: Glen Lansing Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Grout Riser / Sand Pack Steel // / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	PID Over Spoon	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	4-5	2.0/0.5	11	Pale yellowish brown 10YR 6/2, dry, medium dense, SILT, little fine gravel (angular), trace fine to coarse sand, trace organic matter		0.0	0.1	neg
			6-6							
2	2	2-4	4-4	2.0/0.6	7	Grayish brown 5YR 3/2, damp , loose, fine to medium SAND, some silt, little coarse sand to fine gravel (subangular)		0.0	3.6	neg
			3-4							
4	3	4-6	4-38	2.0/1.0	50	Grayish brown 5YR 3/2, dense, fine to coarse SAND, some silt, little fine to coarse gravel (subangular), trace concrete frags		0.0	3.7	neg
			12-12							
6	4	6-8	12-8	2.0/0.9	14	Dark yellowish brown 10YR 4/2, damp, medium, dense, SILT and fine SAND, little little fine to coarse gravel (subangular)		0.0	2.1	neg
			6-7							
	5	8-10	6-4	2.0/0.8	8	Dusky yellowish brown 10YR 2/2, saturated, loose, coarse SAND and fine GRAVEL (subangular), little fine to medium sand		0.0	0.6	neg
			4-4							
10	6	10-12	4-7	1.3/0.0	50+	Spoon refusal @ approx. 11.3 ft No recovery		-----	-----	-----
			50/0.3							
12	7	12-14	4-4	2.0/2.0	10	Dusky yellowish brown 10YR 2/2, saturated, loose, coarse SAND and fine GRAVEL (subangular), little fine to medium sand to approx. 13 ft, then moderate yellowish brown, 10 YR 5/4, saturated, stiff, SILT, some clay		0.0	0.1	neg
			6-7							
14	8	14-16	3-4	2.0/1.3	9	Light olive gray 5Y 5/2, saturated, loose, SILT, some clay		0.0	0.0	neg
			5-4							
16	9	16-18	5-4	2.0/1.0	8	Moderate brown, 5YR 4/4, saturated, loose, fine SAND, some silt, trace fine gravel (subanguiar)		0.0	0.0	neg
			4-4							
18	10	18-20	7-6	2.0/2.0	10	Moderate brown, 5YR 4/4, saturated, loose, fine SAND, some silt, trace fine gravel (subangular)		0.0	0.0	neg
			4-4							
						Terminate the borehole at 20 ft				
						Grout the borehole to the surface with cement/ bentonite grout				

No

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-13
Client: Niagara Mohawk Power Corporation South First Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2 inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 5/08/01 End Date: 5/08/01
Boring Company: Parratt-Wolff, Inc. Foreman: Glen Lansing Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Riser / Steel // \ Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	PID Over Spoon	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	8-7 6-6	2.0/0.5	13	Dark yellowish brown 10YR 4/2, damp, medium dense, SILT and fine SAND, little medium to coarse sand, trace fine, trace fine gravel (angular), trace organic matter		0.0	0.0	neg
2	2	2-4	4-5 5-5	2.0/0.5	10	Grayish brown 5YR 3/2, damp, medium dense, fine to medium SAND, little coarse sand to fine gravel (subangular), little silt, trace orange brick fragments		0.0	0.0	neg
4	3	4-6	6-4 4-5	2.0/0.1	8	Orange BRICK fragments (poor recovery)		-----	-----	-----
6	4	6-8	3-4 4-5	2.0/0.0	8	No recovery		-----	-----	-----
8	5	8-10	5-5 3-2	2.0/1.0	8	Grayish brown 5YR 3/2, saturated, loose, fine SAND, some medium to coarse sand, little silt, trace fine gravel (subangular), trace cinder/brick fragments		0.0	0.0	neg
10	6	10-12	2-3 3-3	2.0/0.3	6	Grayish brown 5YR 3/2, saturated, loose, fine SAND, some medium to coarse sand, little silt, trace fine gravel (subangular), trace cinder/brick fragments		0.0	0.0	neg
12	7	12-14	2-2 1-2	2.0/1.2	3	Grayish brown 5YR 3/2, saturated, very loose, SILT and fine SAND, little fine gravel (subangular)		0.0	0.0	neg
14	8	14-16	1-1 1-1	2.0/1.5	2	Grayish brown 5YR 3/2, saturated, very loose, SILT and fine SAND, little fine gravel (subangular)		0.0	0.0	neg
16	9	16-18	1-2 2-2	2.0/1.5	4	Grayish brown 5YR 3/2, saturated, loose, fine SAND, some silt		0.0	0.0	neg
18	10	18-20	2-2 2-2	2.0/2.0	4	Grayish brown 5YR 3/2, saturated, loose, fine SAND, some silt		0.0	0.0	neg
						Terminate the borehole at 20 ft below grade				
						Grout the borehole to the surface with cement/bentonite grout				

Notes:

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-14
Client: Niagara Mohawk Power Corporation South First Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2 inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 5/08/01 End Date: 5/08/01
Boring Company: Parratt-Wolff, Inc. Foreman: Glen Lansing Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Grout Riser / Sand Pack Steel // / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	PID Over Spoon	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	2-3 2-5	2.0/0.5	5	Dusky brown 5YR 2/2, saturated, loose, SILT, little coarse gravel (subangular)		0.0	0.0	neg
2	2	2-4	2-3 3-6	2.0/1.0	6	Moderate brown 5YR 4/4, saturated, loose, fine SAND and SILT, little fine to medium gravel (subangular)		0.0	0.0	neg
4	3	4-6	3-5 7-7	2.0/1.0	12	Grayish brown 5YR 3/2, saturated, medium dense, SILT, some fine to coarse sand, little fine gravel (subangular)		0.0	0.0	neg
6	4	6-8	6-7 7-6	2.0/1.7	14	Pale brown 5YR 5/2, saturated, medium dense, SILT, some clay, trace organic matter		0.0	0.0	neg
8	5	8-10	5-11 8-7	2.0/1.8	19	Pale brown 5YR 5/2, saturated, medium dense, SILT, some clay, trace organic matter		0.0	0.0	neg
	6	10-12	2-2 2-8	2.0/1.9	4	Pale brown 5YR 5/2, saturated, loose, SILT and fine SAND, little fine gravel (subangular)	odor staining	0.3	7.4	neg
12	7	12-14	7-8 5-4	2.0/2.0	13	Pale brown 5YR 5/2, saturated, medium dense, SILT and fine SAND, little fine gravel (subangular)	odor staining	1.1	11.3	neg
14	8	14-16	4-6 9-9	2.0/1.0	15	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, little medium sand, trace fine gravel (subrounded to subangular)		0.1	1.2	neg
16	9	16-18	3-9 11-12	2.0/1.7	18	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some medium sand, little fine to coarse gravel (subrounded to subangular)		0.0	0.2	neg
18	10	18-20	11-18 21-24	2.0/2.0	39	Pale reddish brown 10R 5/4, saturated, dense, fine SAND, some medium sand, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg

Notes:

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-15
Client: Niagara Mohawk Power Corporation South First Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2 inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 5/08/01 End Date: 5/08/01
Boring Company: Parratt-Wolff, Inc. Foreman: Glen Lansing Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = ; Riser ; Steel // ; Grout ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	PID Over Spoon	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	4-2 2-2	2.0/0.6	4	Pale yellowish brown 10YR 6/2, dry, loose, SILT, some fine to medium gravel (subrounded to angular), little fine to coarse sand		0.0	0.0	neg
2	2	2-4	4-7 8-11	2.0/1.5	15	Dark yellowish brown 10YR 4/2, damp, medium dense, fine sand, little medium to coarse sand		0.0	0.0	neg
4	3	4-6	7-11 12-14	2.0/2.0	23	Dark yellowish brown 10YR 4/2, damp, medium dense, fine sand, little medium to coarse sand		0.0	0.0	neg
6	4	6-8	12-12 12-12	2.0/1.5	24	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, trace fine gravel (subangular)	staining odor	21.8	351.0	pos
8	5	8-10	6-4 4-5	2.0/2.0	8	Pale reddish brown 10R 5/4, saturated, loose, fine SAND, some silt, trace fine gravel (subangular)	sheen odor	6.6	87.1	neg
10	6	10-12	4-6 7-11	2.0/1.1	13	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, trace fine to coarse gravel (subangular)	odor	3.2	41.0	neg
12	7	12-14	14- 50/.04	0.9/0.3	50+	Pale reddish brown 10R 5/4, saturated, very dense, fine SAND, some silt, trace fine to coarse gravel (subangular)	odor	1.7	20.6	neg
14	8	14-16	50/0.3	0.3/0.3	50+	Pale reddish brown 10R 5/4, saturated, very dense, fine SAND, some silt, trace fine to coarse gravel (subangular)		0.1	9.1	neg
16	9	16-18	50/0.2	0.2/0.2	50+	Pale reddish brown 10R 5/4, saturated, very dense, fine SAND, some silt, trace fine to coarse gravel (subangular)		0.0	1.2	neg
18	10	18-20	50/0.2	0.2/0.2	50+	Pale reddish brown 10R 5/4, saturated, very dense, fine SAND, some silt, trace fine to coarse gravel (subangular)		0.0	0.1	neg
20	11	20-22	50/0.2	0.2/0.2	50+	Pale reddish brown 10R 5/4, saturated, very dense, fine SAND, some silt, trace fine to coarse gravel (subangular)		0.0	0.1	neg
						Terminate the borehole at 20.2 ft Grout the borehole to the surface with cement/bentonite grout				

Notes:

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-16
Client: Niagara Mohawk Power Corporation South First Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2 inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 5/09/01 End Date: 5/09/01
Boring Company: Parratt-Wolff, Inc. Foreman: Glen Lansing Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Grout Riser / Sand Pack Steel // / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	PID Over Spoon	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	9-6 4-7	2.0/0.3	10	Grayish brown 5YR 3/2, damp, medium dense, SILT, some fine to coarse sand, little fine to medium gravel (angular) trace organic matter roots		0.0	0.0	neg
2	2	2-4	12-31 14-13	2.0/1.2	45	Moderate yellowish brown 10YR 5/4, damp, dense, SILT, some fine sand, little medium to coarse sand, trace gravel (subrounded to angular)		0.0	0.0	neg
4	3	4-6	6-5 5-6	2.0/1.5	10	Moderate yellowish brown 10YR 5/4, damp to wet, medium dense, SILT, some fine to medium sand, little coarse sand to fine gravel (subrounded to angular)	odor	5.5	7.1	neg
6	4	6-8	6-5 7-7	2.0/0.5	12	Moderate yellowish brown 10YR 5/4, saturated, fine SAND and SILT, little fine to medium gravel (angular)	poor recovery	1.2	3.2	neg
8	5	8-10	6-5 6-6	2.0/1.5	11	Dark yellowish brown 10YR 4/2, saturated, medium dense, fine SAND, some silt		0.5	1.1	neg
10	6	10-12	7-11 14-25	2.0/1.4	25	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt		0.0	0.0	neg
12	7	12-12.4	50/0.4	0.4/0.4	50+	Pale reddish brown 10R 5/4, saturated, very dense, fine SAND, some silt, little fine to medium gravel (subangular)	odor	0.0	0.0	neg
14	8	14-14.9	26/50.4	0.9/0.8	50+	Pale reddish brown 10R 5/4, saturated, dense, fine SAND, some silt, little fine to medium gravel (subrounded to angular)		0.0	0.0	neg
16	9	16-16.7	26/50.2	0.7/0.7	50+	Pale reddish brown 10R 5/4, saturated, dense, fine SAND, some silt, little fine medium gravel (subrounded to angular)		0.0	0.0	neg
						Terminate the borehole at 16.7 ft				
						Grout the borehole to the surface with cement/bentonite grout				

Notes:

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-17
Client: Niagara Mohawk Power Corporation South First Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2 inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 5/09/01 End Date: 5/09/01
Boring Company: Parratt-Wolff, Inc. Foreman: Glen Lansing Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen =, Riser, Steel // \ Grout, Sand Pack, Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	PID Over Spoon	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	6-3	2.0/0.5	5	Dark yellowish brown 10YR 4/2, damp, loose, SILT, some fine to coarse sand, little fine gravel (subangular)		0.0	0.0	neg
			2-2							
2	2	2-4	2-2	2.0/1.5	9	Moderate yellowish brown 10YR 5/4, damp, stiff SILT, little fine sand, trace fine gravel (subangular)		0.0	0.0	neg
			7-12							
4	3	4-6	10-12	2.0/1.8	24	Moderate yellowish brown 10YR 5/4, saturated, medium dense, SILT and fine SAND, trace coarse to fine gravel (subangular)		0.0	0.1	neg
			12-11							
6	4	6-8	12-7	2.0/1.5	13	As above for top 0.5 ft, then pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to medium gravel (subrounded to subangular)		0.0	0.2	neg
			6-7							
8	5	8-10	7-6	2.0/1.0	11	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to medium gravel (subrounded to subangular)		0.0	0.0	neg
			5-5							
10	6	10-12	4-5	2.0/2.0	13	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to medium gravel (subrounded to subangular)		0.0	0.0	neg
			8-11				odor			
12	7	12-12.4	50/0.4	0.4/0.4	50+	Pale reddish brown 10R 5/4, saturated, very dense, fine SAND, some silt, little fine to medium gravel (subrounded to subangular)	odor	0.0	0.0	neg
14	8	14-14.4	50/.4	0.4/0.4	50+	Pale reddish brown 10R 5/4, saturated, very dense, fine SAND, some silt, little fine to coarse gravel (subrounded to angular)		0.0	0.0	neg
						Terminate the borehole at 14.4 ft				
						Grout the borehole to the surface with cement/bentonite grout				

Notes:

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-18
Client: Niagara Mohawk Power Corporation South First Street Site Proj. Loc: Fuiton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2 inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 5/09/01 End Date: 5/09/01
Boring Company: Parratt-Wolff, Inc. Foreman: Glen Lansing Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = Riser Steel // Grout Sand Pack Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	PID Over Spoon	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	2-3 3-3	2.0/2.0	6	Dark yellowish brown 10YR 4/2, damp, loose, SILT, little fine gravel (subangular), trace organic matter (roots)		0.0	0.0	neg
2	2	2-4	50/.3	0.3/0.1	50+	Concrete pad approx. 2 ft below grade concrete in split spoon tip		-----	-----	-----
4	3	4-6	12-8 7-7	2.0/1.2	15	Moderate yellowish brown 10YR 5/4, damp, medium dense, SILT and fine SAND, little fine gravel (subangular)		0.0	0.0	neg
6	4	6-8	12-16 16-11	2.0/2.0	32	As above for top 0.7 ft, then pale reddish brown 10R 5/4, saturated, dense, fine SAND, little fine to coarse gravel (subangular)		0.0	0.0	neg
	5	8-10	11-10 15-9	2.0/2.0	25	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg
10	6	10-12	7-11 17-28	2.0/1.0	28	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg
12	7	12-14	27-50/.4	0.9/0.8	50+	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg
14	8	14-16	50/0.4	0.4/0.4	50+	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg
16	9	16-18	50/0.3	0.3/0.2	50+	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg
						Terminate the borehole at 16.3 ft Grout the borehole to the surface with cement/bentonite grout				

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O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-18
Client: Niagara Mohawk Power Corporation South First Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2 inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 5/09/01 End Date: 5/09/01
Boring Company: Parratt-Wolff, Inc. Foreman: Glen Lansing Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Riser / Steel // Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	PID Over Spoon	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	2-3 3-3	2.0/2.0	6	Dark yellowish brown 10YR 4/2, damp, loose, SILT, little fine gravel (subangular), trace organic matter (roots)		0.0	0.0	neg
2	2	2-4	50/.3	0.3/0.1	50+	Concrete pad approx. 2 ft below grade concrete in split spoon tip		-----	-----	-----
4	3	4-6	12-8 7-7	2.0/1.2	15	Moderate yellowish brown 10YR 5/4, damp, medium dense, SILT and fine SAND, little fine gravel (subangular)		0.0	0.0	neg
6	4	6-8	12-16 16-11	2.0/2.0	32	As above for top 0.7 ft, then pale reddish brown 10R 5/4, saturated, dense, fine SAND, little fine to coarse gravel (subangular)		0.0	0.0	neg
8	5	8-10	11-10 15-9	2.0/2.0	25	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg
10	6	10-12	7-11 17-28	2.0/1.0	28	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg
12	7	12-14	27-50/.4	0.9/0.8	50+	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg
14	8	14-16	50/0.4	0.4/0.4	50+	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg
16	9	16-18	50/0.3	0.3/0.2	50+	Pale reddish brown 10R 5/4, saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (subrounded to subangular)		0.0	0.0	neg
						Terminate the borehole at 16.3 ft Grout the borehole to the surface with cement/bentonite grout				

Notes:

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-11/SB-19
Client: Niagara Mohawk Power Corporation South First Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2 inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 5/09/01 End Date: 5/09/01
Boring Company: Parratt-Wolff, Inc. Foreman: Glen Lansing Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen =, Riser, Steel //; \ Grout, Sand Pack, Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	PID Over Spoon	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	2-2	2.0/1.0	4	Grayish brown 5YR 3/2, damp, loose,		0.0	0.0	neg
			2-2			SILT, little fine to medium sand				
2	2	2-4	4-2	2.0/1.3	3	Grayish brown 5YR 3/2 to brownish black		0.0	0.0	neg
			1-1			5YR 2/1, saturated, very loose, SILT and				
						fine SAND, little brick/glass/cinder fragments				
4	3	4-6	2-1	2.0/0.3	2	Grayish brown 5YR 3/2 to brownish black		0.7	1.1	neg
			1-3			5YR 2/1, saturated, very loose, SILT and				
						fine SAND, little brick/glass/cinder fragments				
6	4	6-8	2-2	2.0/0.5	3	Grayish brown 5YR 3/2 to brownish black		1.5	2.1	neg
			1-3			5YR 2/1, saturated, very loose, SILT and				
						fine SAND, little brick/glass/cinder fragments				
8	5	8-10	2-2	2.0/0.7	3	Light brownish gray 5YR 6/1, saturated,		0.9	1.6	neg
			1-2			very soft, SILT, some clay, trace				
						organic matter				
10	6	10-12	1-1	2.0/1.3	2	Light olive gray 5Y 6/1, saturated, very loose,		0.1	0.3	neg
			1-2			fine SAND, little silt, little clay, trace				
						organic matter, trace shell fragments				
12	7	12-14	2-3	0.9/0.8	50+	Light olive gray 5Y 6/1, saturated, very loose,		0.0	0.1	neg
			7-10			fine SAND, little silt, little clay, trace				
						organic matter, trace shell fragments				
						Terminate the borehole at 14 ft				
						Install a monitoring well in the borehole				

Notes: Wells installation: 2 inch x 0.010 inch slotted PVC screen: 12.5 - 2.5 ft; sand pack: 12.5 - 2.0 ft
sand choke: 2.0 - 1.5 ft; bentonite seal: 1.5-0.5 ft (flush mount completion)

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-20
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/11/02 End Date: 2/11/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Riser / Steel // ; Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	head space (ppm)
0	1	2	---	1.5/1.5	---	0-0.5 ft: Concrete slab; then pale brown 5YR 5/2, damp, fine SAND, some orange brick (bottom 0.5 ft), little fine to coarse gravel (subangular)		neg	0.0	0.0
2	2	4	---	2.0/1.5	---	Pale brown 5YR 5/2, damp, fine SAND, some orange brick fragments (bottom 0.5 ft)		neg	0.0	0.2
4	3	6	---	2.0/1.5	---	BRICKS, SLAG, GRAVEL, some fine pale brown sand (damp)		neg	0.0	0.2
6	4	8	---	2.0/1.3	---	As above, saturated at approximately 6.5 ft below grade		neg	0.0	0.3
8	5	10	---	2.0/1.7	---	Grayish brown 5YR 3/2, saturated, fine SAND, little staining, little slag/brick fragments (top 0.5 ft)		neg	0.0	0.6
10	6	12	---	2.0/2.0	---	Grayish brown 5YR 3/2, saturated, fine fine SAND	sheen on water	neg	1.4	2.1
12	7	14	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, saturated, SILT, little fine sand, little clay		neg	0.0	0.3
14	8	16	---	2.0/2.0	---	Pale yellowish brown 10YR 6/2, saturated, SILT and fine SAND to approximately 15.5 ft, then fine SAND, little fine to medium gravel (subangular). little silt	free product (more dense)	neg	48.1	96.0
16	9	18	---	2.0/1.8	---	Pale reddish brown 10R 5/4, saturated, fine SAND, little silt, fine gravel (subrounded to subangular)	sheen on water	neg	6.1	32.0
18	10	20	---	2.0/0.0	---	No Recovery		---	---	---
20	11	22	---	2.0/1.6	---	Pale reddish brown 10R 5/4, saturated, fine SAND, little fine gravel (subrounded to subangular)	sheen on water (probable dragdown)	neg	38.2	53.1

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-21
Client: Niagara Mohawk Power Corporation (South First Street Site)	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs	Page 1 of 1 Location:
Proj. Loc: Fulton, NY File No.: 1118/29192	Fall: 30 inches	Start Date: 2/11/02 End Date: 2/11/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = Grout Riser Sand Pack Steel // Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	PID head space (ppm)
0	1	2	---	1.5/1.5	---	0-0.5 ft: Concrete slab; then brownish black 5YR 2/1, fine to coarse SAND, some fine gravel (angular), little brick/slag frag.		neg	0.3	0.7
2	2	4	---	2.0/2.0	---	Dark yellowish brown 4/2, damp,fine SAND, (bottom 0.5 ft is mostly brick/slag	moderate odor	neg	28.2	39.2
4	3	6	---	2.0/2.0	---	Dark yellowish brown 4/2, damp,fine SAND, little silt	moderate odor	neg	20.1	30.2
6	4	8	---	2.0/2.0	---	Dark yellowish brown 4/2, saturated, fine SANID, little silt	sheen (free prod. droplets on water)	pos	173.0	361.0
	5	10	---	2.0/2.0	---	Dark yellowsih brown 4/2, saturated, fine SANID, little silt	moderate odor	neg	221.0	412.0
10	6	12	---	2.0/0.0	---	No Recovery		---	---	---
12	7	14	---	2.0/0.7	---	Pale reddish brown 10YR 5/4, saturated, fine SAND, little fine to coarse gravel (subrounded to subangular), coarse gravel lodged in split spoon tip	odor	neg	25.2	61.6
14	8	16	---	2.0/1.3	---	Pale reddish brown 10YR 5/4, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)	odor	neg	17.3	25.2
16	9	18	---	2.0/1.5	---	Pale reddish brown 10YR 5/4, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)	odor	neg	25.9	36.2
18	10	20	---	2.0/1.6	---	Pale reddish brown 10YR 5/4, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)	odor	neg	20.1	30.7

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-22
Client: Niagara Mohawk Power Corporation (South First Street Site)	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs	Page 1 of 1 Location:
Proj. Loc: Fulton, NY File No.: 1118/29192	Fall: 30 inches	Start Date: 2/12/02 End Date: 2/12/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = ; Riser ; Steel // ; \ Grout ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	head space (ppm)
0	1	2	---	2..0/1.5	---	Moderate yellowish brown 10YR 5/4, damp, fine SAND, some silt, little organic matter, trace brick fragments		neg	0.0	0.0
2	2	4	---	2.0/1.0	---	Dark yellowsih orange 10YR 6/6, damp, fine SAND, little silt		neg	0.0	0.0
4	3	6	---	2.0/2.0	---	Grayish red 10R 4/2, damp to wet, fine SAND, some fine to coarse gravel (subangular)		neg	0.0	0.0
6	4	8	---	2.0/1.3	---	Grayish red 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subangular)		neg	0.0	0.0
8	5	10	---	2.0/1.0	---	Dark yellowish brown 10YR 4/2, saturated, appears very loose, very fine SAND, trace fine gravel (subangular)	very light "spotty" sheen on water	neg	0.5	1.2
10	6	12	---	2.0/1.0	---	Dark yellowish brown 10YR 4/2, saturated, appears very loose, very fine SAND, trace fine gravel (subangular)		neg	0.3	1.2
12	7	14	---	2.0/2.0	---	As above to approximately 13 ft, then grayish red 5R 4/2, saturated, fine SAND, some medium to coarse sand, little fine to coarse gravel (subangular to angular)		neg	0.0	3.1
14	8	16	---	2.0/2.0	---	Grayish red 5R 4/2, saturated, fine SAND, little fine to coarse gravel (subangular)		neg	0.0	2.8
16	9	18	---	2.0/2.0	---	As above to approximately 15 ft, then brownish black 5YR 2/1, saturated, ORGANIC MATTER , little shells and shell fragments (PEAT)		neg	0.0	3.4
18	10	20	---	2.0/2.0	---	Pale brown 5YR 5/2, saturated, fine SAND, little fine to medium gravel (subangular)		neg	0.0	3.6

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-23
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/12/02 End Date: 2/12/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = Riser Steel // \ Grout Sand Pack Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	PID head space (ppm)
0	1	2	---	2.0/1.6	---	Dusky yellowish brown 10YR 2/2, damp, SILT, little fine to coarse sand, little organic matter, trace orange brick frag		neg	0.0	0.0
2	2	4	---	2.0/0.1	---	Concrete fragment lodged in spilt spoon tip		---	---	---
4	3	6	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, damp, SILT, little fine sand, trace organic matter		neg	0.0	0.6
6	4	8	---	2.0/1.8	---	Pale yellowish brown 10YR 6/2, saturated, SILT and fine SAND, little clay, trace organic matter (veg)		neg	0.0	3.6
8	5	10	---	2.0/0.7	---	Dark yellowish brown 10YR 4/2, saturated, SILT, little clay, trace fine sand		neg	0.0	2.9
10	6	12	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, saturated, fine SAND, little silt		neg	0.0	4.1
12	7	14	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, saturated, fine SAND, little silt		neg	0.0	3.9
14	8	16	---	2.0/2.0	---	Pale yellowish brown 10YR 6/2, saturated, fine SAND, little fine gravel (subrounded to subangular)		neg	0.0	3.7
16	9	18	---	2.0/2.0	---	Dark reddish brown 10R 3/4, saturated, fine SAND, some fine gravel (subrounded to subangular)		neg	0.0	5.5
18	10	20	---	2.0/2.0	---	Dark reddish brown 10R 3/4, saturated, fine SAND, little fine gravel (subrounded to subangular)		neg	0.0	4.1

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-24
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/12/02 End Date: 2/12/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Riser / Steel // \ Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	PID head space (ppm)
0	1	2	---	2.0/1.0	---	Dark yellowish brown 10YR 4/2, damp, SILT, some fine to coarse sand, little organic matter, little fine to coarse gravel (angular), trace brick fragments		neg	0.0	0.1
2	2	4	---	2.0/0.5	---	Moderate yellowish brown 10YR 5/4, damp, fine to medium SAND, coarse gravel (angular) lodged In split spoon tip		neg	0.0	0.6
4	3	6	---	2.0/1.5	---	Pale reddish brown 10R 5/4, damp to wet, fine SAND, some silt, little fine gravel (subangular), trace clay		neg	0.0	4.1
6	4	8	---	2.0/1.6	---	Pale reddish brown 10R 5/4, saturated, SILT, some fine sand, trace fine gravel (angular)		neg	0.0	3.9
8	5	10	---	2.0/1.8	---	Pale reddish brown 10R 5/4, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	4.0
10	6	12	---	2.0/2.0	---	Olive gray 5Y 4/1, saturated, CLAY, some silt, trace organic matter, trace shells/shell fragments		neg	0.0	2.3
12	7	14	---	2.0/2.0	---	Olive gray 5Y 4/1, saturated, CLAY, some silt, trace organic matter, trace shells/shell fragments		neg	0.0	3.2
14	8	16	---	2.0/2.0	---	As above to approximately 15 ft, then pale reddish brown 10R 5/4, saturated, fine SAND, little fine to medium gravel		neg	0.0	1.6
16	9	18	---	2.0/0.5	---	Pale reddish brown 10R 5/4, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	1.9
18	10	20	---	2.0/1.5	---	Pale reddish brown 10R 5/4, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.6

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-25
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/13/02 End Date: 2/13/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Riser / Steel // ; \ Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	PID head space (ppm)
0	1	2	---	2.0/0.0	---	No Recovery		---	---	---
2	2	4	---	2.0/0.3	---	Dark yellowish brown 10YR 4/2, saturated, fine SAND (poor recovery)		neg	0.0	0.0
4	3	6	---	2.0/2.0	---	Olive gray 5Y 3/2, saturated, CLAY, some silt, little organic matter		neg	0.0	0.0
6	4	8	---	2.0/2.0	---	Olive gray 5Y 3/2, saturated, CLAY, some silt, little organic matter		neg	0.0	0.0
8	5	10	---	2.0/2.0	---	Olive gray 5Y 3/2, saturated, CLAY, some silt, little organic matter		neg	0.0	0.0
10	6	12	---	2.0/2.0	---	As above to approximately 13 ft, then pale reddish brown 10R 5/4, saturated, fine SAND, little fine gravel (subangular)		neg	0.0	0.0
12	7	14	---	2.0/1.3	---	Pale reddish brown 10R5/4, saturated, fine SAND, little fine to coarse gravel (subangular)		neg	0.0	0.0
14	8	16	---	2.0/1.5	---	Pale reddish brown 10R5/4, saturated, fine SAND, little fine to coarse gravel (subangular)		neg	0.0	0.0
16	9	18	---	2.0/1.5	---	Pale reddish brown 10R5/4, saturated, fine SAND, little fine to coarse gravel (subangular)		neg	0.0	0.0
18	10	20	---	2.0/1.0	---	Pale reddish brown 10R5/4, saturated, fine SAND, little fine to coarse gravel (subangular)		neg	0.0	0.0

[illegible]s: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-26
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/13/02 End Date: 2/13/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Riser / Steel // / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	PID head space (ppm)
0	1	2	---	2.0/1.0	---	Dark yellowish brown 10YR 4/2, damp, fine SAND some silt, little organic matter		neg	0.0	0.0
2	2	4	---	2.0/1.0	---	Dark yellowish brown 10YR 4/2, saturated, fine SAND, some silt, little fine gravel (angular)		neg	0.0	0.2
4	3	6	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, saturated, fine SAND		neg	0.0	0.9
6	4	8	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, saturated, fine SAND		neg	0.0	1.0
8	5	10	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, saturated, fine SAND, some silt, little clay		neg	0.0	1.2
10	6	12	---	2.0/1.7	---	As above with intermittent clay seams (0.05 ft thick). Bottom of sample: little fine gravel (subrounded to subangular)		neg	0.0	1.6
12	7	14	---	2.0/0.5	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subangular) poor recovery		neg	0.0	2.1
14	8	16	---	2.0/1.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subangular to angular)	very dense	neg	0.0	0.9
16	9	18	---	1.5/1.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subangular to angular)	very dense	neg	0.0	0.0
18	10	20	---	2.0/1.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to medium gravel, little coarse gravel (subangular to angular)	very dense	neg	0.0	0.0

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-27
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/13/02 End Date: 2/13/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Riser / Steel // — Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	PID head space (ppm)
0	1	2	---	2.0/1.3	---	Grayish brown 5YR 3/2, damp, SILT, some fine to coarse sand, little organic matter, trace fine gravel (angular)		neg	0.0	0.0
2	2	4	---	2.0/1.0	---	Dark yellowish brown 10YR 4/2, damp to wet, fine SAND, some silt		neg	0.0	0.0
4	3	6	---	2.0/1.5	---	Moderate yellowish brown 10YR 5/4, saturated, fine SAND, little silt		neg	0.0	0.0
6	4	8	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, saturated, SILT, fine SAND, intermittent fine sand lenses (0.05 ft thick)		neg	0.0	0.0
[illegible]	5	10	---	2.0/0.4	---	Moderate yellowish brown 10YR 5/4, saturated, SILT, fine SAND, intermittent fine sand lenses (0.05 ft thick)		neg	0.0	0.0
10	6	12	---	2.0/1.7	---	Moderate yellowish brown 10YR 5/4, saturated, very fine SAND		neg	0.0	0.0
12	7	14	---	2.0/1.5	---	Moderate yellowish brown 10YR 5/4, saturated, very fine SAND; bottom 0.3 ft little fine to medium gravel (angular)		neg	0.0	0.0
14	8	16	---	2.0/1.5	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subangular to angular)		neg	0.0	0.0
16	9	18	---	2.0/1.5	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subangular to angular)		neg	0.0	0.0
18	10	20	---	2.0/1.3	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subangular to angular)		neg	0.0	0.0

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-28
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/14/02 End Date: 2/14/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Riser / Steel // ; Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	head space (ppm)
0	1	2	---	2.0/1.0	---	Moderate yellowish brown 10YR 5/4, saturated, SILT, little fine sand, little organic matter		neg	0.0	0.0
2	2	4	---	2.0/1.3	---	Moderate yellowish brown 10YR 5/4, saturated, very fine SAND, little silt, trace organic matter		neg	0.0	0.0
4	3	6	---	2.0/1.5	---	As above to approximately 5.3 ft, then pale reddish brown 10R 4/2, saturated , fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
6	4	8	---	2.0/1.3	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
8	5	10	---	2.0/1.2	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
10	6	12	---	2.0/1.5	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
12	7	14	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
14	8	16	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
16	9	18	---	2.0/1.4	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
18	10	20	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-29
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/14/02 End Date: 2/14/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = ; Riser ; Steel // ; Grout ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	PID head space (ppm)
0	1	1	---	1.0/1.0	---	Grayish brown 5YR 3/2, damp to wet, SILT, some fine gravel (angular), little organic matter		neg	0.0	0.0
1	---	4	---	---	---	Auger through concrete pad: 1-4 ft		---	---	---
4	2	6	---	2.0/2.0	---	Pale yellowish brown 10YR 6/2, saturated, fine SAND, little silt	low odor	neg	4.2	18.6
6	3	8	---	2.0/2.0	---	Pale brown 5YR 5/2, saturated, fine SAND, little fine gravel (subangular)		neg	2.1	5.3
8	4	10	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.1	0.3
10	5	12	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.1
12	6	14	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
14	7	16	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
16	8	18	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
18	9	20	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-30
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/14/02 End Date: 2/14/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Grout Riser / Sand Pack Steel // / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	head space (ppm)
0	1	2	---	2.0/1.5	---	Grayish brown 5YR 3/2, damp, fine to coarse SAND, little fine to coarse gravel (angular)		neg	0.0	0.0
2	2	4	---	2.0/1.7	---	Dark yellowish brown 10YR 4/2, damp, SILT, some fine to coarse SAND, little fine to coarse gravel (angular)		neg	0.0	0.0
4	3	6	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, saturated, fine SAND, little silt		neg	0.0	0.0
6	4	8	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, saturated, fine SAND, little silt		neg	0.0	0.0
8	5	10	---	2.0/2.0	---	Moderate yellowish brown 10YR 5/4, saturated, fine SAND, little silt		neg	0.0	0.0
10	6	12	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
12	7	14	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
14	8	16	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
16	9	18	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0
18	10	20	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, little fine to medium gravel (subrounded to subangular)		neg	0.0	0.0

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-31
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118.080	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/15/02 End Date: 2/15/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = Grout Riser Sand Pack Steel // Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	head space (ppm)
0	1	2	---	2.0/2.0	---	Dark yellowish brown 10 YR 4/2, damp, SILT, some fine to coarse sand, little fine to coarse gravel (angular), trace concrete fragments		neg	0.0	0.0
2	2	4	---	2.0/0.7	---	As above, gravel lodged in split spoon tip		neg	0.0	0.0
4	3	6	---	2.0/1.4	---	Dark yellowish brown 10 YR 4/2, saturated, fine SAND, little fine to coarse gravel (subangular to angular)		neg	0.0	0.0
6	4	8	---	2.0/1.0	---	Dark yellowish brown 10 YR 4/2, saturated, fine SAND, little fine to coarse gravel (subangular to angular)		neg	0.0	0.0
[illegible]	5	10	---	2.0/2.0	---	As above to approximately 9.5 ft, then Pale reddish brown 10R 4/2, saturated, fine sand, little fine to medium gravel (angular)		neg	0.0	0.0
10	6	12	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to coarse gravel (angular)		neg	0.0	0.0
12	7	14	---	2.0/1.5	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to coarse gravel (angular); bottom 0.2 ft apparent broken cobble		neg	0.0	0.0
14	8	16	---	2.0/2.0	---	Cobble 14.0 - 14.5 ft, then dark yellowish brown 10YR 4/2, saturated, fine SAND, little silt		neg	0.0	0.0
16	9	18	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subrounded to subangular)		neg	0.0	0.0
18	10	20	---	2.0/2.0	---	Pale reddish brown 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subrounded to subangular)		neg	0.0	0.0

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-32
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/15/02 End Date: 2/15/02
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = / Riser / Steel // — Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	head space (ppm)
0	1	2	---	2.0/1.0	---	Grayish brown 5YR 3/2, damp, SILT, some fine to coarse gravel, little fine to coarse sand		neg	0.0	0.0
2	2	4	---	2.0/1.5	---	Grayish red 10R 4/2, damp, fine SAND, some coarse to fine gravel (angular)		neg	0.0	0.0
4	3	6	---	2.0/0.9	---	Grayish red 10R 4/2, saturated, coarse to fine GRAVELl (angular), some fine sand	boney augering (cobbles?)	neg	0.0	0.0
6	4	8	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, some coarse to fine gravel (angular)		neg	0.0	0.0
8	5	10	---	2.0/1.0	---	Grayish red 10R 4/2, saturated, fine SAND, some coarse to fine gravel (angular); gravel lodged in spoon tip		neg	0.0	0.0
10	6	12	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subanguiar to angular)		neg	0.0	0.0
12	7	14	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subanguiar to angular)		neg	0.0	0.0
14	8	16	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, some fine to coarse gravel (subangular to angular)		neg	0.0	0.0
16	9	18	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, little fine to coarse gravel (subanguiar to angular)		neg	0.0	0.0
18	10	20	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, little fine to coarse gravel (subanguiar to angular)		neg	0.0	0.0

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-33
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 2/15/02 End Date: 2/15/02

Boring Company: Parratt-Wolff, Inc.
Foreman: Lee Penrod
Drill Rig: CME
OBG Geologist: Chawn O'Dell

Screen = | Riser | Steel // | Grout | Sand Pack | Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	PID head space (ppm)
0	1	2	---	2.0/1.0	---	Dark yellowish brown 10YR 4/2, damp to wet, fine SAND, some silt, little organic matter		neg	0.0	0.0
2	2	4	---	2.0/1.3	---	Dark yellowish brown 10YR 4/2, saturated, fine SAND, trace yellow brick fragments		neg	0.0	0.0
4	3	6	---	2.0/2.0	---	As above to approximately 5 ft, then 0.2 ft of brick fragments, followed by grayish red 10R 4/2, saturated, fine SAND, little fine to coarse gravel (subangular to angular)		neg	0.0	0.0
6	4	8	---	2.0/1.6	---	Grayish red 10R 4/2, saturated, fine SAND, little fine to coarse gravel (subangular to angular), trace fine to coarse sand		neg	0.0	0.0
8	5	10	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, little fine to coarse gravel (subangular to angular), trace fine to coarse sand		neg	0.0	0.0
10	6	12	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, little fine to coarse gravel (subangular to angular), trace fine to coarse sand		neg	0.0	0.0
12	7	14	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, some coarse gravel (subangular to angular), little fine to medium gravel		neg	0.0	0.0
14	8	16	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, some coarse gravel (subangular to angular), little fine to medium gravel		neg	0.0	0.0
16	9	18	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, some coarse gravel (subangular to angular), little fine to medium gravel	very dense	neg	0.0	0.0
18	10	20	---	2.0/2.0	---	Grayish red 10R 4/2, saturated, fine SAND, some coarse gravel (subangular to angular), little fine to medium gravel	very dense	neg	0.0	0.0

Notes: The soil boring was grouted to the surface with cement/bentonite grout.

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O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-34
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/29192	Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 06/06/03 End Date: 06/06/03
Boring Company: Parratt-Wolff, Inc. Foreman: Mickey Marshal Drill Rig: Tripod OBG Geologist: Chawn O'Dell		Screen = ; Riser ; Steel // ; Grout ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	UV Light	PID over spoon (ppm)	head space (ppm)
0	1	4		4.0/3.5		Brownish Black 5YR2/1, Saturated, SILT, little organic matter to ~1.0'. Then Moderate Yellowish Brown 10YR5/4, saturated, fine sand, little silt.	2-4 B.D.		0.0	
4	2	8		4.0/4.0		Moderate Yellowish Brown, 10YR5/4, saturated fine SAND, little silt, trace fine gravel (subround-subangular).			0.0	
8	3	12		4.0/4.0		Moderate Yellowish Brown 10YR5/4, saturated fine SAND, little silt, trace fine gravel (subround-subangular)			0.0	
12	4	16		4.0/4.0		Pale Reddish Brown 10R5/4, saturated, fine SAND, little silt, little fine gravel, subround.			0.0	
16	5	17.3		1.3/1.0		as above, Refusal at 17.3 ft.			0.0	

Notes:

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O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-35
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 2 Location: Conc. Pad Area 1 Start Date: 6/14/04 End Date: 6/14/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	3	2.0/0.0	--	18" concrete				
2		4	12-9 12-12	2.0/1.2	21	7"-5YR6/4 Dusky Yellow, cmf(+) SAND , medium dense, moist, odor 7"-4YR5/2 Pale Brown, cmf(+) SAND, little rnd gravel, medium dense, moist, odor, sheen at tip			11.2	POS
4		6	4-8 6-6	2.0/1.2	14	14"-N2 Grayish Black (5") grading to 10YR6/6 Dark Yellowish Orange (3") to 10YR5/4 Moderate Yellowish Brown, f SAND, medium dense, sat., odor, sheen, some silt last 5"			5.5	POS
6		8	5-6 10-11	2.0/1.4	16	17"-10YR5/4 Moderate Yellowish Brown, f SAND, trace cm sand and rnd gravel, medium dense, sat., sheen, NAPL in sand (black and yellow) oriented horizontally, odor			41.3	POS
8		10	10-9 17-25	2.0/?	26	10YR5/4 Moderate Yellowish Brown, very f SAND, medium dense, sat., odor			4.6	POS
10		11.3	3-19 50/0.3	2.0/1.1	50+	as above grading to cmf SAND and GRAVEL, tight, very dense, saturated, no odor at bottom, slight at top.			2.1	Slight POS
12		12.9	38 50/0.4	0.9/0.5	50+	6"-10YR5/4 Pale Reddish Brown, tight f SAND, and little (subrnd-sub ang) gravel, trace silt, very dense, moist-wet, slight odor.			3.8	NEG
14		14.9	25 50/0.4	0.9/0.5	50+	6"-As above, rnd gravel.			2.3	NEG
16		16.8	25 50/0.3	0.8/0.7	50+	8"-As Above			4.2	NEG
18		18.9	38 50/0.4	0.9/0.7	50+	8"-As above, f SAND, little (rnd) gravel, moist, no odor			1.6	NEG
20		20.9	30 50/0.4	0.9/0.7	50+	8"-As above, no gravel			1.1	NEG

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-35
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 2 of 2 Location: Conc. Pad Area 1 Start Date: 6/14/04 End Date: 6/14/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
22		22.9	35	0.9/0.5	50+	6"-As above, more 5R4/2 Grayish Red			1.1	NEG
			50/0.4							
24		24.9	33	0.9/0.7	50+	8"-As above			1.6	NEG
			50/0.4							
						End of Boring at 24.9 ft.				

Grouted to surface.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-36
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 2 Location: South of SB-3 Start Date: 6/15/04 End Date: 6/15/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		1	- -	1.0/0.0	- -	Blacktop, gravel				
1		2	6-6	1.0/0.5	- -	10YR6/6 Dark Yellowish Orange, SILT, stiff, moist, no odor			2.5	NEG
2		4	11-25 24-20	2.0/0.7	49	8"-5YR3/2 Grayish Brown, as above, grading to cmf SAND, some silt, little ang gravel, brick fragments, dense, moist, no odor			0.9	NEG
4		6	6-9 9-14	2.0/0.5	18	4"-As above 10"-10YR6/6 Dark Yellowish Orange, SILT, trace rnd gravel, moist, no odor 4"-10YR4/2 Dark Yellowish Brown, cmf SAND, little silt and ang gravel, medium dense, moist, no odor			0.7	NEG
6		8	2-2 3-4	2.0/0.5	5	As above			0.6	NEG
8		10	6-9 9-11	2.0/0.7	18	8"-N2 Grayish Black and 10YR5/4 Moderate Yellowish Brown, cmf SAND and f GRAVEL (some silt top 2"), brick fragment, slag/coal fragments (shiny), medium dense, saturated, sheen, odor			3.6	NEG
10		12	12-4 2-2	2.0/0.1	6	2"-As above, some silt, coal fragment			6.3	NEG
12		14	2-3 4-3	2.0/1.3	7	3"-As above, sheen 13" - N6 Medium Light Gray, SILT, organic (roots?) matter, mottling, some clay, trace sand, firm, moist, odor			6.5	NEG
14		16	2-2 4-4	2.0/1.6	6	10"-As above, gravel and concrete fragment seam <1" at 6" 5YR7/6 Moderate Yellow mottling 9"-N6 SILT and f SAND, loose, wet, odor			3.8	NEG Slight POS
16		18	2-3 4-4	2.0/1.4	7	7"-N3 Dark Gray SILT, little clay, loose, moist slight odor 10"-N3 Dark Gray, f SAND, little silt, organic fragments, loose, wet, slight odor			2.3	NEG
18		20	1-1 1-1	2.0/0.3	2	14"-N7 Light Gray, CLAY, very soft, wet, slight odor			1.8	NEG

At 4-6 ft. hard drilling.
Cuttings stop coming to surface at ~10 ft.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-36
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 2 of 2 Location: South of SB-3 Start Date: 6/15/04 End Date: 6/15/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
20		22	NS	NS	--	NS			--	--
22		24	10-10 7-7	2/0/1.5	17	6"-As 18'-20', sheen, spotty NAPL 12"-10YR4/2 Dark Yellowish Brown, cmf SAND and GRAVEL, (rnd gravel), NAPL, medium dense, sat., sheen, odor			241	POS
24		26	6-6 4-3	2.0/0.8	10	4"-As above 6"-10YR5/4 Moderate Yellowish Brown, cmf(++) SAND, loose, saturated, sheen, odor, rock in shoe			12.1	POS
26		28	6-9 15-20	2.0/1.2	24	4"-As above, sheen 10"-5YR4/4 Moderate Brown, cmf SAND and (rnd-subrnd) GRAVEL, dense (tight), moist, odor, slight sheen (dragdown)			9.8	NEG
28		29.9	25-32 50/0.4	1.9/0.6	50+	7"-As above, very dense			6.9	NEG
						Spoon refusal at 29.9 ft				

20-22 ft. not sampled. Failed to sample interval after adding auger flights.
Grouted to surface.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-37
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 2 Location: West of SB-3 and 4, between SB-3 and 4 Start Date: 6/15/04 End Date: 6/15/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		1	- -	1.0/0.0	- -	Asphalt, gravel				
1		2	4-7	1.0/0.8	- -	9"-10YR4/2 Dark Yellowish Brown, f SAND, little (rnd) gravel, grading to 10YR6/4 Moderate Yellowish Brown SILT, some clay, trace coal fragments, medium dense, moist, no odor			0.5	NEG
2		4	16-16 18-17	2.0/0.3	34	2"-10YR4/2 Dark Yellowish Brown, cmf SAND and GRAVEL, trace coal fragments, dense, moist, no odor 2"-10YR5/4 Moderate Yellowish Brown, cmf SAND, little cmf gravel, dense, moist, no odor			0.6	NEG
4		6	8-8 27-21	2.0/0.2	35	2"-As above, moist			1.7	NEG
6		8	4-3 1-1	2.0/0.8	4	2"-N2 Grayish Black, f SAND, trace coal fragments, loose, slight odor, wet 8"-10YR5/4 Moderate Yellowish Brown, f SAND, some silt, trace (rnd) gravel, very loose, wet, no odor			0.9	NEG
8		10	1-1 1-2	2.0/1.3	2	11"-As above, liquefied, light discoloring at bottom, odor, very loose 4"-N2 Black, GRAVEL, little sand, coal slag, roots, organic fragments, (gold color fragment),very loose, odor			0.6 1.3	NEG Slightly POS
10		12	1-2 3-2	2.0/0.3	5	3"-As above			1.0	NEG
12		14	2-2 4-7	2.0/1.6	6	3"-As above 16"-N6, Medium Light Gray, SILT, little clay, rust mottles, organic matter (roots), stiff, moist, odor			4.5	NEG
14		16	2-2 4-5	2.0/1.6	6	16"-As above, moist, odor 3" - N6 Medium Light Gray, f SAND and SILT, loose, moist, odor			1.7	NEG
16		18	3-3 4-4	2.0/1.4	7	17"-As above shell fragments, odors, becoming wet. Grading to (sticky, wet, no odor (clay last 4")			5.1	NEG

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-37
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 2 of 2 Location: West of SB-3 and 4, between SB-3 and 4 Start Date: 6/15/04 End Date: 6/15/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = Grout Riser Sand Pack Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
18		20	2-2	2.0/1.3	4	4"-As above			3.0	NEG
			2-2			12"-5YR6/4 Dusky Yellow, SILT, little clay,soft, wet, odor				
20		22	3-11	2.0/1.5	22	7"-As above			3.6	NEG
			11-9			4"-10YR6/6 Dark Yellowish Orange, SILT, little clay and gravel, hard, moist, odor, black stain				
						7"-10YR5/4 Pale Reddish Brown, f SAND, little gravel (cmf rnd), medium dense, wet, odor, black stain				
22		24	3-3	2.0/0.7	5	8"-As above, liquefied odor			5.4	NEG
			2-2							
24		26	1-1	2.0/0.0	9	NR				
			8-5							
26		28	10-15	2.0/1.3	45	16"-10YR5/4 Pale Reddish Brown, cmf(+) SAND, gravel (rnd), becoming extremely dense, moist, odor,				
			39-43						4.6	NEG
						End of Boring at 28 ft				

Grouted to surface.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-38
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: East of SB-35, Area 1 Start Date: 6/16/04 End Date: 6/16/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	2/2 4/4	2.0/0.8		5" - 10YR5/12 - Dark Yellow Brown, cmf(+) sand, moist, no odor, little (rnd) gravel. 5" - 10YR8/2 - Dark Yellow Brown, cmf(+), sand, trace gravel, moist, no odor			2.8	NEG
2		4	2/10 32/23	2.0/0.9		7" - 10YR4/2 Dark Yellow Brown, f SAND, little silt, trace (rnd) gravel, wet, sheen, odor 3" - 5YR6/4 Dusky Yellow, f SAND, dry-moist, odor, some silt 1" - as above, some gravel, sheen, odor, moist			27.3	NEG
4		6	25/19 11/9	2.0/1.2		14" - 10YR6/6 - Dark Yellow Brown, cmf(+) SAND, trace of gravel (rnd), moist, odor, becomes wet and sheen at 6" from top			7.6	POS
6		8	10/8 8/7	2.0/0.9		11" - As above, becoming some fine NAPL blebs			7.6	POS
						9"- As above, slight sheen, saturated			2.7	NEG
8		10	7/8 8/8	2.0/0.8						
10		12	10/14 15/20			2" - As above, saturated, poor recovery			NA	NEG
12		14	19/21 17/15	2.0/1.3		15" - As above, cmf SAND, little fine (rnd) gravel, saturated slight odor - silt lens ~1" thick, 2" from top becoming light (dense)			2.0	NEG
14		15.4	15/40 50/0.4	2.0/1.3		13" - As above, becoming more fine sand, trace fine gravel, moist, more dense, slight odor, becoming 5YR4/4, 2" - 5YR4/4 Medium Brown, CLAY, little silt and fine sand, moist, stiff, no odor			2.6	NEG
16		17.3	11/42 50/0.3	2.0/0.6		8" - 10YR5/4 Pale Reddish Brown, CMF(+), SAND, trace (fine (md) gravel, moist, no odor, tight			2.4	NEG
18		18.8	14 50/0.3	2.0/0.6		8" - As above, tight			2.2	NEG
20		21.4	40/50 50/0.4	2.0/0.8		9" - As above, no odor				NEG
						EOB - 22'				

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-39
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Adjacent to water and MW-7 Start Date: 6/16/04 End Date: 6/16/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser; \ Grout; Sand Pack; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		2	3-5	2.0/1.3	11	7"-Topsoil 10YR5/4 Medium Yellowish Brown				
			6-5			9"-10YR4/2 Dark Yellowish Brown, cmf SAND, coal fragments, slag, medium dense, no odor, dry			0.0	NEG
2		4	3-4	2.0/1.3	11	16"-10YR5/4 Moderate Yellowish Brown, f SAND, medium dense, moist, no odor			3	NEG
			7-7							
4		6	4-6	2.0/1.6	12	19"-As above, bedding, oxidation (rust), medium dense, wet, no odor,			2.5	NEG
			6-5							
6		8	4-5	2.0/1.4	10	17"-As above, grading to some silt, medium dense, becoming less wet			2.6	NEG
			5-6							
8		10	4-5	2.0/1.1	10	13"-As above, SILT, intermittent f sand lenses, stiff, moist, more moist at lenses, no odor			2.5	NEG
			5-4							
10		12	4-5	2.0/1.3	11	16"-As above, becoming f SAND and SILT, trace f (rnd) gravel, stiff, wet, no odor			2.5	NEG
			6-6							
12		14	3-3	2.0/1.0	5	6"-As above, f SAND, some silt, no odor			2.5	NEG
			2-2			6" - 10YR5/4 Pale Reddish Brown, cmf(++) SAND, little f (rnd) gravel, loose, saturated, no odor				
14		16	2-2	2.0/0.1	4	2"-10YR5/4 Moderate Yellowish Brown, f SAND, little silt, loose, saturated, no odor			2.7	NEG
			2-2							
16		18	6-6	2.0/1.0	20	12"-As above, little cmf(rnd) gravel, bedoming dense, saturated, no odor			2.3	NEG
			14-20							
18		20	34-17	2.0/0.9	52	11"-10YR5/4 Pale Reddish Brown, cmf SAND, little cmf (rnd) gravel, very dense, moist-wet, no odor			2.6	NEG
			35-48							
20		20.9	21	2.0/0.4	50+	5"-As above, no odor, moist			2.4	NEG
			50/0.4							
22		23.4	25-43	1.4/0.6	50+	7"-As above, cmf(+) SAND, moist			2.6	NEG
			50/0.4							
24		25	30	2.0/0.2	- -	3"-As above			2.7	NEG
			30							
						End of boring at 25 ft.				

MS/MSD collected at SB-39 (0-4').
Grouted to surface.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-40
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: South of Concrete Pad Area 1 Start Date: 6/17/04 End Date: 6/17/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		2	1-1 1-2	2.0/1.3	3	6"-topsoil 10"-10YR7/4 Grayish orange to 10YR2/2 Dusky Yellowish Brown, cmf SAND, trace f (rnd) gravel, green mottles, stained, very loose, moist-wet, slight odor			0.0	
2		4	10-23 16-10	2.0/1.0	39	2"-As above 10"-10YR6/6 Dark Yellowish Orange, cmf(++) SAND, trace (rnd) gravel, dense, moist, no odor			0.0	
4		6	9-5 6-4	2.0/1.0	11	As above, 10YR5/4, Moderate Yellowish Brown, some silt at top grading to trace silt, becoming medium dense, saturated, no odor			0.0	
6		8	6-5 14-8	2.0/0.5	19	6"-As above, rock in shoe			0.0	
8		10	14-18 22-17	2.0/0.7	40	9"-As above, organics trace, dense			0.0	
10		12	4-9 15-21	2.0/1.0	24	12"-As above, medium dense, moist, no odor			0.0	
12		12.4	50/0.4	0.4/0.0	50+	NR-rock in shoe, very dense			0.2	
14		16	20-10 18-26	2.0/0.8	28	10"-As 10-12', medium dense, saturated			0.8	
16		16.9	14 50/0.4	0.9/0.8	50+	10"-5YR4/4 Moderate Brown, f SAND, very dense, saturated, no odor			0.0	
18		19.4	2-15 50/0.4	1.4/0.3	50+	4"-10YR5/4 Pale Reddish Brown, cmf(+) SAND, little f (rnd) gravel, very dense, moist, no odor			0.4	
20		20.9	10 50/0.4	0.9/0.2	50+	3" - As above			0.1	
22		22.9	30 50/0.4	2.0/0.2	50+	3" - As above			0.3	
24		25	16-43	1.0/0.1	--	2" - As above			0.3	
						End of Boring at 25 ft				

1200: Trip Blank prepared in field with Wegman's Distilled Water
UV Light not used due to rain.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-41
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 2 Location: Southwest of SB-36 Start Date: 6/18/04 End Date: 6/18/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / \ Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		2	- -	2.0/0.0		Asphalt, gravel				
1		2	5-7	1.0/0.7		9"-10YR4/4, Moderate Brown, SILT, some cmf sand, trace (rnd) f gravel, stiff, moist, no odor			0.3	NEG
2		4	10-12 11-9	2.0/0.1	23	2"-As above Concrete in shoe			1.0	NEG
4		6	5-3 3-2	2.0/0.0	6	NR - spoon not wet			NA	NA
6		8	2-2 2-2	2.0/0.6	4	2"-10YR5/4 Moderate Yellowish Brown, cmf SAND and, some gravel, little silt, loose, moist, no odor 5"-N1 Black, coal fragments, clinker, sheen, loose, wet, slight odor			2.0	POS
8		10	3-2 2-2	2.0/0.3	4	1"-As above, coal tar 2"-N2 Grayish Black, SILT, coal fragments, blebs of NAPL, soft, odor, moist,			7.0	NEG
10		12	4-4 6-7	2.0/0.7	10	9"-As above, organic (roots), blebs of NAPL, stiff, strong odor, moist,			9.6	NEG
12		14	2-2 2-2	2.0/1.1	4	14"-N5 Medium Gray, SILT, some clay, organics (roots), rusty mottles, soft, moist, odor			7.9	NEG
14		16	2-4 2-4	2.0/1.1	6	9"-As above,firm, more moist 5"-5YR4/1 Olive Gray, SILT and f SAND, firm, wet, odor			2.5	NEG
16		18	3-4 2-3	2.0/1.3	6	6"- as above 9"-5YR4/2 Oliver Gray, SILT, little f sand, shell fragments, organics, loose, moist, slight odor			2.5	NEG
18		20	3-2 2-4	2.0/1.2	4	6"-SILT, soft 8"-4YR5/7 light olive gray, f SAND, some silt, loose, wet, slight odor			1.1	NEG
20		22	1-2 1-1	2.0/1.5	3	11"-As above, SILT, little clay, very soft, odor, wet 7"-5YR5/1 light olive gray, CLAY, wet, soft, moist, odor			2.3	NEG

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-41
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 2 of 2 Location: Southwest of SB-36 Start Date: 6/18/04 End Date: 6/18/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	PID (ppm)	UV
22		24	1-1 1-1	2.0/1.7	2	20" - As above, odor, very soft, wet, moist			9.8	NEG
24		26	1-1 1-1	2.0/0.8	2	10"-5YR6/4 Dusky yellow, SILT, some f sand, very soft, wet, odor			9.6	NEG
26		28	4-4 3-2	2.0/0.5	7	2"-As above, little f sand <1"-N3 Dark Gray, f SAND, stained, strong odor, wet 4"-10YR5/4 Pale Reddish Brown, cmf(+) SAND, trace f (rnd) gravel, loose, moist-wet, strong odor			1.8	NEG
28		29.4	16-38 50/0.4	1.4/0.8	50+	10"-As above, very dense			2.5	NEG
30		30.9	38 50/0.4	0.9/0.5	50+	6"-As above, odor, moist			0.8	NEG
32		33.1	38-42 50/0.1	1.1/0.5	80+	6"-As above, extremely dense, odor, moist			0.9	NEG
						End of Boring at 33.1 ft				

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-42
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 2 Location: East of SB-31 Start Date: 6/23/04 End Date: 6/23/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser; \ Grout; Sand Pack; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
						2"- 10YR2/2 Dusky Yellowish Brown,				
0		2	4-6	2.0/0.5	12	topsoil			0.0	NEG
			6-6			2" - Slag				
						2" - 10YR2/2 Dusky Yellowish Brown, cmf sand, some angular gravel, moist, no odor, brick fragments				
2		4	6-10	2.0/0.7	21	8" - As above, trace clinkers, becoming			0.1	NEG
			11-11			wet at bottom, no odor				
4		6	10-10	2.0/0.8	23	9" - 5YR4/4 Moderate Brown, coarse			0.1	NEG
			13-10			GRAVEL (angular), saturated, no odor, little cmf sand				
6		8	GP	2.0/0.8	GP	10" - As above, saturated, no odor			0.0	NEG
8		10	6-7	2.0/0.8	15	10" - 10YR4/2 Grayish Red, cmf sand			0.5	NEG
			8-5			and GRAVEL, moist, no odor				
10		12	3-11	2.0/1.3	19	5" - As above, saturated, no odor			1.4	NEG
			8-8			8" - 10YR4/2 - Dark Yellowish Brown, cmf (++) SAND, trace fine (rnd gravel), coal fragment, wet, no odor				
12		14	15-7	2.0/0.6	11	7" - As above, N2 Grayish Black, SILT,			1.5	NEG
			4-6			trace fine sand, shell fragments, moist, no odor, organic fragments, hint of laminations at top				
14		16	2-2	2.0/1.0	4	5YR5/2 Pale Brown, cmf(++) SAND			0.0	NEG
			2-2			grading to fine SAND, 3" silt lens, 4" from top, wet, no odor				
16		18	GP	2.0/0.0	GP	NR - sample, trace of material similar to				NEG
						14-16' description			NA	
18		20	9-5	2.0/0.0	10	NR spoon wet			NA	NEG
			5-10							
20		22	5-9	2.0/1.4	31	6" - 5YR3/2 Grayish Brown, cmf(+)				
			22-23			SAND, wet, no odor, little fine gravel				
						11" - 10YR5/4 Pale Reddish Brown, cmf SAND and (ang) GRAVEL, moist, dry, no odor			0.0	NEG

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-42
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 2 of 2 Location: East of SB-31 Start Date: 6/23/04 End Date: 6/23/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
22		24	GP	2.0/1.0	GP	As above, wet - hard tight (geoprobe)			0.0	NEG
24		26	19-35 33-26	2.0/0.8	68	9" - As above			0.0	NEG
						End of Boring @ 26'				

Grouted to surface.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-43
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: North of SB-31 Start Date: 6/23/04 End Date: 6/23/04

Boring Company: Parratt-Wolff, Inc.
Foreman: Lee Penrod
OBG Geologist: Scott Tucker

Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Instaiied	Field Testing PID (ppm)	Field Testing UV
0		2	3-7 3-2	2.0/0.9	10	4" - topsoil, roots 6" N5 med gray, cmf SAND, little gravel, shale fragments, brick fragments, no odor, dry			0.0	NEG
2		4	1-2 4-4	2.0/0.5	6	6" - 5YR4/4 med brown, cmf SAND and GRAVEL (sub-rnd), wet, no odor, coal fragments			0.0	NEG
4		6	3-3 3-3	2.0/0.5	6	6" - as above, brick fragments, slight odor, wet			0.2	NEG
6		8	GP	2.0/0.8	GP	10" - as above, wood fragments (5"), sat, slight odor, sheen on water from spoon. (interval geoprobed)			2.6	NEG
8		10	5-5 17-11	2.0/0.4	22	5" - as above, sat, no odor, no sheen observed			2.1	NEG
10		12	3-7 21-12	2.0/0.8	28	3" - 10YR5/4 mod yellow brown, cmf SAND, some (rnd) gravel, sat, no odor 3" - black wood, slight odor 5" - shale rock fragments, sat, no odor			2.6	NEG
12		14	GP	2.0/0.3	GP	3"-10YR5/4 mod, yellow brown, fine GRAVEL, little cmf sand, sat, no odor (interval geoprobed)			2.9	NEG
14		16	5-3 5-17	2.0/1.1	6	5" - 5YR4/1 olive gray, CLAY, bound by wood fragments, moist, no odor, soft 8" - 10YR4/2 dark yellow brown, silt and fine SAND, wet, no odor, laminated			1.4	NEG
16		18	GP	2.0/0.8	GP	8" - 5YR5/2 pale brown, fine SAND, trace (ang-rnd) f gravel, rock in shoe, wet, no odor. (interval geoprobed)			2.3	NEG
18		18.9	11 50/0.4	0.9/0.8	50+	8" - as above, cmf SAND, trace rnd gravel, wet, no odor			2.7	NEG
						Spoon refusal at 18.9' Auger refusal @ 19.5'				

Notes: DUP-2 collected at SB-43(0-4') @1230
0-4 ft interval sampled twice 6" apart for sample volume
Coal and clinkers not sampled.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-44
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 2 Location: West of SB-31 ~15-22' Start Date: 6/23/04 End Date: 6/23/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		2	4-1 1-1	2.0/1.0	2	6" - N5 Medium Gray, cmf SAND, ash, clinkers, moist, slight odor, black wood fragments, black staining. 6" - topsoil, organics			NA	NEG
2		4	11-8 6-2	2.0/0.3	14	4" - 10YR5/4 Pale Reddish Brown, omf SAND, some (ang) mf gravel, moist, wet at bottom, no odor			NA	NEG
4		6	9-5 5-5	2.0/1.4	10	3" shale fragments, sat 4" - 10YR5/4 Pale Reddish Brown, cmf(+) SAND, trace (ang) fine gravel, wet, no odor			NA	NEG
6		8	GP	2.0/0.8	GP	10" - as above, saturated, no odor (interval geoprobed)			NA	NEG
8		10	2-2 2-2	2.0/1.0	4	10YR5/4 Moderate Yellow Brown, omf SAND, some (ang) fine gravel, little silt, saturated, no odor			4.3	NEG
10		12	3-4 4-3	2.0/0.5	8	10YR3/4 Dark Reddish Brown, cm GRAVEL (ang), sat, no odor, some fine sand....(broken rock)			2.1	NEG
12		14	GP	2.0/0.6	GP	7" -10YR3/4 Dark Reddish Brown, cm GRAVEL (ang), saturated, no odor, some fine sand, broken rock fragments. (interval geoprobed)			3.9	NEG
14		16	2-2 1-2	2.0/0.9	3	8" N2 Grayish Black, SILT, organics, shell fragments, moist, no odor, becoming little clay 1" - 10YR5/4 Moderate Yellowish Brown, m SAND, wet, no odor 2" - 10YR4/2 Dark Yellow Brown, SILT, little fine sand, moist, no odor			4.6	NEG
16		18	GP	2.0/1.4	GP	8" - as above, laminations(-) trace shell fragments 9" - 5YR6/4 Light Brown, cmf SAND and (ang) GRAVEL, becoming omf(+), SAND, little fine gravel, wet, no odor. (interval geoprobed)			4.9	NEG
18		20	GP	2.0/0.8	GP	9" - as above, becoming cmf(++) SAND, little (rnd) fine gravel, wet, no odor			4.3	NEG
20		22	5-12 22-25	2.0/0.6	34	7" - as above, no odor, moist			4.2	NEG

Notes: 0-2 ft and 2-4 ft sampled twice 6" apart for sample volume.
0-8 ft headspace not available due to volume.
No coal or clinkers sampled.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-44
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 2 of 2 Location: West of SB-31 ~15-22' Start Date: 6/23/04 End Date: 6/23/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
22		24	GP	2.0/0.6	GP	7"- as above, moist - wet, no odor, tight. (interval geoprobed)			4.7	NEG
24		25.1	19-43	2.0/0.3	93+	3" - as above, tight			4.7	NEG
			50/0.1							
						Spoon refusal @ 25.1 ft				
						E.O.B. @ 25.1 ft				

Grouted to surface.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-45
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs. Fall: 30 inches	Page 1 of 2 Location: So. neighbors property westerly location near stump Start Date: 6/24/04 End Date: 6/24/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	2-2 2-2	2.0/0.9	4	6" - topsoil 5" - coal fragments, ash clinkers, dry, no odor			0.1	NEG
2		4	3-3 3-4	2.0/1.6	6	3" - as above 6" - 10YR4/3 Dark Yellow Brown, fine SAND, coal fragments, moist, no odor 10" - 10YR6/6 Dark Yellow Orange, fine SAND grading to fine SAND, some silty, wet near top (fine sand) becoming moist, no odor, organics			0.3	NEG
4		6	2-3 13-11	2.0/1.1	16	13" - as above, little silt, moist-wet, no odor			1.6	NEG
6		8	GP	2.0/1.2	GP	14" - 10YR7/4 Grayish Orange, SILT, trace-little clay, little fine sand, wet, no odor, trace fine gravel (rnd-sub rnd) at last 3". (interval geoprobed)			5.4	NEG
8		10	2-4 4-5	2.0/1.6	8	19" - as above SILT (3"), becoming fine SAND, little silt (12"), then becoming SILT, little clay and fine sand, moist-wet, no odor			5.8	NEG
10		12	1-1 3-3	2.0/1.0	4	12" - 10YR6/7 Pale Yellow Brown, fine SAND and SILT, trace rnd gravel and cm sand, wet, no odor			5.1	NEG
12		14	GP	2.0/1.9	GP	20" - N6 Medium Light Gray, SILT, trace fine sand, sat, sticky, trace clay, inc. to little clay 3" - 5YR4/4 Moderate Brown, cmf(+) SAND, trace silt and subrnd gravel, wet, no odor (interval geoprobed)			4.4	NEG
14		16	8-5 5-3	2.0/0.5	10	6" - as above becoming no silt			2.7	NEG
16		18	GP	2.0/0.8	GP	9" - as above, cmf SAND, some (rnd) coarse gravel, saturated, no odor (interval geoprobed)			2.3	NEG
18		20	25-4 3-3	2.0/0.8	7	9" - as above becoming little silt, no odor, saturated			2.7	NEG
20		22	3-4 13-7	2.0/0.9	17	11" - as above becoming tight			2.3	NEG

Notes:

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-45
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs. Fall: 30 inches	Page 2 of 2 Location: So. neighbors property westerly location near stump Start Date: 6/24/04 End Date: 6/24/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = Grout Riser Sand Pack Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
22		24	GP	2.0/1.1	GP	3" - as above 10" -5YR4/4 Moderate Brown, cmf(+) SAND, little gravel, tight, moist, no odor (interval geoprobed)			2.3	NEG
24		25	3-3 3-7	2.0/0.2	6	2" - as above			3.1	NEG
						E.O.B. @ 25 ft				

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-46
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Southside of Conc Pad Area 1 Start Date: 6/24/04 End Date: 6/24/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = Riser — Grout, Sand Pack, Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	1-1 1-1	2.0/1.5	2	10YR4/2 Dark Yellowish Brown (black stains), cmf (+) SAND, very loose, dry, becoming wet, slight odor			3.6	NEG
2		4	2-2 2-2	2.0/1.1	4	8"-As above 5" - N2 Grayish Black, cmf(+) SAND, stained, loose, strong odor, sheen			155	POS
4		6	4-4 5-3	2.0/0.8	9	10"-5YR5/6 Light Brown, cmf(+) SAND, trace (rnd) f gravel, loose, wet, odor			8.2	NEG
6		8	GP	2.0/1.2	GP	14"-As above, little f gravel, slight odor (interval geoprobed)			9.4	NEG
8		9.4	30-36 50/0.4	2.0/1.0	80+	As above, little cmf gravel (rnd), extremely dense, moist- wet, slight odor			9.1	NEG
10		12	19-25 17-16	2.0/0.8	42	10"-As above, 10YR5/4 Pale Red Brown, dense, slight odor, moist-wet			3.1	NEG
12		14	GP	2.0/0.4	GP	5"-As above hard drilling (interval geoprobed)			--	--
						End of Boring at 14 ft				

Notes:
0-4 ft interval required 6 spoons for MS/MSD sample volume.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-47
Client: National Grid Proj. Loc: South First Street, Fulton, NY File No.: 1118/35165	Tripod Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Southside of Conc Pad Area 1, south of SB-46.. Start Date: 10/14/2005 End Date: 10/14/2005
Boring Company: Parratt-Wolff, Inc. Foreman: Jim Lansing Fdrill Rig: Tripod rig OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	2	2.0/0.7	6	top soil, little clinkers.				
			2							
			4						-	neg
			5							
2		4	5	2.0/1.0	14	2"- coal and clinker fragments.				
			6			10"- 10YR6/6 Dark Yellowish Orange,				
			8			f sand.			-	neg
			12							
4		6	9	2.0/1.1	23	13"- as above, trace f rnd gravel,				
			10			saturated, no odor.				
			13						-	neg
			24							
						EOB @ 6 ft.				

Notes:
Heavy rain

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-48
Client: National Grid Proj. Loc: South First Street, Fulton, NY File No.: 1118/35165	Tripod Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Southside of Conc Pad Area 1, southwest of SB-46.. Start Date: 10/14/2005 End Date: 10/14/2005
Boring Company: Parratt-Wolff, Inc. Foreman: Jim Lansing Fdrill Rig: Tripod rig OBG Geologist: Scott Tucker		Screen = / Riser Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	-	2.0/1.3	-	14"- topsoil grading to SILT, some				
			-			f sand, wet, no odor.				
			-			2"- 10YR6/6 Dark Yellowish Orange			-	neg
			-			f SAND, little silt, saturated, no odor.				
2		4	-	2.0/0.6	-	4"- 10YR6/6 Dark Yellowish Orange				
			-			f SAND, little silt, saturated, no odor.				
			-			3"- 10YR6/6 Dark Yellowish Orange			-	neg
			-			f SAND, little silt, trace f gravel,				
						saturated, no odor.				
4		6	-	2.0/0.4	-	10YR6/6 Dark Yellowish Orange				
			-			f SAND, little silt, trace f gravel,				
			-			saturated, no odor.			-	neg
			-							
						EOB @ 6 ft.				

Notes: Heavy rain
0-2 ft interval required 6 spoons for MS/MSD sample volume.
2-4 ft interval required 4 spoons for Duplicate sample volume.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-1
Client: Niagara Mohawk Proj. Loc: Fulton, NY File No.: 1118.081	Sampler: 2" Split Spoon Hammer: 140 lbs. Fall: 30"	Page 1 of 2 Location: Start Date: 7/9/96 End Date: 7/9/96
Boring Company: Parratt Wolff, Inc. Foreman: Brian Waters OBG Geologist: Chawn O'Dell		Screen = Riser; Grout; Sand Pack; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID Over Spoon (PPM)	Field Testing Jar Head Space (PPM)
0						Augered to 4 ft., due to the test pit excavation.				
5	1	4-6	3-4 3-8	2'/2'	7	Pale moderate yellowish brown (10YR 6/2), and medium light gray (N6), mottling, moist to wet, loose SILT, some fine sand, little medium sand, well sorted.			0.0	0.0
	2	6-8	18-50 50/0.2	1.2'/1.2'	50(+)	Pale moderate yellowish brown (10YR 6/2), and medium light gray (N6), mottling, moist to wet, loose SILT, some fine sand, little medium sand, well sorted.			0.0	0.0
10	3	8-10	21-15 23-25	2/0.3'	38	Light brownish gray (5YR 6/1), saturated, hard, fine SAND, some silt, little cobbles. (Cobble driven with the split spoon - poor recovery).			0.0 (Dup 0.0)	0.0
	4	10-12	5-10 8-9	2'/2'	18	Dark yellowish brown (10YR 4/2), saturated, medium dense, fine to medium, subrounded to subangular SAND, little fine angular gravel, trace silt.			0.0	0.0
15	5	12-14	7-8 15-14	2'/2'	23	Dark yellowish brown (10YR 4/2), saturated, medium dense, fine to medium, subrounded to subangular SAND, little fine angular gravel, trace silt			0.0	0.0 (Dup 0.0)
	6	14-16	13-28 44-51	2'/2'	72	Dark yellowish brown (10YR 4/2), moist to wet, extremely dense, subrounded to subangular, fine to coarse SAND, some subangular to subrounded, fine gravel, little silt and clay.			0.0	0.0
	7	16-18	24-50/0.4	0.9/0.9'	50(+)	Dark yellowish brown (10YR 4/2), wet, extremely dense, subrounded to subangular, medium SAND, some fine sand, little silt , trace subrounded to subangular gravel.			0.0	0.0
20	8	18-20	27-32 37-34	2.0/2.0'	69	Pale brown (5YR 5/2), saturated, extremely dense, subrounded to subangular medium SAND, some fine sand, little subrounded to subanular fine gravel, trace silt and clay.			0.0 (Dup 0.0)	0.0 (Dup 0.0)
	9	20-22	16-38 51-51	2.0/2.0'	89	Pale brown (5YR 5/2), saturated, extremely dense, subrounded to subangular fine to medium SAND, some silt, little subrounded to subangular fine gravel, trace clay.			0.0	0.0

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-1
Client: Niagara Mohawk Proj. Loc: Fulton, NY File No.: 1118.081	Sampler: 2" Split Spoon Hammer: 140 lbs. Fall: 30"	Page 2 of 2 Location: Start Date: 7/9/96 End Date: 7/9/96
Boring Company: Parratt Wolff, Inc. Foreman: Brian Waters OBG Geologist: Chawn O'Dell		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID Over Spoon (PPM)	Field Testing Jar Head Space (PPM)
	10	22-24	51-52	1.4/1.4'	50(+)	Pale brown (5YR 5/2), saturated, extremely dense, fine to medium SAND, some silt, little subrounded to subangular fine to medium gravel, trace clay.			0.0	0.0
25			50/.4							
		24-26	52-50/0.3	0.8/0.8'	50(+)	Pale brown (5YR 5/2), saturated, extremely dense, fine to medium SAND, some silt, little fine subrounded gravel.			0.0	0.0
		26-28	68/0.5	0.5/0.5'	50(+)	Pale brown (5YR 5/2), saturated, extremely dense, subrounded to subangular, fine to medium SAND, little silt, trace fine to medium subrounded gravel.			0.0	0.0
		28-30	89/0.5	0.5/0.5'	50(+)	Pale brown (5YR 5/2), saturated, extremely dense, subrounded to subangular, fine to medium subrounded gravel.			0.0	0.0

Well installtion: 2" PVC sump: 17'-15'; 2 x 0.010" slotted PVC screen: 15-5'; riser to grade; Bentonite chips 30-18'; sand pack: 18-3; bentonite chips: 3-1'; grout to grade. Finished as a stickup well.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-2
Client: Niagara Mohawk	Sampler: 2" Split Spoon	Page 1 of 2
Proj. Loc: Fulton, NY	Hammer: 140 lbs.	Location:
File No.: 1118.081	Fall: 30"	Start Date: 7/10/96 End Date: 7/10/96

Boring Company: Parratt Wolff, Inc.
Foreman: Brian Waters
OBG Geologist: Chawn O'Dell

Screen = | Riser ☐ | \ Grout | Sand Pack | Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing: PID Over Spoon (PPM)	Field Testing: Jar Head Space (PPM)
0	1	0-2	2-4 4-2	2/1.3'	8	Moderate yellowish brown (10YR 5/4), damp, loose, fine to medim SAND, some silt, little subrounded to subangular fine gravel.			0.0	0.0
5	2	2-4	2-3 2-5	2/1.6'	5	Pale yellowish brown (10YR 6/2), damp, loose, SILT and fine SAND, little medium sand, trace fine angular gravel, trace asphalt pieces.			0.0	0.0
	3	4-6	2-2 2-2	2/0.2'	4	Dark yellowish brown (10YR 2/2), saturated, loose, medium SAND, little fine sand and silt, trace subrounded gravel.			0.0	0.0
	4	6-8	1-2 3-3	2/1.1'	5	Pale yellowish brown (10YR 6/2), saturated, loose, SILT and fine SAND, little medium sand.			1.3 (Dup 1.2)	2.6 (Dup 2.4)
10	5	8-10	2-4 7-4	2/0.5'	11	Dark yellowish brown (10YR 4/2), saturated, medium dense, fine SAND, some medium sand, little silt.			0.0	1.9
	6	10-12	6-9 9-7	2/0.2'	18	Dark yellowish brown (10YR 4/2), saturated, medium dense, fine SAND little subrounded to subanguiar fine to course gravel.			0.0	2.9
	7	12-14	9-6 7-9	2/0.2'	13	Dark yellowish brown (10YR 4/2), saturated, medium dense, fine SAND, some medium sand, little subrounded to subangular fine to coarse gravel.			0.0	1.7
15	8	14-16	10-9 16-18	2/17'	25	Moderate yellowish brown (10YR 5/4), saturated, medium dense, subrounded to subangular fine to medium SAND, little subrounded to angular fine to coarse gravel, trace silt.			0.0	2.0
	9	16-18	49-50/0.3	0.8/0.8'	50(+)	Moderate brown (5YR 4/4), saturated, extremely dense, subrounded to angular, fine to coarse SAND and GRAVEL, little silt.			1.2 (Dup 1.1)	1.1 (Dup 1.0)
	10	18-20	54-50/0.2	0.7/0.7'	50(+)	Moderate yellowish brown (5YR 4/4), saturated, extremely dense, subrounded to subangular fine to coarse SAND and GRAVEL.			0.0	0.0
20	11	20-22	50/0.3	0.3/0.3	50(+)	Moderate brown (5YR 4/4), saturated, extremely dense, fine to medium SAND, little silt. trace fine angular gravel.			0.0	0.0

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-2
Client: Niagara Mohawk	Sampler: 2" Split Spoon	Page 2 of 2
		Location:
Proj. Loc: Fulton, NY	Hammer: 140 lbs.	
		Start Date: 7/10/96
File No.: 1118.081	Fall: 30"	End Date: 7/10/96

Boring Company: Parratt Wolff, Inc.
Foreman: Brian Waters
OBG Geologist: Chawn O'Dell

Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing: PID Over Spoon (PPM)	Field Testing: Jar Head Space (PPM)
	12	22-14	102/0.5	0.5/0.5'	50(+)	Moderate brown (5YR 4/4), saturated, extremely dense, fine to medium SAND, little silt, trace fine angular gravel			0.0	0.0
	13	24-26	85/0.4	0.4/0.4'	50(+)	Moderate brown (5YR 4/4), saturated, extremely dense, fine to medium SAND, little silt, trace fine angular gravel			0.0	0.0
						Angular refusal at 24.5 ft.				

Well installation: 2" PVC sump: 15-13': 2" x 0.010" slotted PVC screen: 12.5-2.5'; riser to 0.5'. Bentonite chips: 24.5' - 16'; sand pack: 16-2'; bentonite chips: 2-1'; grout to 0.8'. Finished as a flush mount well.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-3
Client: Niagara Mohawk	Sampler: 2" Split Spoon	Page 1 of 2
Proj. Loc: Fulton, NY	Hammer: 140 lbs.	Location:
File No.: 1118.081	Fall: 30"	Start Date: 7/12/96 End Date: 7/12/96

Boring Company: Parratt Wolff, Inc.
Foreman: Brian Waters
OBG Geologist: Chawn O'Dell

Screen = | Riser | \ Grout | Sand Pack | Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip Installed	Field Testing PID Over Spoon (PPM)	Field Testing Jar Head Space (PPM)
0	1	0-2	4-4 4-3	2/0.3'	8	Moderate yellowish brown (10YR 5/4), dry, loose, fine to medium SAND, little coarse sand, trace subangular, fine gravel.			0.0	0.0
	2	2-4	2-4 14-15	2/1.2'	18	Moderate yellowish brown (10YR 5/4), moist, medium dense, medium SAND, some coarse sand, little fine subangular gravel, little ash and asphalt fragments, trace orange brick fragments.			0.0	0.0
5	3	4-6	3-2 3-2	2/0.5'	5	Dusky yellowish brown (10YR 2/2), moist, loose, asphalt (hard chunks), some fine to coarse sand, little ash.			0.0	0.0
	4	6-8	3-2 2-1	2/0.3'	4	Dusky yellowish brown (10YR 2/2), moist, loose, asphalt (hard chunks), some fine to coarse sand, little ash.			0.0	0.0
	5	8-10	3-3 4-7	2/1.2'	7	Moderate yellowish brown (10YR 5/4), wet, loose, fine SAND, little medium sand, trace clay.			0.0	0.0
10	6	10-12	5-11 14-15	2/1.7'	25	Pale yellowish brown (10YR 6/2), moist, hard, CLAY, little silt, trace fine sand.			0.0	0.0
	7	12-14	7-10 9-14	2/2'	19	Pale yellowish brown (10YR 6/2), moist hard, CLAY, some silt, little fine sand.			0.0 (Dup. 0.0)	0.0 (Dup. 0.0)
15	8	14-16	5-6 6-7	2/2'	12	Pale yellowish brown (10YR 6/2), saturated, medium dense, very fine SAND, some silt, little clay.			0.0	0.0
	9	16-18	9-11 11-12	2/1.6'	22	Pale yellowish brown (10YR 6/2), saturated,very fine SAND, some silt, little clay.			0.0	0.0
	10	18-20	15-9 14-5	2/0.4'	23	Pale brown (5YR 5/2), saturated, medium dense, fine to coarse, subrounded to angular, SAND and GRAVEL. Sheen-free product (strong odor).			5.6	210
20	11	20-22	5-6 10-9	2/0.7	16	Pale brown (5YR 5/2), saturated, medium dense, fine to coarse, subrounded to angular, SAND and GRAVEL. (Sheen - strong odor).			3.2	270

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-3
Client: Niagara Mohawk Proj. Loc: Fulton, NY File No.: 1118.081	Sampler: 2" Split Spoon Hammer: 140 lbs. Fall: 30"	Page 2 of 2 Location: Start Date: 7/12/96 End Date: 7/12/96
Boring Company: Parratt Wolff, Inc. Foreman: Brian Waters OBG Geologist: Chawn O'Dell		Screen = / Riser \ Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID Over Spoon (PPM)	Field Testing Jar Head Space (PPM)
	12	22-24	12-22 33-79	2/1.6'	55	Grayish brown (5YR 3/2), saturated extremely dense, medium to coarse SAND, little fine subrounded to subangular gravel, trace silt to fine sand, strong odor.			3.0 (Dup. 3.1)	279 (Dup. 2.75)
25	13	24-26	60/0.4	0.4/0.4'	50(+)	Light brown (5YR 5/6), saturated extremely dense, fine to coarse SAND, some silt, little fine to coarse subrounded to angular gravel, trace clay, slight odor.			2.1	19.6
	14	26-28	50/0.4	0.4/0.4'	50(+)	Light brown (5YR 5/6), saturated extremely dense, fine to coarse SAND, some silt, little fine to coarse subrounded to angular gravel, trace clay, slight odor.			0.6	22

Well installation: 2" PVG sump: 16-14'; 2" x 0.010" slotted screen: 14-4'; riser to 0.5'; bentonite chips 28-16'; sand pack: 16-2'; bentonite chips: 2-1; grout 1-0.8'. Finshed as a flush mount well.

CPO:aj/4 n&d/mw-3(2)

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-4
Client: Niagara Mohawk	Sampler: 2" Split Spoon	Page 1 of 2 Location:
Proj. Loc: Fulton, NY	Hammer: 140 lbs.	Start Date: 7/11/96
File No.: 1118.081	Fall: 30"	End Date: 7/11/96

Boring Company: Parratt Wolff, Inc.
Foreman: Brian Waters
OBG Geologist: Chawn O'Dell

Screen = | Riser | \ Grout | Sand Pack | Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID Over Spoon (PPM)	Field Testing Jar Head Space (PPM)
0	1	0-2	6 4-9	1.5/1.5'	10	Grayish brown (5YR 3/2), damp, medium dense, medium to coarse SAND, some angular fine to coarse gravel, little silt to fine sand. (0-0.5' asphalt and gravel).			0.0	0.0
	2	2-4	5-9 3-4	2/1.4'	12	Grayish brown (5YR 3/2), moist, medium dense, medium SAND, some subrounded to anguler, coarse sand and fine to medium gravel, little orange brick fragments.			0.0	0.0
	3	4-6	41-10 5-5	2/0.4'	15	Light brown (5YR 6/4), moist, medium dense, fine to coarse subrounded to angular SAND and GRAVEL, some orange brick fragments.			0.0	0.0
	4	6-8	47-100/0.3 0.3	0.8/0.5'	100+	Moderate reddish brown (10YR 4/6), damp, extremely dense BRICKS.			0.0	2.1
	5	8-10	12-4 3-4	2/1.6'	7	Grayish black (N2), saturated, loose, fine to coarse, subrounded to angular SAND and GRAVEL, little silt , trace brick and concerete fragments, strong odor.			14.3 (Dup. 14.1)	19.4 (Dup. 18.9)
	6	10-12	2-3 7-6	2/1.5'	10	Brownish black (5YR 2/1), saturated, medium dense, SILT and fine SAND, little medium sand, trace clay moderate odor.			15.2	21.2
	7	12-14	10-11 15-27	2/1.3'	26	Brownish gray (5YR 4/1), saturated, medium dense, subrounded to angular, fine, 'to coarse SAND and GRAVEL, little silt, moderate odor.			6.1	8.3
	8	14-16	3-7 37-49	2/0.6'	44	Brownish gray (5YR 4/1), saturated, dense, subrounded to angular, fine to coarse SAND and GRAVEL, little silt, moderate odor.			5.2	7.6
	9	16-18'	50/0.2'	0.2/0.0		No Recovery.			N.A	N/A
	10	18-20	3-5 12-12	2'/1.2'	17	Light brownish gray (5YR 6/1), saturated, extremely dense, medium to coarse SAND, some fine to angular gravel, little silt. slight odor.			1.3	3.2
	11	20-22	21-42 37-46	2/0.9'	79	Light brownish gray (5YR 6/1), saturated, extremely dense, medium to coarse SAND, some fine to angular gravel, little silt, slight odor.			1.7 (Dup. 1.5)	3.6 (Dup. 3.6)
	12	22-24	5.0/0.4	0.4/0.4'	50(+)	Brownish black (5YR 2/1), saturated, extremely dense, fine to coarse subangular to angular SAND and GRAVEL, little silt, slight odor.			0.8	1.2

CPO:aj/4 n&d/mw-4

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-4
Client: Niagara Mohawk Proj. Loc: Fulton, NY File No.: 1118.081	Sampler: 2" Split Spoon Hammer: 140 lbs. Fall: 30"	Page 2 of 2 Location: Start Date: 7/11/96 End Date: 7/11/96
Boring Company: Parratt Wolff, Inc. Foreman: Brian Waters OBG Geologist: Chawn O'Dell		Screen = / Riser; \ Grout; Sand Pack; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID Over Spoon (PPM)	Field Testing Jar Head Space (PPM)
25	13	24-26	50/0.4	0.4/0.4'	50(+)	Moderate brown (5YR 4/4), saturated, extremely dense, subrounded to angular,medium to coarse SAND, some fine sand, little fine, angular gravel. No apparent odor.			0.0	0.6
	14	26-28	33-57 56-59	2/1.4'	113	Moderate brown (5YR 4/4), saturated, extremely dense, subrounded to angular, fine to coarse SAND, some subrounded to angular gravel, little silt, no apparent odor.			0.0	0.3
30	15	28-30	48-50/0.2	0.7/0.2'	50(+)	Moderate brown (5YR 4/4), saturated, extremely dense, subrounded to angular, fine to coarse SAND, some subrounded to angular gravel, little silt, no apparent odor.			0.0	0.0

Well installation: Sump: 16-14'; 2" x0.010" slotted PVC screen: 14-4' riser: 4-0.5', bentonite chips 30-18', sand pack 18-2'; bentonite pellets 2-1 ft., grout 1-0.5'. Finished as a flush mount well.

CPO:al/4 n&d/mw-4(2)

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-5
Client: Niagara Mohawk Proj. Loc: Fulton, NY File No.: 1118.081	Sampler: 2" Split Spoon Hammer: 140 lbs. Fall: 30"	Page 1 of 1 Location: Start Date: 7/11/96 End Date: 7/11/96
Boring Company: Parratt Wolff, Inc. Foreman: Brian Waters OBG Geologist: Chawn O'Dell		Screen = ; Riser ; Grout \ ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID Over Spoon (PPM)	Field Testing Jar Head Space (PPM)
0	1	0-2	5 8-8	2/2'	13	Grayish brown (5YR 3/2), damp, medium dense, fine to coarse SAND, little fine angular gravel.			0.0	0.0
	2	2-4	4-4 6-5	2/2'	10	Pale yellowish brown (10YR 6/2), damp, medium dense, fine SAND, some medium sand, little silt.			0.0	0.0
5	3	4-6	2-1 8-11	2/2'	9	Moderate brown (5YR 4/4), damp, loose, fine SAND, some medium sand, little silt, staining at tip of spoon. Metal fragements.			1.2	2.3
	4	6-8	3-2 2-2	2/0.0'	4	No recovery. Coarse gravel lodged in spoon tip.			N/A	N/A
	5	8-10	4-1 1-2	2/1.5'	2	Grayish brown (5YR 3/2), saturated, very loose, fine SAND, little silt, strong odor, black staining.			5.5	110
10	6	10-12	6-7 5-5	2/2'	12	Pale yellowish brown (10YR 6/2), saturated, medium dense, fine SAND, some silt. Odor and elevated PID reading at approximately 10.3'. (no odor 10.5' -12.0'.)			12.1	130
15	7	12-14	3-3 6-6	2/2'	9	Pale yellowish brown (10YR 6/2), saturated, loose, very fine SAND, some silt, trace clay, no odor.			0.0 (Dup. 0.0)	35 (Dup. 33)
	8	14-16	8-5 5-3	2/1.7'	10	Pale yellowish brown (10YR 6/2), saturated, stiff, SILT, little fine sand to approximately 1.5', then CLAY, little silt 15-16'.			0.0	0.0

Monitor well installation: 2" PVC sump: 16-14'; 2' x 0.010" slotted PVC screen: 14-4'; riser: 4-0.5'; sand pack: 16-2'; bentonite chips: 2-1'; grout: 1-0.8'. Finished as a flush mount well.

CPO:ers/4_n&d/mw-5

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-6
Client: Niagara Mohawk Power Corpora South Fulton Street Site	Drill Method: Hollow Stem Auger	Page 2 of 2
Proj. Loc: Fulton, NY	Sampler: 2-inch Split Spoon	Location:
	Hammer: 140 lbs	Start Date: 6/17/98
File No.: 1118.081	Fall: 30 inches	End Date: 6/18/98

Boring Company Parratt/Wolff, Inc.
Foreman: Glen Lansing
Drill Rig: Inger Soll-Rand A-300
OBG Geologist: Chawn O'Dell

Screen = | \ Grout
Riser | Sand Pack
Steel // | Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	PID Head Space (ppm)	Equip. Installed	Field Testing PID (ppm)	Field Testing UV Light
22	12	22-24	32-60	1.0/0.8	92+	Light brown (5YR 6/4), saturated, extremely dense, fine to medium SAND, little silt, little fine to medium gravel (subangular)	0.0		0.0	Neg.
23										
24	13	24-26	29-50/ 0.2	0.7/0.6	79+	Light brown (5YR 6/4), saturated, very dense, fine to medium SAND, little silt, little fine to medium gravel (subangular)	0.0		0.0	Neg.
25										
26	14	26-26.8	52-50/ 0.3	0.8/0.8	102+	Light brown (5YR 6/4), saturated, extremely dense, fine to medium SAND, little silt, little fine to medium gravel (subangular)	0.0		0.0	Neg
27								=		
28	15	28-28.5	100	0.5/0.5	100+	Light brown (5YR 6/4), saturated, extremely dense, fine to medium SAND, little fine to coarse gravel (sub-angular, little silt)	0.2	=	0.0	Neg
29								=		
30	16	30-30.5	63	0.5/0.5	63+	Light brown (5YR 6/4), saturated, very dense, fine to medium SAND, little fine to coarse gravel (sub-angular, little silt)	0.2	=	0.0	Neg
31								=		
32	17	32-34.0	8-20 31-37	2.0/.1.8	51	Light brown (5YR 6/4), saturated, very dense, fine to medium SAND, some silt, little fine to coarse gravel (subangular) intermittent clay seams (~0.05' thick)	0.1	=	0.0	Neg
33								=		
34	18	34-34.4	50/0.4	0.4/0.4	50+	Light brown (5YR 6/4), saturated, extremely dense, fine to medium SAND, some silt, little fine to medium gravel (subangular), intermittent clay seams (~0.05 thick)	0.0	=	0.0	Neg.
35								=		
36	19	36-36.4	50/0.4	0.4/0.4	50+	Light brown (5YR 6/4), saturated, extremely dense, fine to medium SAND, some silt, little fine to medium gravel (subangular), intermittent clay seams (~0.05 thick) spoon refusal at 36.4 ft, advance augers to approx. 36.9 ft, auger refusal	0.2	=	010	Neg.
37	20	36.9-37.(	50/0.1	0.1/0.05	50+	Grayish black (N2), fine grained SANDSTONE	0.0	=	0.0	Neg
						Bottom of boring at 37 ft				

Notes: Well Installatic 2-inch x 0.020 inch slotted PVC Screen: 37- 27 ft Bentonite Seal: 24-22 ft Finished as a flush mount well
Sand Pack (1 Morie): 37-25 ft Sand Choke (00 Morie): 22-21 ft
Sand Choke (00 Morie): 25-24 Grout: to 0.5 ft

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-6
Client: Niagara Mohawk Power Corporation South Fulton Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2-inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 2 Location: Start Date: 6/17/98 End Date: 6/18/98
Boring Company: Parratt/Wolff, Inc. Foreman: Glen Lansing Drill Rig: Inger Soll-Rand A-300 OBG Geologist: Chawn O'Dell		Screen = ; Riser ; Steel // ; \ Grout ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	PID Head Space (ppm)	Equip. Installed	Field Testing PID (ppm)	Field Testing UV light
0	1	0.5-2	6	1.5/1.3	10	Brownish black (5YR 2/1), damp, medium dense, coarse to fine SAND, some fine gravel (subangular), little slag/ coal/brick fragments	0.0		0.0	Neg
			4-3							
1										
2	2	2-4	3-3	2.0/1.0	6	Brownish black (5YR 2/1), damp, loose, coarse to fine SAND, some fine gravel (subangular), little slag/ coal/brick fragments	0.8		0.0	Neg
			3-2							
3										
4	3	4-6	3-5	2.0/1.6	11	Grayish black (N2), medium dense, damp to wet, fine to coarse SLAG fragments (subangular), little brick/ coal fragments to approx. 5.7 ft, then moderate yellowish brown (10YR 5/4), wet, loose, fine SAND, little silt	2.9		0.0	Pos
			6-2							
5										
6	4	6-8	3-4	2.0/1.4	12	Brownish gray (5YR 4/1), saturated, medium dense, fine SAND, some silt, trace wood fragments	38		0.8	Pos
			8-8							
7										
8	5	8-10	6-8	2.0/1.5	15	Brownish gray (5YR 4/1), saturated, medium dense, fine SAND, some silt, trace wood fragments	74		1.2	Pos.
			7-9							
9										
10	6	10-12	3-1	2.0/1.3	11	Moderate reddish brown (10R 4/6), saturated, medium to dense, fine to medium SAND, little fine to coarse gravel (subangular)	58		1.0	Neg.
			10-20							
11										
12	7	12-14	15-23	2.0/1.2	44	Moderate reddish brown (10R 4/6), saturated, dense, SAND, little fine to coarse gravel (subangular)	75		0.5	Neg.
			21-22							
13										
14	8	14-16	13-15	2.0/1.5	25	Moderate reddish brown (10R 4/6), saturated, medium dense, fine SAND, some silt, little fine gravel (subangular)	23		0.2	Neg
			10-11							
15										
16	9	16-18	7-11	2.0/1.3	26	Moderate reddish brown (10R 4/6), saturated, medium dense, fine SAND, some silt, little fine gravel (subangular)	5.7		0.0	Neg.
			15-22							
17										
18	10	18-20	15-21	1.7/1.2	44	Moderate reddish brown (10 R 4/6), saturated, dense, fine SAND< little fine to medium gravel (subangular), trace silt	2.3		0.0	Neg.
			23-50/							
19			0.2							
20	11	20-22	31-50/3	0.8/0.8	50+	Moderate reddish brown (10 R 4/6), saturated, very dense, fine SAND, little fine to medium gravel (subangular) trace silt	1.2		0.0	Neg.
21										

Notes:

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-7
Client: Niagara Mohawk Power Corporation South Fulton Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2-inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 6/17/98 End Date: 6/17/98
Boring Company: Parratt/Wolff, Inc. Foreman: Glen Lansing Drill Rig: Inger Soll-Rand A-300 OBG Geologist: Chawn O'Dell		Screen = \ Grout Riser Sand Pack Steel // Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	PID Head Space (ppm)	Equip. Installed	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	3-12	2.0/1.2	19	Moderate brown (5YR 4/4), damp, medium dense, SILT	0.0	\ \	0.0	Neg.
			7-4			to fine SAND, some medium to coarse sand, little fine		\ \		
1						gravel (subangular), trace organics		\ \		
								\ \		
2	2	2-4	4-4	2.0/1.5	8	Moderate brown (5YR 4/4), damp, loose, fine to coarse	0.0	\ \	0.0	Neg.
			4-7			SAND, some fine to coarse gravel (subangular), little		\ \		
3						silt, trace brick fragments		\ \		
4	3	4-6	4-11	2.0/1.5	18	Moderate brown (5YR 3/4), saturated at ~6 ft, medium		=	0.0	Neg.
			7-5			dense, fine SAND, some medium to coarse sand,		=		
5						little fine to medium gravel (subangular)		=		
								=		
6	4	6-8	3-4	2.0/0.7	12	Light olive gray (5Y 5/2), saturated, stiff, CLAY, some	0.0	=	0.0	Neg.
			8-5			silt, trace organic matter		=		
7								=		
								=		
8	5	8-10	3-3	2.0/1.6	5	Olive gray (5Y 3/2) to grayish brown (5YR 3/2), sat-	0.0	=	0.0	Neg.
			2-4			urated, firm, SILT, some fine sand, little clay		=		
9								=		
								=		
10	6	10-12	3-2	2.0/1.7	8	Olive gray (5Y 3/2), to dusky yellowish brown (10YR 2/2)	0.0	=	0.0	Neg.
			6-8			saturated, stiff, SILT, some clay, little fine sand, trace		=		
11						organics		=		
								=		
12	7	12-14	7-6	2.0/2.0	11	Light olive gray (5Y 5/2), saturated, stiff, CLAY, some	0.0	=	0.0	Neg
			5-5			silt, little fine sand, fine sand lense, approx. 12.6 to		=		
13						12.8 ft		=		
								=		
14						Bottom of boring at 14 ft		=		

Notes: Well Installation: 2-inch x 0.020 Inch slotted PVC Screen: 14 to 4 ft
Sand Pack (1 Morie): 14 to 3.5 ft Grout: 3-0 ft
Sand Choke (00 Morie): 3.5 to 3 ft Finished as a sickup well

CPO:ers/div76/4 notes/borings/mw-7

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING MW-7D

Client: Niagara Mohawk Power Corporation (South First Street Site)
Proj. Loc: Fulton, NY
File No.: 1118/35165

Hollow Stem Auger
Sampler: 2-inch split spoon
Hammer: 140 lbs
Fall: 30 inches

Location: Between MW-7 and river.
Start Date: 6/22/2004
End Date: 6/22/2004

Boring Company: Parratt-Wolff, Inc.
Foreman: Lee Penrod
OBG Geologist: Scott Tucker

Screen =; Riser; Grout; Sand Pack; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	11-13 9-6	2.0/0.3	22	7"-Topsoil, coal fragments(-), dry, no odor 5"-10YR6/6 Dark Yellowish Orange, f SAND, trace f (rnd) gravel, medium dense, moist, ho odor			0.2	NEG
2		4	5-3 4-5	2.0/1.0	7	13" -As above, cmf(+) SAND, little f (rnd) gravel, root structures, loose, wet at bottom of spoon, no odor			0.0	NEG
4		6	2-1 2-2	2.0/0.7	3	8"-As above, wet, 10YR5/4 Moderate Yellowish Brown, coal fragment(-) gravel, coarse and rnd on rollerbit, very loose			0.0	NEG
6		8	1-1 1-2	2.0/0.8	2	10"-N2 Grayish Black, CLAY, some silt, little organic fragments, olive green mottles, very soft, no odor, moist,			0.1	NEG
8		10	1-1 2-3	2.0/0.9	3	11"-N6 Medium Light Gray, SILT, some clay, soft, moist, no odor			0.0	NEG
10		12	1-2 3-5	2.0/1.2	5	14"-As above, SILT, little clay, firm, moist, no odor			0.0	NEG
12		14	3-6 6-9	2.0/1.3	12	15"-As above, SILT, tight, rust mottles, organics (roots) moist, stiff, no odor, little clay			0.0	NEG
14		16	1-1 2-3	2.0/0.9	3	11"-As above			0.0	NEG
16		18	3-2 2-2	2.0/1.5	4	6"-As above, moist, no odor 12"-5GYR4/1 Dark Greenish Gray, SILT, little clay, shell fragments, soft, moist, no odor.			0.0	NEG
18		20	2-2 1-2	2.0/1.3	3	6"-As above, gravel at interface 9"-N7 Light Gray, SILT, soft, saturated, no odor			0.0	NEG
20		22	1-1 1-1	2.0/1.3	2	15"-As above, becomes varved last 2"			0.0	NEG
22		24	1-1 1-1	2.0/1.0	2	12" -As above becomes 5YR5/1 Light Olive Gray, no odor		=	0.0	NEG

Well set at 28 ft., 2" schedule 40 PVC, 5' 0.010" slot screen (23-28'), 7' sand, 2' bentonite seal, grout to surface, stick-up protective casing.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-7D
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 2 of 2 Location: Between MW-7 and river. Start Date: 6/22/2004 End Date: 6/22/2004
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser — Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
24		26	13-10	2.0/0.0	20	NR- cmf gravel in shoe, saturated		=	- -	- -
			10-8					=		
26		28	7-10	2.0/1.3	33	16"-10YR4/6 Moderate Reddish Brown, cmf SAND, some cmf (rnd) gravel, little silt, dense, moist, no odor		=	0.0	NEG
			23-32					=		
						End of Boring at 28 ft.				

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-8
Client: Niagara Mohawk Power Corporation South Fulton Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2-inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 6/16/98 End Date: 6/16/98
Boring Company: Parratt/Wolff, Inc. Foreman: Glen Lansing Drill Rig: Inger Soll-Rand A-300 OBG Geologist: Chawn O'Dell		Screen =, Riser, Steel // \ Grout, Sand Pack, Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	PID Head Space (ppm)	Equip. Installed	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	2-3	2.0/0.4	4	Dark yellowish brown (10YR 4/2), damp, loose, SILT,	0.0	\ \	0.0	Neg
			1-1			little fine to coarse gravel (subrounded), trace fine to		\ \		
1						medium sand, trace organic matter		\ \		
								\ \		
2	2	2-4	1-3	2.0/0.3	8	(Poor recovery) Grayish brown (5YR 3/2), damp, loose,	0.0	\ \	0.0	Neg
			5-11			fine to medium SAND, little silt, little coarse to fine		\ \		
3						gravel (subrounded), trace brick fragments		\ \		
								\ \		
4	3	4-6	5-6	2.0/0.4	13	(Poor recovery) Grayish brown (5YR 3/2), damp to wet	0.0		0.0	Neg.
			7-11			(~5 ft), medium dense, coarse to fine cobble, brick				
5						fragments (subangular) little silt to coarse sand				
6	4	6-8	5-11	2.0/0.7	47	Grayish brown (5YR 3/2), damp to wet, dense, fine to	0.0	=	0.0	Neg.
			36-8			coarse GRAVEL/COBBLE FRAGMENTS (subrounded		=		
7						to subangular), little fine to coarse sand, trace brick		=		
						fragments		=		
8	5	8-10	3-2	2.0/1.5	5	Dusky brown (5YR 2/2), saturated, loose, SILT, little	0.0	=	0.0	Neg
			3-5			organics, trace fine sand		=		
9								=		
								=		
10	6	10-12	4-4	2.0/1.8	12	Moderate yellowish brown (10YR 5/4), and dark gray	0.0	=	0.0	Neg.
			8-8			(N3) mottling, wet, stiff CLAY, some silt, little very		=		
11						fine sand		=		
								=		
12	7	12-14	4-9	2.0/1.7	18	Moderate yellowish brown (10YR 5/4), and dark gray	0.0	=	0.0	Neg.
			9-11			(N3) mottling, wet, hard CLAY, some silt, little very		=		
13						fine sand		=		
								=		
14	8	14-16	3-4	2.0/1.8	8	Moderate yellowish brown (10YR 5/4), and dark gray	0.0	=	0.0	Neg.
			4-4			(N3) mottling, wet, stiff CLAY, some silt, little very		=		
15						fine sand to approx. 15 ft, then olive gray (5Y 4/1),		=		
						saturated, stiff, silt and fine sand, little organic		=		
16						matter, little shells/shell fragments		=		
								=		
						Bottom of boring at 16 ft		=		

Notes: Well Installation: 2-linch x 0.020 inch slotted PVCScreen: 16-6 ft Bentonite Seal: 5-4.5 ft
Sand Pack (1 Morie): 6-5.5 ft Sand Choke (00 Morie): 4.5 -4 ft
Sand Choke (00 Morie): 5.5-5 ft Grout to surface

Finished as a stickup well

CPO:ers/div76/4 notes/borings/MW-8

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-8D
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 2 Location: North 5' of MW-8 Start Date: 6/16/04 End Date: 6/16/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / \ Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2				See log MW-8 dated 6/16/98 for description.				
2		4								
4		6								
6		8				Piece of pottery on auger flights				
8		10				SEE MW-8 Log Dated 6/16/98				
10		12				Piece of plastic on auger flight till 16'				
12		14								
14		16								
16		18	6-6 13-10	2.0/0.5	19	6"- 10YR5/4 Pale reddish brown cmf (++)SAND, little silt and clay, little gravel, wet, no odor			1.0	Neg
18		20	6-6 4-8	2.0/0.5	10	6"- as above, liquified			NA	NEG
20		22	4-7 6-7	2.0/0.0	22	No Recovery - Rock in shoe, trace cmf SAND in shoe			0.4	NEG

Notes: 0-4 ft boney augering
10 gallons used to flush sand from 21.5 to 24.5 ft bgs
2" PVC well set at 33', 5' 0.010" slot screen (28-33')', sand to 26' bentonite to 24', grout to grade.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-8D
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 2 of 2 Location: North of property on City property. South of SB-24 Start Date: 6/16/04 End Date: 6/16/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
22		23.6	18-31	2.0/1.5	75	10YR5/4 Pale Reddish Brown, cmf(+) SAND, trace mf gravel, moist-wet, no odor, tight, trace silt			0.4	
			44-50/0.1							NEG
24		26	35-43	2.0/1.4	90	17" as above			0.4	
			47-49							NEG
26		26.9	40	2.0/0.4	50+	5" as above			0.5	
			50/0.4							NEG
28		28.4	50/0.4	2.0/0.3	50+	3" as above			0.0	
										NEG
30		30.4	50/0.4	2.0/0.3	50+	3" as above			0.0	
										NEG
32		32.1	50/0.1	2.0/0.2	50+	2" as above			0.0	
										NEG
						Auger refusal at 33'				

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-9
Client: Niagara Mohawk Power Corporation South Fulton Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2-inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 6/16/98 End Date: 6/16/98
Boring Company: Parratt/Wolff, Inc. Foreman: Glen Lansing Drill Rig: Inger Soll-Rand A-300 OBG Geologist: Chawn O'Dell		Screen = ; Riser ; Steel // ; Grout \ ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	PID Head Space (ppm)	Equip. Installed	Field Testing PID (ppm)	
0	1	0-2	4-3	2.0/0.5	5	Brownish gray (5YR 4/1), damp, loose, fine to coarse	0.0	\ \	0.0	Neg
			2-9			SAND, some silt, little fine to medium gravel (sub-		\ \		
1						angular), trace brick fragments, trace organics		\ \		
								\ \		
2	2	2-4	14-8	2.0/0.6	17	Grayish brown (5YR 3/2), damp, medium dense, fine to	0.0	\ \	0.0	Neg
			9-9			coarse SAND, little fine to medium gravel (subangular),		\ \		
3						trace brick fragments		\ \		
								\ \		
4	3	4-6	4-4	2.0/1.8	8	Dark yellowish brown (10YR 4/2), damp to wet, loose,	0.0	\ \	0.0	Neg.
			4-4			fine to medium SAND, little fine to medium gravel				
5										
6	4	6-8	2-2	2.0/2.0	6	Moderate yellowish brown (10YR 5/4), damp, firm,	0.0	=	0.0	Neg.
			4-6			SILT, some clay, trace fine sand		=		
7								=		
								=		
8	5	8-10	2-4	2.0/2.0	9	Moderate yellowish brown (10YR 5/4), and dark gray	0.0	=	0.0	Neg.
			5-8			(N3) mottling, damp to wet, stiff, CLAY, some silt		=		
9								=		
								=		
10	6	10-12	2-3	2.0/1.5	7	Moderate yellowish brown (10YR 5/4), and dark gray	0.0	=	0.0	Neg.
			4-4			(N3) mottling, damp to wet, firm, CLAY, some silt to		=		
11						approx.. 11.8 ft, then olive gray (5Y 4/1), saturated, firm,		=		
						SILT and fine SAND, little organics matter, little shells/		=		
						shell fragments		=		
12	7	12-14	4-6	2.0/2.0	12	Moderate reddish brown (10R 4/6), saturated, medium	0.0	=	0.0	Neg.
			6-9			dense, fine to medium SAND, little coarse sand to fine		=		
13						gravel (subangular)		=		
								=		
14	8	14-16	4-5	2.0/2.0	9	Moderate reddish brown (10R 4/6), saturated, loose, fine	0.0	=	0.0	Neg.
			4-4			to medium SAND, little coarse sand to fine gravel		=		
15						(subangular)		=		
								=		
16	9	16-18	WOH-WOH	2.0/2.0	7	Grayish red (10R 4/2), saturated, loose, fine SAND,	0.0	=	0.0	Neg.
			7-9			trace fine gravel (subangular)		=		
17								=		
						Augers advanced to 16 ft, split spoon collected to 18 ft	0.0	=		
18						Bottom of boring at 18 ft		=		

Notes: Well Installation: 2-inch x 0.020 inch slotted PVC Screen: 16-6 ft Bentonite Seal: 5-4.5 ft
Sand Pack (1 Morie): 16-5.5 ft Grout to surface
Sand Choke (00 Morie): 5.5-4 ft Finished as a stickup well

CPO:ers/div76/4 notes/borings/mw-9

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-9D
[illegible]ent: Niagara Mohawk Power Corporation Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 6/18/1998 End Date: 6/18/1998
Boring Company: Parratt Wolff, Inc. Foreman: Glen Lansing Drill Rig: Ingersoll Rand A-300 Geologist: Chawn O'Dell		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	PID Head Space (ppm)	Equip. installed	Field Testing PID (ppm)	Field Testing UV
						See log for MW-9S for soil description	0.0		0.0	Neg.
18	1	18-20	11-15 50/0.4	1.4/1.4	65+	Moderate Reddish Brown (10R4/6), saturated, extremely dense, fine to medium SAND, little fine to coarse gravel, (subangular)	0.0		0.0	Neg.
20	2	20-22	27-30 51-	1.5/1.4	81+	Moderate Reddish Brown (10R4/6), saturated, extremely dense, fine to medium SAND, little fine to coarse gravel, (subangular)	0.0		0.0	Neg.
22	3	22-24	43 50/0.4	0.9-0.9	100+	As above	0.0		0.0	Neg.
24	4	24-26	22-52	1.0/0.8	100+	As above				
26	5	26-28	27 50/0.4	0.9-0.9	100+	As above				
28	6	28-30	14-44 50/0.3	1.3/1.3	100+	As above Bottom of borehole at 30 ft.				

Notes: well Installation: 2-inch x 0.020 inch slotted PVC Screen: 30-20 ft
Sand pack (1 morie): 30-18 ft
Sand Choke (00 Morie): 18-17 Grout to Surface

Bentonite Seal: 17 to 15 ft
Sand Choke (00 Morie): 15-14 ft
Gout to surface Finished as a stickup well

O'BRIEN & GERE ENGINEERS, INC. | **TEST BORING LOG** | **REPORT OF BORING MW-10**

Client: Niagara Mohawk Power Corporation
South Fulton Street Site
Proj. Loc: Fulton, NY

File No.: 1118.081

Drill Method: Hollow Stem Auger
Sampler: 2-inch Split Spoon
Hammer: 140 lbs
Fall: 30 inches

Page 1 of 1
Location:
Start Date: 6/17/98
End Date: 6/17/98

Boring Company: Parratt/Wolff, Inc.
Foreman: Glen Lansing
Drill Rig: Inger Soll-Rand A-300
OBG Geologist: Chawn O'Dell

Screen = | Grout \
Riser | Sand Pack
Steel // | Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	PID Head Space (ppm)	Equip. Installed	Field Testing PID (ppm)	UV Light
0	1	0-2	34-45	2.0/1.2	60	Light brown (5YR 5/6), to pale yellowish brown (10YR 6/2), damp, very dense, fine to medium SAND, some brick fragments, little fine to medium gravel (angular), trace silt/organics	0.0		0.0	Neg
			15-7							
1										
2	2	2-4	3-2	2.0/1.4	3	Grayish brown (5YR 3/2), damp, very loose, fine to coarse SAND, little fine gravel/brick fragments, trace slag	0.0		0.0	Neg.
			1-1							
3										
4	3	4-6	3-1	2.0/2.0	2	Grayish brown (5YR 3/2), damp, very loose, fine to coarse SAND, little fine gravel/brick fragments, trace slag to approx. 4.5 ft, then dark yellowish brown (10YR 4/2), to moderate yellowish brown (10YR 5/4), damp, very loose, fine SAND, little silt	0.0		0.0	Neg
			1-4							
5										
6	4	6-8	6-7	2.0/1.7	14	Moderate yellowish brown (10YR 5/4), saturated, medium dense, fine SAND, little silt	0.0		0.0	Neg
			7-11							
7										
8	5	8-10	2-4	2.0/2.0	9	Moderate yellowish brown (10YR 5/4), saturated, loose silt and fine SAND, trace clay, trace fine gravel (angular)	0.0		0.0	Neg
			5-7							
9										
10	6	10-12	WOH-9	2.0/1.4	17	Moderate reddish brown (10R 4/6), saturated, medium dense, fine SAND, little fine to medium gravel (sub-angular), trace silt	0.0		0.0	Neg
			8-4							
11										
12	7	12-14	7-6	2.0/1.7	11	Moderate reddish brown (10R 4/6), saturated, medium dense, fine SAND, some silt, little fine to coarse gravel (angular)	0.0		0.0	Neg.
			5-3							
13										
14	8	14-16	6-4	2.0/2.0	7	Moderate reddish brown (10R 4/6), saturated, loose fine SAND, some silt, little fine to coarse gravel (angular)	0.0		0.0	0.0
			3-3							
15										
16						Bottom of borehole at 16 ft				

Notes: Well Installation: 2-inch x 0.020 inch slotted PVC Screen: 15-5 ft Bentonite Seal: 4-3.5 ft
Sand Pack (1 Morie): 15-4.5 ft Grout: 3.5-0.5 ft
Sand Choke (00 Morie): 4.5-4 ft Finished as a flush mount well

CPO:ers/div76/4 notes/borings/mw-10

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-11/SB-19
Client: Niagara Mohawk Power Corporation South First Street Site Proj. Loc: Fulton, NY File No.: 1118.081	Drill Method: Hollow Stem Auger Sampler: 2 inch Split Spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Start Date: 5/09/01 End Date: 5/09/01
Boring Company: Parratt-Wolff, Inc. Foreman: Glen Lansing Drill Rig: CME OBG Geologist: Chawn O'Dell		Screen = Grout Riser Sand Pack Steel // Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	PID Over Spoon	Field Testing PID (ppm)	Field Testing UV Light
0	1	0-2	2-2 2-2	2.0/1.0	4	Grayish brown 5YR 3/2, damp, loose, SILT, little fine to medium sand		0.0	0.0	neg
2	2	2-4	4-2 1-1	2.0/1.3	3	Grayish brown 5YR 3/2 to brownish black 5YR 2/1, saturated, very loose, SILT and fine SAND, little brick/glass/cinder fragments		0.0	0.0	neg
4	3	4-6	2-1 1-3	2.0/0.3	2	Grayish brown 5YR 3/2 to brownish black 5YR 2/1, saturated, very loose, SILT and fine SAND, little brick/glass/cinder fragments		0.7	1.1	neg
6	4	6-8	2-2 1-3	2.0/0.5	3	Grayish brown 5YR 3/2 to brownish black 5YR 2/1, saturated, very loose, SILT and fine SAND, little brick/glass/cinder fragments		1.5	2.1	neg
8	5	8-10	2-2 1-2	2.0/0.7	3	Light brownish gray 5YR 6/1, saturated, very soft, SILT, some clay, trace organic matter		0.9	1.6	neg
10	6	10-12	1-1 1-2	2.0/1.3	2	Light olive gray 5Y 6/1, saturated, very loose, fine SAND, little silt, little clay, trace organic matter, trace shell fragments		0.1	0.3	neg
12	7	12-14	2-3 7-10	0.9/0.8	50+	Light olive gray 5Y 6/1, saturated, very loose, fine SAND, little silt, little clay, trace organic matter, trace shell fragments		0.0	0.1	neg
						Terminate the borehole at 14 ft				
						Install a monitoring well in the borehole				

Notes: Wells installation: 2 inch x 0.010 inch slotted PVC screen: 12.5 - 2.5 ft; sand pack: 12.5 - 2.0 ft
sand choke: 2.0 - 1.5 ft; bentonite seal: 1.5-0.5 ft (flush mount completion)

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-12S
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: South 5' from MW-12D Start Date: 6/21/04 End Date: 6/21/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser — Grout, Sand Pack, Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2								
2		4				See log MW-12D dated 6/21/2004 for description.				
4		6								
6		8								
8		10								
10		12								
12		14								
14		16	-	2.0/0.0	-	No Recovery - Sand/gravel on basket wet spoon, spot of sheen			NA	NA
						EOB at 16 ft				

Notes: 0-4 ft boney augering 10-12 ft UV Light not working
2" PVC well set at 16 ft, 10 ft. of 0.010" slot screen (6-16'), sand to 4 ft., bentonite to 3 ft, grout to surface. Flushmount finish.
10 gallons used to remove bridge

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-12D
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 2 Location: North of property on City property, south of SB-24 Start Date: 6/21/04 End Date: 6/21/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		2	8-13 40-10	2.0/0.3	53	5YR3/4 Moderate Brown, topsoil, dry, no odor			0.0	NEG
2		4	7-15 15-8	2.0/0.5	30	Brick concrete and rock fragments 2" 10YR2/2 Dusky Yellowish Brown, SILT, trace (ang) coarse gravel, very organic, moist, no odor.			0.0	NEG
4		6	10-43 17-7	2.0/0.9	60	5YR3/4 Moerate Brown, cmf SAND, some (ang-subrnd) gravel, dry, no odor.			0.0	NEG
6		8	3-4 5-5	2.0/1.0	9	5B7/1 Light Bluish Gray, SILT, little clay, rusty mottles, peat seam <1" at 4" from bottom, moist, wet seam vertical parting, no odor, stiff			0.0	NEG
8		10	2-3 4-4	2.0/1.2	7	as above, grading to 5GY4/1 Dark Greenish Gray, SILT, varved, soft, shell fragments, blebs of NAPL, vertical root filled fractures, wet-moist, odor			3.0	POS
10		12	3-4 4-6	2.0/0.3	8	5YR3/4 Moderate Brown, SILT, some cmf sand, trace (subrnd) gravel, wet, slight odor.			0.6	-
12		14	2-3 4-3	2.0/0.6	7	5"- 5YR4/1Brownish Gray and 5Y4/1 Olive Gray, SILT, little clay, moist-wet, slight odor. 3"- 10R4/6 Moderate Reddish Brown, cmf(+) SAND, little silt, wet, odor.			1.3	NEG
14		16	5-4 5-6	2.0/1.5	9	as above, some silt, little rnd gravel, fine seams of f sand, wet, slight odor			0.7	NEG
16		18	8-12 17-21	2.0/1.1	29	As above, wet, no odor			1.2	NEG
18		20	15-21 25-32	2.0/0.4	46	5" - as above, wet, no odor			0.9	NEG
20		22	23-17 27-29	2.0/0.1	44	As above			0.6	NEG
22		22.8	26 50/0.3	2.0/0.2	50+	As above - rock in shoe			0.5	NEG

Notes: 0-4 ft boney augering 10-12 ft UV Light not working
2" PVC well set at 28 ft, 5 ft. of 0.010" slot screen (23-28 ft), sand to 21 ft., bentonite to 19 ft, grout to surface. Flushmount finish.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-12D
Client: Niagara Mohawk Power Corporation (South First Street Site) Proj. Loc: Fulton, NY File No.: 1118/35165	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 2 of 2 Location: North of property on City property. South of SB-24 Start Date: 6/21/04 End Date: 6/21/04
Boring Company: Parratt-Wolff, Inc. Foreman: Lee Penrod OBG Geologist: Scott Tucker		Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
24		26	11-9	2.0/1.7	22	20" - As above, cmf(++) SAND, silt clasts,			0.3	
			13-17			wet, no odor, loose				NEG
26		28	33-37	2.0/1.0	68	As above, cmf SAND, tight, some silt			0.8	
			31-28							NEG
28		28	50/0.0	0	50+	NR - Spoon refusal				
									-	-
						Auger refusal				
						E.O.B. at 28 ft				

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-13
Client: National Grid Proj. Loc: South First Street, Fulton, NY File No.: 1118/35273	Direct Push Drill Sampler: 2-inch dia.split spoon	Page 1 of 1 Location: 4 ft north of SB-36 Start Date: 10/14/2005 End Date: 10/14/2005
Boring Company: Parratt-Wolff Inc. Foreman: Jim Lansing Drill Rig: IR Geologist: Scott Tucker		Screen = / Riser Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
						0 - 16 ft See boring log for SB-36 for geologic details (hard drilling at 14 ft)				
16		18				8"- 10Y6/2 Pale Olive, CLAY, stiff, moist. 4"- 10Y6/2 Pale Olive, SILT, little f sand, shells, wood fragments, saturated, strong odor.			10.3	neg
18		20				3"- as above, little clay, strong odor. 5"- N6 Medium Light Gray, SILT, wet, strong odor.			6	neg
20		22				6"- as above, some c-m round gravel, NAPL, sheen, strong odor.			75.9	pos
22		24				9"- N3 Dark Gray, cmf SAND and rnd-subrnd GRAVEL, saturated, NAPL, sheen, strong odor. 6"- 5YR6/4 Light Brown, cmf SAND and rnd GRAVEL, sheen, strong odor.			426	pos
24		26				9"- 5Y6/4 Light Brown, f SAND, trace f rnd gravel, sheen (dragdown), slight odor.			3.6	neg
						EOB @ 26 ft				

Notes: Screen: 19 - 24 ft; Sump: 24 - 26 ft; Riser: 0.5 - 19 ft; Bentonite: 24-26 ft; Bentonite Seal: 2-17 ft; PVC Material: 4" dia. - 0.020" slot screen

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING PZ-1
Client: Niagara Mohawk	Sampler: 2" Split Spoon	Page 2 of 2
		Location:
Proj. Loc: Fulton, NY	Hammer: 140 lbs	Start Date: 7/10/96
File No.: 1118.081	Fall: 30"	End Date: 7/10/96

Boring Company: Parratt Wolff, Inc.
Foreman: Brian Waters
OBG Geologist: Chawn O'Dell

Screen = / Riser / Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing: PID Over Spoon (PPM)	Field Testing: Jar Head Space (PPM)
22	12	22-24	30-39	2'/1.7'	76	Moderate brown (5YR 4/4), saturated,			0.0	0.0
			37-49			extremely dense, medium SAND, some				
23						coarse sand, little fine subangular gravel,				
						little fine sand to silt				
24	13	24-26	28-25	2'/1.6'	58	Moderate brown (5YR 4/4), saturated,			0.0	0.0
			33-38			extremely dense, medium SAND some coarse				
25						sand, little fine subangular gravel, little fine				
						sand				
26	14	26-28	50/0.2	0.2'/0.2'	50+	Poor recovery. Coarse angular gravel			0.0	0.0
27										
28	15	28-30	50/0.1	0.1'/0.0'	50+	No recovery			N/A	N/A

Well installation: 2-inch PVC sump: 16-14'; 2" x 0.010" slotted PVC screen: 13.5-3.5'; Riser 3.5'-0.5', Bentonite chips: 30-17'; sand pack: 17 to 2'
Bentonite chips: 2-1'; grout: 1-0.8' finished as a flushmount well.

CPO:ers/4 n&d/PZ-1(2)

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING PZ-1
Client: Niagara Mohawk	Sampler: 2" Split Spoon	Page 1 of 2
Proj. Loc: Fulton, NY	Hammer: 140 lbs	Location:
File No.: 1118.081	Fall: 30"	Start Date: 7/10/96 End Date: 7/10/96
Boring Company: Parratt Wolff, Inc.		Screen = / Riser
Foreman: Brian Waters		\ Grout / Sand Pack / Bentonite
OBG Geologist: Chawn O'Dell		

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID Over Spoon (PPM)	Field Testing Jar Head Space (PPM)
0	1	0-2	3-10	2'/1.3'	17	Dusky yellowish brown (10YR 2/2), medium dense, fine to medium SAND, some silt, little course sand, trace orange brick fragments.			0.0	0.0
			7-7							
1										
2	2	2-4	8-10	2'/1.5'	18	Moderate reddish brown (10R 4/6), moist to wet, medium dense, medium subrounded to subangular SAND and orange brick fragments, little fine sand, trace coarse sand			0.0	0.0
			8-3							
3										
4	3	4-6	13-50/	0.7/0.3	50+	Moderate reddish brown (10R 4/6), damp, extremely dense, bricks and brick fragments			0.0	0.0
			0.2							
5										
6	4	6-8	10-3	2'/0.6'	6	Brown gray (5YR 4/1), saturated, loose, SILT and fine SAND, little clay, trace fine, sub-rounded gravel			5.3	9.6
			3-4							
7										
8	5	8-10	4-9	2'/1.7'	18	Light brownish gray (5YR 4/1), saturated, medium dense, fine SAND, some silt, little clay			1.3	3.7
			9-10							
9										
10	6	10-12	4-8	2'/1.2'	20	Light brownish gray (5YR 4/1), saturated, medium dense, fine SAND, some SILT, little clay, trace fine subrounded to subangular gravel			0.0	1.2
			12-9							
11										
12	7	12-14	9-10	2'/1.5'	21	Light brownish gray (5YR 4/1), saturated, medium dense, fine SAND, some silt, little clay, trace subrounded to subangular fine gravel			0.0	0.0
			11-14							
13										
14	8	14-16	16-14	2'/1.9'	26	Moderate brown (5YR 4/4), saturated, medium dense, fine to coarse subrounded to subangular SAND and GRAVEL			0.0	0.0
			12-10							
15										
16	9	16-18	6-9	2'/2'	21	Moderate brown (5YR 4/4), saturated, medium dense, fine to coarse subrounded to subangular SAND and GRAVEL			0.0	0.0
			12-17							
17										
18	10	18-20	12-18	2'/1.6'	35	Moderate brown (5YR 4/4), saturated, dense, subrounded to subangular, medium to coarse SAND, some fine gravel, little silt to fine sand			0.0	0.0
			17-15							
19										
20	11	20-22	12-18	2'/0.5'	38	Moderate brown (5YR 4/4), saturated, dense, medium to coarse SAND, some fine sub-rounded to angular gravel, little fine sand			0.0 (Dup 0.0)	0.0 (Dup 0.0)
			20-17							
21										

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING PZ-2
Client: National Grid Proj. Loc: South First Street Fulton, NY File No.: 1118/35273	Hollow Stem Auger Sampler: 2-inch dia.split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: east of MW-7 Start Date: 10/13/2005 End Date: 10/13/2005
Boring Company: Parratt-Wolff Inc. Foreman: Mark Eaves Drill Rig: IR Geologist: Scott Tucker		Screen = Riser Grout Sand Pack Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		2	5	2.0/ 0.7	13	3" - topsoil				
			5			5"- 10YR5/4 Moderate Yellowish				
			8			Brown, damp, mf(+) SAND, trace f rnd,			0	neg
			8			gravel, coal fragment, no odor.				
2		4	5	2.0/1.1	11	as above, becoming 5YR5/6 Light				
			7			Brown, damp, no odor.			0	neg
			4							
			4							
4		6	16	2.0/1.0	6	9"- 10 YR5/4 Moderate Yellowish		=		
			3			Brown, SILT, trace clay, wet, no odor,		=		
			3			roots.		=	0	neg
			3			3"- 5Y6/1 Light Olive Gray, SILT, little		=		
						clay, wet, no odor.		=		
6		8	2	2.0/1.3	3	7"- 10YR4/3 Dark Yellowish Brown,		=		
			1			SILT, trace f sand, orange & gray		=		
			2			mottling, no odor, wet.		=	0	neg
			10			8"- 10YR4/3 Dark Yellowish Brown,		=		
						f SAND, saturated, trace roots at top,		=		
						no odor.		=		
8		10	2	2.0/1.2	3	as above, little silt and clay, roots,		=		
			1			becoming no clay, trace rnd-ang c-f		=	0	neg
			2			gravel, saturated, no odor.		=		
			1					=		
10		12	2	2.0/1.0	5	5"- 10YR2/2 Dusky Yellowish Brown,		=		
			2			CLAY, moist, no odor, trace organics.		=		
			3			7"- 10YR5/4 Light Olive and 5B6/3 Pale		=	0	neg
			4			Blue, CLAY, trace silt, moist, organics,		=		
						mottling?, no odor.		=		
12		14	3	2.0/0.8	7	as above, no odor, moist.		=		
			3					=	0	neg
			4					=		
			6					=		
						EOB @ 14 ft.				

Notes: Screen: 4 - 14 ft | Riser: 0.5 - 4 ft | Sand: 3 - 14 ft

Bentonite: 1.5 -3 ft

PVC Material: 2" dia. - 0.010" slot screen

flush mount

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING PZ-3
Client: National Grid Proj. Loc: South First Street, Fulton, NY File No.: 1118/35273	Hollow Stem Auger Sampler: 2-inch dia.split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: Between PZ-2 and PZ-4 Start Date: 10/14/2005 End Date: 10/14/2005
Boring Company: Parratt-Wolff Inc. Foreman: Mark Eaves Drill Rig: IR Geologist: Scott Tucker		Screen = / Riser Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		2				See boring log for SB-41 for geologic details (did not sample, augered to depth)				
2		4								
4		6								
6		8								
8		10								
10		12								
12		14								

Notes: Screen: 4 - 14 ft
Riser: 0.5 - 4 ft
Sand: 3 - 14 ft
Bentonite: 1.5 -3 ft
PVC Material: 2" dia. - 0.010" slot screen
flush mount

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING PZ-4
Client: National Grid (Niagara Mohawk) Proj. Loc: South First Street Fulton, NY File No.: 1118/35273	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: east of SB-41 Start Date: 10/13/2006 End Date: 10/13/2006
Boring Company: Parratt-Wolff Inc. Foreman: Mark Eaves Drill Rig: IR Geologist: Scott Tucker		Screen = Riser Grout Sand Pack Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	Field Testing UV
0		0.5	-	-	-	Augered through blacktop.				
0.5		2	3	1.5/0.6	6	10YR5/4 Moderate Yellowish Brown,				
			3			cmf(+) SAND, little rnd gravel, trace			0	neg
			4			coal fragments, damp, no odor.				
2		4	8	2.0/0.8	5	as above, cmf SAND, some rnd m-f				
			3			gravel, coal fragements, moist,				
			2			no odor.			0	neg
			3							
4		6	8	2.0/0.4	9	as above, 10YR4/2 Dark Yellowish		=		
			4			Brown, red brick fragments, moist,		=		
			5			no odor.		=	0	neg
			4					=		
6		8	6	2.0/0.3	7	N2 Grayish Black, coarse SAND and		=		
			4			GRAVEL, coal fragments, saturated,		=		
			3			no odor.		=	0.3	neg
			2					=		
8		10	1	2.0/0.3	3	N1 Black, wood, little c sand and		=		
			1			gravel, strong odor, wet, sheen.		=	16.8	neg
			2					=		
			2					=		
10		12	2	2.0/0.6	3	2"- as above, sheen		=		
			1			5"- N1 Black, SILT, little f SAND,		=		
			2			moist, strong odor.		=	19.1	
			1					=		neg
12		14	2	2.0/1.0	6	6"- as above		=		
			3			6"- 10Y5/4 Light Olive, and 5B6/2 Pale		=		
			3			Blue, CLAY, mottled, hint of varving,		=	18.5	neg
			3			organics, moist, possible odor		=		
						(dragdown?)		=		
						EOB @ 14 ft				

Notes: Screen: 4 - 14 ft; Riser: 0.5 - 4 ft; Sand: 3 - 14 ft; Bentonite: 1.5 -3 ft; PVC Material: 2" dia. - 0.010" slot screen; flush mount

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING PZ-5
Client: National Grid (Niagara Mohawk) Proj. Loc: South First Street, Fulton, NY File No.: 1118/35273	Hollow Stem Auger Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: east of MW-8 Start Date: 10/14/2005 End Date: 10/14/2005

Boring Company: Parratt-Wolff Inc.
Foreman: Mark Eaves
Drill Rig: IR
Geologist: Scott Tucker

Legend: Screen = ; Riser ; Grout ; Sand Pack ; Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	PID (ppm)	UV
0		2	2	2.0/1.0	5	7"- 10YR5/4 Moderate Yellowish				
			2			Brown, SAND and SiLT, trace angular				
			3			gravei.			0	neg
			5			5"- Shingle fragments.				
2		4	3	2.0/?	6	10YR5/4 Moderate Yellowish Brown,				
			3			f SAND, iittle siit, trace wood fragments			0	neg
			3							
			3							
4		6	2	2.0/1.3	2	9"- 10YR5/4 Moderate Yeiiowish		=		
			1			Brown, f SAND, wet, no odor.		=		
			1			7"- 10YR6/2 Pale Yellowish Brown,		=	0	neg
			2			f SAND and SILT, little clay, trace rnd		=		
						coarse gravel, no odor, wet.		=		
6		8	2	2.0/1.0	3	9"- 10YR6/2 Pale Yellowish Brown and		=		
			1			5YR5/2 Pale Brown, CLAY, little silt,		=	0	neg
			2			wet, no odor.		=		
			5			3"- 5YR5/2 Pale Brown, cm(+)f SAND,		=		
						some mf ang gravel, moist, no odor.		=		
8		10	2	2.0/0.2	6	10YR6/2 Pale Yellowish Brown, CLAY,		=		
			3			very stiff, slight odor, spoon saturated.		=		
			3					=	0	neg
			5					=		
								=		
10		12	2	2.0/0.2	11	10YR5/4 Moderate Yellowish Brown to		=		
			4			N4 Medium Dark Gray, CLAY, hint of		=		
			7			varving top 5", very stiff, moist,		=	0	neg
			9			no odor.		=		
								=		
12		14	6	2.0/1.7	15	as above, very stiff, trace roots.		=		
			6					=		
			9					=	0	neg
			11					=		
								=		
						EOB @ 14 ft				

Notes: Screen: 4 - 14 ft; Riser: 0.5 - 4 ft; Sand: 3 - 14 ft
Bentonite: 1.5 -3 ft
PVC Material: 2" dia. - 0.010" slot screen
flush mount

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING PZ-6
Client: National Grid Proj. Loc: South First Street, Fulton, NY File No.: 1118/35273	Hollow Stem Auger Sampler: 2-inch dia.split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: between sewer line and MW-9D Start Date: 10/14/2005 End Date: 10/14/2005
Boring Company: Parratt-Wolff Inc. Foreman: Mark Eaves Drill Rig: IR Geologist: Scott Tucker		Screen = Riser \ Grout Sand Pack Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		2	2	2.0/0.0.6	6	2"- topsoil				
			2			5"- 10YR5/4 Moderate Yellowish				
			4			Brown, f SAND and rnd-ang c-m			0.4	neg
			6			GRAVEL, brick and coal fragments,				
						damp, no odor.				
2		4	32	2.0/0.5	11	concrete fragemtns				
			6						0.3	neg
			5							
			5							
4		6	4	2.0/0.7	5	Gravel, coal and clinker fragments,				
			3			no odor.				
			2						0.8	neg
			2							
6		8	3	2.0/1.4	4	5"- as above		=		
			3			12"- 5Y4/1 Olive Gray, SILT and		=	0.7	neg
			1			f SAND, roots last 7", wet, no odor.		=		
			1					=		
								=		
8		10	1	2.0/1.1	4	5GY5/2 Dusky Yellow Green, CLAY,		=		
			2			little silt, trace f sand ad f rnd gravel,		=		
			2			sand is 10R6/6 Moderate Reddish		=	1.2	slight
			1			Orange, roots, odor, wet.		=		pos
								=		
10		12	3	2.0/1.3	4	as above, shells at 6" from bottom,		=		
			2			intermittent layering, slight sheen in		=		
			2			random locations, odor, wet.		=	16.6	pos
			1					=		
								=		
12		14	3	2.0/1.7	6	as above, shells, NAPL blebs in clay,		=		
			3			strong odor, wet.		=		
			3					=	29.5	pos
			3					=		
								=		
14		16	-	2.0/0.3	-	N5 Medium Gray, SILT, little f sand,		=		
			-			some coarse rnd gravel, NAPL blebs in		=		
			-			SILT, sheen, saturated, odor.		=	7.8	pos
			-					=		
								=		
						EOB @ 16 ft				

Notes: Screen: 6 - 16 ft Bentonite: 2 - 4 ft
Riser: 0-6 ft (stick-up) PVC Material: 2" dia. - 0.010" slot screen
Sand: 4 - 16 ft

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING PZ-7
Client: National Grid Proj. Loc: South First Street Fulton, NY File No.: 1118/35273	Hollow Stem Auger Sampler: 2-inch dia.split spoon Hammer: 140 lbs Fall: 30 inches	Page 1 of 1 Location: between sewer line and MW-3 Start Date: 10/14/2005 End Date: 10/14/2005
Boring Company: Parratt-Wolff Inc. Foreman: Mark Eaves Drill Rig: IR Geologist: Scott Tucker		Screen =, Riser, Grout, Sand Pack, Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		2	1	2.0/0.7	5	4"- Topsoil				
			1			4"- Angular gravel, coal fragments				
			4						0.6	neg
			3							
2		4	3	2.0/0.7	4	4"- SILT, little f sand, saturated, odor.				
			2			4"- coal fragments			0.8	neg
			2							
			2							
4		6	-	2.0/0.3	-	3" angular gravel, brick and porcelain				
			-			fragments, wet, slight odor.				
			-						1.1	neg
			-							
6		8	-	NR	-	No Recovery		=		
			-					=		
			-					=	-	-
			-					=		
8		10	-	NR	-	No Recovery		=		
			-					=		
			-					=	-	-
			-					=		
10		12	5	2.0/1.6	8	5"- N4 Medium Dark Gray, SILT, trace		=		
			4			f SAND, roots, wet, no odor.		=		
			4			3"-5GY5/2 SILT, little clay, wet, no odor		=	1.3	neg
			1			11"- N8 Very Light Gray, SILT, tight,		=		
						no odor		=		
12		14	2	2.0/0.8	5	10YR6/6 Dark Yellowish Orange and		=		
			2			N6 Medium Light Gray, CLAY, little silt		=		
			3			and f sand, trace roots, moist, no odor.		=	1.1	neg
			5					=		
14		16	3	2.0/0.5	9	5GY5/2 Dusky Yellow Green, SILT,		=		
			4			trace f sand, shells, wood and coal		=		
			5			fragments.		=	1	neg
			7					=		
						EOB@ 16 ft				

Notes: Screen: 6 - 16 ft; Riser: stick-up; Sand: 4 - 16 ft; Bentonite: 2 - 4 ft; PVC Material: 2" dia. - 0.010" slot screen

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING TP-1
Client: Niagara Mohawk	Sampler: Backhoe	Page 1 of 1
		Location:
Proj. Loc: Fulton, New York	Hammer: NA	Start Date: 7/8/96
File No.: 1118.081	Fall: NA	End Date: 7/8/96

Boring Company: Parratt-Wolff
Foreman: Brian Waters
OBG Geologist: Chawn O'Dell

Screen | Riser | Grout | Sand Pack | Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
						Brownish black (5YR 2/1), moist, medium dense, fine to medium SAND, some silt, little fine to medium gravel to approximately 3 ft, then grayish orange (10YR 7/4), wet to saturated, dense SILT, some fine sand to approximately 5 ft. Stained soil (moderate odor) encountered at approximately 5 ft below grade			0.0 0.0
						Test pit dimensions: approximately 5 ft deep by 5 ft long by 2 ft wide			
						Intact concrete structure located approximately 5 ft below the surface			

The test pit was backfilled with excavated soils.

CPO:ers/div76/4 n&d/TP-1

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING TP-2
Client: Niagara Mohawk Proj. Loc: Fulton, New York File No.: 1118.081	Sampler: Backhoe Hammer: NA Fall: NA	Page 1 of 1 Location: Start Date: 7/8/96 End Date: 7/8/96
Boring Company: Parratt-Wolff Foreman: Brian Waters OBG Geologist: Chawn O'Dell		Screen = / Riser / \ Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
						Moderate yellowish brown (10YR 5/4), damp, medium dense, SILT, some fine to medium sand, little subrounded to angular coarse sand to fine gravel to approximately 3 ft then, grayish orange (10YR 7/4) wet to saturated, dense SILT and fine SAND, little medium to coarse sand, trace sub-rounded to angular gravel to approximately 5 ft below grade.			0.0 0.0
						Test pit dimensions: approximately 5 ft deep by 7 ft long by 2 ft wide			
						Edge of intact concrete structure located approximately 4.5 ft below grade			

The test pit was backfilled with excavated soils.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING TP-3
Client: Niagara Mohawk	Sampler: Backhoe	Page 1 of 1
Proj. Loc: Fulton, New York	Hammer: NA	Location:
File No.: 1118.081	Fall: NA	Start Date: 7/8/96 End Date: 7/8/96
Boring Company: Parratt-Wolff Foreman: Brian Waters OBG Geologist: Chawn O'Dell		Screen / Riser — Grout / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
						Brownish black (5YR 2/1), damp, loose to medium dense, fine to medium SAND, some silt, little subrounded to subangular coarse sand to fine gravel to approximately 3 ft, then dark yellowish orange (10YR 6/6), wet to saturated, medium dense, medium sand some fine sand to silt, little coarse sand, trace subrounded to subangular fine gravel			0.0 0.0
						Test pit dimensions: approximately 6 ft deep by 8 ft long by 4 ft wide			
						Structure hot encountered. Excavation terminated due to close proximatey to marked underground gas pipeline.			

The test pit was backfilled with excavated soils.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING TP-4
Client: Niagara Mohawk	Sampler: Backhoe	Page 1 of 1
Proj. Loc: Fulton, New York	Hammer: NA	Location:
File No.: 1118.081	Fall: NA	Start Date: 7/8/96 End Date: 7/8/96

Boring Company: Parratt-Wolff
Foreman: Brian Waters
OBG Geologist: Chawn O'Dell

Screen = | Riser | \ Grout | Sand Pack | Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
						Moderate yellowish brown (10YR 5/4), damp to saturated, medium dense, fine to coarse, subrounded sand, little SILT and CLAY, some concrete and brick fragments			0.0
						Test pit dimensions: approximately 5 ft long by 4 ft deep by 3 ft wide			0.0
						Intact brick/ceramic foundation, round and holding water located approximately 3 ft below grade.			

The test pit was backfilled with excavated soils.

CPO:ers/div76/4 n&d/TP-4

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING SB-2
Client: Niagara Mohawk Power Corp Proj. Loc: 567-S. First St., Fulton, NY File No.: 1118.081	Drill Method: 3.25 inch HAS Sampler: 2-inch split spoon Hammer: 140 lbs Fall: 30-inches	Page 1 of 1 Location: Start Date: 02/23/00 End Date: '02/23/00
Boring Company: Parratt-Wolff, Inc. Foreman: Joe Persey Drill Rig: I.R OBG Geologist: Peter Bogardus		Screen = / Riser / Steel // ; Grout \ / Sand Pack / Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)	UV
0		2				Fill - asphalt to 0.5'				
						Sand and gravel, old asphalt to 1.5'				
						then brownish red moist silt, little clay				
2		4	28-17	2/1.0	44	Dark yellowish brown 10YR4/2 SILT,			3.1	neg
			27-12			some fine sand, strong odor				
4		6	2-1	2/1.2	2	Olive gray 5Y4/1, moist, rich soft SILT,			45	UV
			1-1			some fine sand, strong odor				
6		8	2-1	2/1.3	7	Moderate yellowish brown 10YR			17.5	UV
			6-9			5/4 wet medium stiff SILT and fine				
						SAND, (DNAPL) (slight odor)				
8		10	5-6	2/1.3	13	Medium gray N5, stiff wet fine SAND			37	neg
			7-9			and SILT, trace of gravel (slight odor)				
						Product noted on rods when plug				
						removed				
10		12	2-8	2/1.0	16	Medium gray, very stiff wet SILT, little				
			'8-6			fine sand, trace of clay			1.2	neg
12		14	8-7	2/1.2	13	Moderate yellowish brown wet stiff				
			6-8			SILT, little fine sand			0.2	neg
14		16	4-10	2/1.3	18	Moderate brown 5YR 3/4, medium				
			8-10			dense, wet medium to coarse SAND.				
						Some fine to medium gravel			0	neg
16		18	16-12	2/1.3	22	Similar			0	neg
			10-5							
18		20	10-10	2/NR	20	No recovery			---	---
			11-12							

Ground water sampling logs

O'Brien & Gere Engineers, Inc.

Standard Ground Water Sampling Log

Date: July 16, 1998
Site Name: Niagara Mohawk
Location: Fulton, NY
Project No: 1118.081.013.130
Personnel: James A. Moore

Weather: Sunny 90°
Well #: MW - 1
Evacuation Metho: Bottom Loading Stainless Steel Bailer
Sampling Method: Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well *: 19.13 ft.
Depth to Water *: 4.99 ft.
Length of Water Column: 14.14 ft.
Volume of Water in Well: 2.30 gal.(s)
3X Volume of Water in Well: 6.90 gal.(s)

Water Volume /ft. for:	
x	2" Diameter Well = 0.163 X LWC
	4" Diameter Well = 0.653 X LWC
	6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 4 gal.(s)
Did well go dry? Yes

* Measurements taken from: [x] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.00
7.0 Standard	7.01
10.0 Standard	9.99

Conductivity Standard Readings	
84 S Standard	—
1413 S Standard	1470 @ 27°C

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial 0.5	initial 23.2	initial 7.94	initial 599	initial 65.4
2	16.8	7.81	672	1152
~~3~~ 4	16.2	7.76	687	>1000
~~5~~				

Water Sample:
Time Collected: 1530

Physical Appearance at Start	
Color	Colorless
Odor	None
Turbidity (> 100 NTU)	65.4
Sheen/Free Product	None

Physical Appearance at Sampling	
Color	Tan/Brown
Odor	None
Turbidity (> 100 NTU)	>1000
Sheen/Free Product	None.

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	Glass	3	No	None	—
1 Liter	Amber Glass	2	No	None	—

Notes:

O'Brien & Gere Engineers, Inc.

Standard Ground Water Sampling Log

Date July 16, 1998
Site Name Niagara Mohawk
Location Fulton, NY
Project No 1118.081.013.130
Personnel James A. Moore

Weather SUNNY 90°F
Well # MW - 2
Evacuation Metho Bottom Loading Stainless Steel Bailer
Sampling Method Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well *	13.38	ft.
Depth to Water *	3.75	ft.
Length of Water Column	9.63	ft.
Volume of Water in Well	1.57	gal.(s)
3X Volume of Water in Well	4.71	gal.(s)

Water Volume /ft. for:

x	2" Diameter Well = 0.163 X LWC
	4" Diameter Well = 0.653 X LWC
	6" Diameter Well = 1.469 X LWC

Volume removed before sampling 5 gal.(s)
Did well go dry? NO

* Measurements taken from [x] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.00
7.0 Standard	7.01
10.0 Standard	9.99

Conductivity Standard Readings	
84 S Standard	—
1413 S Standard	1470 @ 27°C

Water parameters:

	Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial	0.5	22.8	6.81	1032	27.8
	2	20.5	6.84	1124	1089
	4	19.8	6.97	1071	>1000
	5	19.6	6.95	1064	>1000

Water Sample:
Time Collected 1500

Physical Appearance at Start		Physical Appearance at Sampling	
Color	COLORLESS	Color	TAN
Odor	SWEET	Odor	SWEET
Turbidity (> 100 NTU)	27.8	Turbidity (> 100 NTU)	>1000
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	GLASS	3	NO	NONE	—
LITER	GLASS	2	NO	NONE	—

Notes:

O'Brien & Gere Engineers, Inc. **Standard Ground Water Sampling Log**

Date July 16, 1998
Site Name Niagara Mohawk
Location Fulton, NY
Project No 1118.081.013.130
Personnel James A. Moore

Weather Sunny 90°F
Well # MW - 3
Evacuation Metho Bottom Loading Stainless Steel Bailer
Sampling Method Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well * 18.93 ft.
Depth to Water * 11.40 ft.
Length of Water Column 7.53 ft.
Volume of Water in Well 1.23 gal.(s)
3X Volume of Water in Well 3.69 gal.(s)

Water Volume /ft. for:

x	2" Diameter Well = 0.163 X LWC
	4" Diameter Well = 0.653 X LWC
	6" Diameter Well = 1.469 X LWC

Volume removed before sampling 4 gal.(s)
Did well go dry? No

* Measurements taken from [x] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.00
7.0 Standard	7.01
10.0 Standard	9.99

Conductivity Standard Readings	
84 S Standard	—
1413 S Standard	1470 @ 27.00

Water parameters:

	Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial	0.5	19.1	7.69	840	35.6
	1.5	16.8	7.16	877	1,130
	2.5	16.6	7.16	776	1645
	4	16.5	7.12	812	1549

Water Sample:
Time Collected 1100

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Colorless	Color	Brown
Odor	None	Odor	None
Turbidity (> 100 NTU)	35.6	Turbidity (> 100 NTU)	1,549
Sheen/Free Product	None	Sheen/Free Product	None

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	Glass	3	No	None	—
Liter	Glass	2	No	None	—

Notes:

O'Brien & Gere Engineers, Inc. **Standard Ground Water Sampling Log**

Date July 16, 1998
Site Name Niagara Mohawk
Location Fulton, NY
Project No 1118.081.013.130
Personnel James A. Moore

Weather SUNNY 90°F
Well # MW-4
Evacuation Metho Bottom Loading Stainless Steel Bailer
Sampling Method Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well * 15.98 ft.
Depth to Water * 8.20 ft.
Length of Water Column 7.78 ft.
Volume of Water in Well 1.27 gal.(s)
3X Volume of Water in Well 3.81 gal.(s)

Water Volume /ft. for:
x 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling 4 gal.(s)
Did well go dry? NO

* Measurements taken from [x] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.00
7.0 Standard	7.01
10.0 Standard	9.99

Conductivity Standard Readings	
84 S Standard	—
1413 S Standard	1470 @ 27°C

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial 0.5	initial 23.4	initial 6.97	initial 933	initial 220
1.5	19.1	6.49	1,130	694
3	18.0	6.39	1,100	812
4	17.9	6.40	1,110	613

Water Sample:
Time Collected 1245

Physical Appearance at Start	
Color	YELLOW
Odor	SWEET
Turbidity (> 100 NTU)	220
Sheen/Free Product	NONE

Physical Appearance at Sampling	
Color	BROWN
Odor	SWEET
Turbidity (> 100 NTU)	615
Sheen/Free Product	NONE

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	GLASS	3	NO	NONE	—
1Ltr	GLASS	2	NO	NONE	—

Notes:

O'Brien & Gere Engineers, Inc. — **Standard Ground Water Sampling Log**

Date July 16, 1998
Site Name Niagara Mohawk
Location Fulton, NY
Project No 1118.081.013.130
Personnel James A. Moore

Weather OVERCAST 90°F
Well # MW - 5
Evacuation Metho Bottom Loading Stainless Steel Bailer
Sampling Method Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well * 15.81 ft.
Depth to Water * 7.48 ft.
Length of Water Column 8.33 ft.
Volume of Water in Well 1.36 gal.(s)
3X Volume of Water in Well 4.08 gal.(s)

Water Volume /ft. for:
x 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling 4.5 gal.(s)
Did well go dry? NO

* Measurements taken from [x] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings		Conductivity Standard Readings	
4.0 Standard	4.00	84 S Standard	—
7.0 Standard	7.01	1413 S Standard	1470 @ 27°C
10.0 Standard	9.99		

Water parameters:

	Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial	0.5	21.8	6.80	655	172
	1.5	18.1	6.67	781	347
	3	16.9	6.59	887	698
	4.5	16.8	6.54	907	752

Water Sample:
Time Collected 1400

Physical Appearance at Start		Physical Appearance at Sampling	
Color	TAN	Color	TAN/BROWN
Odor	SWEET	Odor	SWEET
Turbidity (> 100 NTU)	172	Turbidity (> 100 NTU)	752
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ML	GLASS	3	NO	NONE	—
LITER	GLASS	2	NO	NONE	—

Notes: BAILER
EQUIPMENT BLANK COLLECTED @ 1415 AFTER MW-5

O'Brien & Gere Engineers, Inc.	Standard Ground Water Sampling Log

Date July 16, 1998
Site Name Niagara Mohawk
Location Fulton, NY
Project No 1118.081.013.130
Personnel James A. Moore

Weather Sunny 90°F
Well # MW- 6
Evacuation Metho Bottom Loading Stainless Steel Bailer
Sampling Method Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well * 36.62 ft.
Depth to Water * 7.16 ft.
Length of Water Column 29.46 ft.
Volume of Water in Well 4.80 gal.(s)
3X Volume of Water in Well 14.40 gal.(s)

Water Volume /ft. for:

x	2" Diameter Well = 0.163 X LWC
	4" Diameter Well = 0.653 X LWC
	6" Diameter Well = 1.469 X LWC

Volume removed before sampling 9 gal.(s)
Did well go dry? Yes

* Measurements taken from [x] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.00
7.0 Standard	7.01
10.0 Standard	9.99

Conductivity Standard Readings	
84 S Standard	
1413 S Standard	1476 @ 27°C

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial 0.5	initial 26.1	initial 7.45	initial 447	initial 39.7
5	16.7	7.61	468	760
~~10~~ 9 DRY	16.6	7.75	483	>1000
~~15~~				

Water Sample:
Time Collected 1130

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Colorless	Color	Dark Brown
Odor	Slight Sweet	Odor	Slight Sweet
Turbidity (> 100 NTU)	39.7	Turbidity (> 100 NTU)	>1000
Sheen/Free Product	None	Sheen/Free Product	~~None~~ Slight Sheen on surface

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	GLASS	3	NO	NONE	—
1 Liter	GLASS	2	NO	NONE	—

Notes:

O'Brien & Gere Engineers, Inc. — **Standard Ground Water Sampling Log**

Date: July 16, 1998
Site Name: Niagara Mohawk
Location: Fulton, NY
Project No: 1118.081.013.130
Personnel: James A. Moore

Weather: SUNNY 90°F
Well #: MW - 7
Evacuation Metho: Bottom Loading Stainless Steel Bailer
Sampling Method: Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well *: 16.44 ft.
Depth to Water *: 8.90 ft.
Length of Water Column: 7.54 ft.
Volume of Water in Well: 1.23 gal.(s)
3X Volume of Water in Well: 3.69 gal.(s)

Water Volume /ft. for:
x 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 4 gal.(s)
Did well go dry?: NO

* Measurements taken from: [x] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.00
7.0 Standard	7.01
10.0 Standard	9.99

Conductivity Standard Readings	
84 S Standard	—
1413 S Standard	1470 @ 27°c

Water parameters:

	Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial	0.5	21.4	6.63	671	123
	1.5	18.9	6.70	672	154
	3	17.7	6.71	729	422
	4	17.5	6.76	707	701

Water Sample:
Time Collected: 1330

Physical Appearance at Start	
Color	COLORLESS
Odor	SLIGHT SWEET
Turbidity (> 100 NTU)	123
Sheen/Free Product	NONE

Physical Appearance at Sampling	
Color	Tan/Brown
Odor	SLIGHT SWEET
Turbidity (> 100 NTU)	701
Sheen/Free Product	NONE

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	GLASS	9	NO	NONE	—
Liter	GLASS	8	NO	NONE	—

Notes: MS & MSD COLLECTED

O'Brien & Gere Engineers, Inc. **Standard Ground Water Sampling Log**

Date July 16, 1998
Site Name Niagara Mohawk
Location Fulton, NY
Project No 1118.081.013.130
Personnel James A. Moore

Weather SUNNY 85°F
Well # MW - 8
Evacuation Metho Bottom Loading Stainless Steel Bailer
Sampling Method Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well * 18.02 ft.
Depth to Water * 9.43 ft.
Length of Water Column 8.59 ft.
Volume of Water in Well 1.40 gal.(s)
3X Volume of Water in Well 4.20 gal.(s)

Water Volume /ft. for:
x 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling 4.5 gal.(s)
Did well go dry? NO

* Measurements taken from [x] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings		Conductivity Standard Readings	
4.0 Standard	4.00	84 S Standard	—
7.0 Standard	7.01	1413 S Standard	1470 @ 27°C
10.0 Standard	9.99		

Water parameters:

	Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial	0.3	18.0	5.48	688	15.2
	1.5	16.6	6.06	689	46.9
	3	15.5	6.19	696	34.7
	4.5	15.4	6.27	702	36.8

Water Sample:
Time Collected 0930

Physical Appearance at Start		Physical Appearance at Sampling	
Color	COLORLESS	Color	COLORLESS
Odor	NONE	Odor	NONE
Turbidity (> 100 NTU)	15.2	Turbidity (> 100 NTU)	36.8
Sheen/Free Product	NONE	Sheen/Free Product	NONE

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ML	GLASS	~~3~~ 6	NO	NONE	—
LITER	GLASS	~~2~~ 4	NO	NONE	—

Notes: BLIND DUPLICATE

O'Brien & Gere Engineers, Inc. — **Standard Ground Water Sampling Log**

Date: July 16, 1998
Site Name: Niagara Mohawk
Location: Fulton, NY
Project No: 1118.081.013.130
Personnel: James A. Moore

Weather: Sunny 85°F
Well #: MW- 9
Evacuation Metho: Bottom Loading Stainless Steel Bailer
Sampling Method: Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well *: 18.04 ft.
Depth to Water *: 8.56 ft.
Length of Water Column: 9.48 ft.
Volume of Water in Well: 1.55 gal.(s)
3X Volume of Water in Well: 4.65 gal.(s)

Water Volume /ft. for:
- x 2" Diameter Well = 0.163 X LWC
- ___ 4" Diameter Well = 0.653 X LWC
- ___ 6" Diameter Well = 1.469 X LWC

Volume removed before sampling: 5 gal.(s)
Did well go dry? NO

* Measurements taken from: [x] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.00
7.0 Standard	7.01
10.0 Standard	9.99

Conductivity Standard Readings	
84 S Standard	—
1413 S Standard	1470 @ 27°

Water parameters:

	Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial	0.5	20.6	6.93	791	184
	2	17.4	6.88	849	1114
	4	16.4	6.84	814	946
	5	16.1	6.80	807	831

Water Sample:
Time Collected: 1000

Physical Appearance at Start	
Color	MILKY
Odor	None
Turbidity (> 100 NTU)	184
Sheen/Free Product	None

Physical Appearance at Sampling	
Color	Brown
Odor	None
Turbidity (> 100 NTU)	831
Sheen/Free Product	None.

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	GLASS	3	NO	None	—
Liter	GLASS	2	NO	None	—

Notes:

O'Brien & Gere Engineers, Inc. — Standard Ground Water Sampling Log

Date July 16, 1998
Site Name Niagara Mohawk
Location Fulton, NY
Project No 1118.081.013.130
Personnel James A. Moore

Weather SUNNY 90°F
Well # MW- 90
Evacuation Metho Bottom Loading Stainless Steel Bailer
Sampling Method Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well * 31.80 ft.
Depth to Water * 10.57 ft.
Length of Water Column 21.23 ft.
Volume of Water in Well 3.46 gal.(s)
3X Volume of Water in Well 10.38 gal.(s)

Water Volume /ft. for:
x 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling 10.5 gal.(s)
Did well go dry? NO (NOTES)

(Other, Specify)

* Measurements taken from [x] Well Casing [ ] Protective Casing [ ]

Instrument Calibration:

pH Buffer Readings
4.0 Standard 4.00
7.0 Standard 7.01
10.0 Standard 9.99

Conductivity Standard Readings
84 S Standard —
1413 S Standard 1470 @ 27°

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial 0.5	initial 19.2	initial 6.81	initial 1,162	initial 4.44
3	15.8	7.24	1,380	54.2
7	15.3	7.31	1,516	316.
10.5	15.1	7.19	2,360	647

Water Sample:
Time Collected 1030

Physical Appearance at Start
Color COLORLESS
Odor NONE
Turbidity (> 100 NTU) 4.44
Sheen/Free Product NONE

Physical Appearance at Sampling
Color Brown
Odor NONE
Turbidity (> 100 NTU) 647
Sheen/Free Product NONE.

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	GLASS	3	NO	NONE	—
LITER	GLASS	2	NO	NONE	—

Notes:

O'Brien & Gere Engineers, Inc.	Standard Ground Water Sampling Log

Date July 16, 1998
Site Name Niagara Mohawk
Location Fulton, NY
Project No 1118.081.013.130
Personnel James A. Moore

Weather Sunny 90°F.
Well # MW-10
Evacuation Metho Bottom Loading Stainless Steel Bailer
Sampling Method Bottom Loading Stainless Steel Bailer

Well Information:

Depth of Well *	14.92	ft.
Depth to Water *	7.91	ft.
Length of Water Column	7.01	ft.
Volume of Water in Well	1.14	gal.(s)
3X Volume of Water in Well	3.42	gal.(s)

Water Volume /ft. for:	
x	2" Diameter Well = 0.163 X LWC
	4" Diameter Well = 0.653 X LWC
	6" Diameter Well = 1.469 X LWC

Volume removed before sampling 3.5 gal.(s)
Did well go dry? No

* Measurements taken from [x] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.00
7.0 Standard	7.01
10.0 Standard	9.99

Conductivity Standard Readings	
84 S Standard	←
1413 S Standard	1470 @ 27°C

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm	Turbidity Readings NTU
initial 0.5	initial 20.1	initial 7.31	initial 2,060	initial 19.7
1.5	18.1	7.04	2,050	948
2.5	17.8	7.14	2,060	389
3.5	17.7	7.08	2,070	266

Water Sample:
Time Collected 1215

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Colorless	Color	Brown
Odor	None	Odor	None
Turbidity (> 100 NTU)	19.7	Turbidity (> 100 NTU)	266
Sheen/Free Product	None.	Sheen/Free Product	None.

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	Glass	3	No	None	—
Liter	Glass	2	No	None	—

Notes:

O'Brien & Gere Engineers, Inc. **Standard Ground Water Sampling Log -**

Date 08/04/99

Site Name NMPC South First Street

Location Fulton, NY

Project No 1118.081

Personnel Chawn O'Dell

Weather overcast; ~75°F

Well # MW-3

Evacuation Metho disposable polyethylene bailer

Sampling Method disposable polyethylene bailer

Well Information:

Depth of Well * 18.97 ft.

Depth to Water * 12.12 ft.

Length of Water Column 6.85 ft.

Volume of Water in Well 1.12 gal.(s)

3X Volume of Water in Well 3.36 gal.(s)

Water Volume /ft. for:

X 2" Diameter Well = 0.163 X LWC

4" Diameter Well = 0.653 X LWC

6" Diameter Well = 1.469 X LWC

Volume removed before sampling 3.5 gal.(s)

Did well go dry? NO

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings

4.0 Standard 4.03

7.0 Standard 7.00

10.0 Standard 10.00

Conductivity Standard Readings

84 S Standard ——

1413 S Standard 1413 uS/cm

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm
initial 0.25	initial 16.3 °C	initial 7.24	initial 1022 uS/cm
1.25	15.8	7.03	1026
2.25	15.3	7.01	995
3.50	15.5	7.03	963

Water Sample:
Time Collected 1220

Physical Appearance at Start

Color Colorless -> Gray

Odor NO

Turbidity (> 100 NTU) >100ntu

Sheen/Free Product NO

Physical Appearance at Sampling

Color Brown Gray

Odor NO

Turbidity (> 100 NTU) >100ntu

Sheen/Free Product NO

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	voa	3	no	HCL	<2
quart	amber glass	2	no	none	~7

Notes:

O'Brien & Gere Engineers, Inc. **Standard Ground Water Sampling Log -**

Date	08/04/99		
Site Name	NMPC South First Street	Weather	Lt. rain, ~80°F
Location	Fulton, NY	Well #	MW-4
Project No	1118.081	Evacuation Metho	disposable polyethylene bailer
Personnel	Chawn O'Dell	Sampling Method	disposable polyethylene bailer

Well Information:

Depth of Well * 16.03 ft.

Depth to Water * 8.98 ft.

Length of Water Column 7.05 ft.

Volume of Water in Well 1.15 gal.(s)

3X Volume of Water in Well 3.45 gal.(s)

Water Volume /ft. for:

X	2" Diameter Well = 0.163 X LWC
	4" Diameter Well = 0.653 X LWC
	6" Diameter Well = 1.469 X LWC

Volume removed before sampling 3.75 gal.(s)

Did well go dry? No

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.03
7.0 Standard	7.00
10.0 Standard	10.00

Conductivity Standard Readings	
84 S Standard	—
1413 S Standard	1413 us/cm

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm
initial 0.25	initial 16.3 °C	Initial 6.71	initial 1455 us/cm
1.25	16.9	6.36	1369
2.50	16.7	6.01	1461
3.75	17.0	6.57	1382

Water Sample:
Time Collected 1340

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Colorless	Color	Gray-Brown
Odor	Yes	Odor	Yes
Turbidity (> 100 NTU)	<100ntu	Turbidity (> 100 NTU)	>100ntu
Sheen/Free Product	No	Sheen/Free Product	~~No~~ Yes - Sheen

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	voa	3	no	HCL	<2
quart	amber glass	2	no	none	~7

Notes:

O'Brien & Gere Engineers, Inc.

Standard Ground Water Sampling Log

Date 08/04/99
Site Name NMPC South First Street
Location Fulton, NY
Project No 1118.081
Personnel Chawn O'Dell

Weather OVERCAST, ~83°F
Well # MW-5
Evacuation Metho disposable polyethylene bailer
Sampling Method disposable polyethylene bailer

Well Information:

Depth of Well * 15.85 ft.
Depth to Water * 7.86 ft.
Length of Water Column 7.99 ft.
Volume of Water in Well 1.30 gal.(s)
3X Volume of Water in Well 3.9 gal.(s)

Water Volume /ft. for:

X 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling 4.0 gal.(s)
Did well go dry? NO

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings
4.0 Standard 4.03
7.0 Standard 7.00
10.0 Standard 10.00

Conductivity Standard Readings
84 S Standard —
1413 S Standard 1413 us/cm

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm
initial 0.25	initial 17.5	initial 6.96	initial 704 us/cm
1.25	16.7	6.59	737
2.75	16.4	6.51	771
4.0	16.2	6.49	796

Water Sample:
Time Collected 1615

Physical Appearance at Start
Color Colorless
Odor Yes
Turbidity (> 100 NTU) <100ntu
Sheen/Free Product No

Physical Appearance at Sampling
Color Yellow-Gray
Odor Yes
Turbidity (> 100 NTU) >100ntu
Sheen/Free Product No

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	voa	3	no	HCL	<2
quart	amber glass	2	no	none	~7

Notes: Collect Blind Duplicate

O'Brien & Gere Engineers, Inc.

Standard Ground Water Sampling Log

Date 08/04/99
Site Name NMPC South First Street
Location Fulton, NY
Project No 1118.081
Personnel Chawn O'Dell

Weather OVERCAST; ~83°F
Well # MW-6
Evacuation Metho disposable polyethylene bailer
Sampling Method disposable polyethylene bailer

Well Information:

Depth of Well * 36.74 ft.
Depth to Water * 7.75 ft.
Length of Water Column 28.99 ft.
Volume of Water in Well 4.73 gal.(s)
3X Volume of Water in Well 14.20 gal.(s)
14.20

Water Volume /ft. for:
X 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling 11.0 gal.(s)
Did well go dry? yes

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.03
7.0 Standard	7.00
10.0 Standard	10.00

Conductivity Standard Readings	
84 S Standard	—
1413 S Standard	1413 us/cm

Water parameters:

	Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm
initial	0.25	17.C °C	7.95	412 us/cm
	5.0	15.1	7.93	370
	10.0	17.0	8.01	345
	11.0	DRY	DRY	DRY

Water Sample:
Time Collected 1515

Physical Appearance at Start	
Color	Colorless
Odor	yes
Turbidity (> 100 NTU)	<100 ntu
Sheen/Free Product	No

Physical Appearance at Sampling	
Color	Brown
Odor	Yes
Turbidity (> 100 NTU)	>100 ntu
Sheen/Free Product	No

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	voa	3	no	HCL	<2
quart	amber glass	2	no	none	~7

Notes:

O'Brien & Gere Engineers, Inc. — Standard Ground Water Sampling Log

Date 08/05/99
Site Name NMPC South First Street
Location Fulton, NY
Project No 1118.081
Personnel Chawn O'Dell

Weather Partly sunny, ~75°F
Well # MW-1
Evacuation Metho disposable polyethylene bailer
Sampling Method disposable polyethylene bailer

Well Information:

Depth of Well * 16.48 ft.
Depth to Water * 9.34 ft.
Length of Water Column 7.14 ft.
Volume of Water in Well 1.17 gal.(s)
3X Volume of Water in Well 3.51 gal.(s)

Water Volume /ft. for:
X 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling 4.0 gal.(s)
Did well go dry? NO

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings
4.0 Standard 4.02
7.0 Standard 7.00
10.0 Standard 10.00

Conductivity Standard Readings
84 S Standard —
1413 S Standard 1413 uS/cm

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm
initial 0.25	initial 16.6 °C	initial 6.84	initial 820 uS/cm
1.25	16.0	6.71	809
2.50	15.1	6.56	791
4.0	14.5	6.50	778

Water Sample:
Time Collected 0945

Physical Appearance at Start
Color Colorless
Odor No
Turbidity (> 100 NTU) <100ntu
Sheen/Free Product No

Physical Appearance at Sampling
Color Brown
Odor NO
Turbidity (> 100 NTU) >100ntu
Sheen/Free Product NO

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	voa	3	no	HCL	<2
quart	amber glass	2	no	none	~7

Notes:

O'Brien & Gere Engineers, Inc.

Standard Ground Water Sampling Log

Date 08/05/99

Site Name NMPC South First Street

Location Fulton, NY

Project No 1118.081

Personnel Chawn O'Dell

Weather Partly Sunny ~ 70°F

Well # MW-8

Evacuation Metho disposable polyethylene bailer

Sampling Method disposable polyethylene bailer

Well Information:

Depth of Well * 18.06 ft.

Depth to Water * 10.49 ft.

Length of Water Column 7.57 ft.

Volume of Water in Well 1.23 gal.(s)

3X Volume of Water in Well 3.69 gal.(s)

Water Volume /ft. for:

- X 2" Diameter Well = 0.163 X LWC
- 4" Diameter Well = 0.653 X LWC
- 6" Diameter Well = 1.469 X LWC

Volume removed before sampling 4.0 gal.(s)

Did well go dry? No

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings

- 4.0 Standard 4.02
- 7.0 Standard 7.00
- 10.0 Standard 10.00

Conductivity Standard Readings

- 84 S Standard ——
- 1413 S Standard 1413 us/cm

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm
initial 0.25	initial 14.6 °C	initial 6.75	initial 926 us/cm
1.25	13.5	6.84	898
2.75	12.8	6.77	893
4.0	12.5	6.73	891

Water Sample:
Time Collected 0845

Physical Appearance at Start		Physical Appearance at Sampling	
Color	Colorless	Color	Brown
Odor	No	Odor	No
Turbidity (> 100 NTU)	<100ntu	Turbidity (> 100 NTU)	>100Ntu
Sheen/Free Product	No	Sheen/Free Product	No

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	voa	3	no	HCL	<2
quart	amber glass	2	no	none	~7

Notes: Collect Matrix Spike/Matrix Spike Duplicate

O'Brien & Gere Engineers, Inc.

Standard Ground Water Sampling Log

Date 08/05/99

Site Name NMPC South First Street

Location Fulton, NY

Project No 1118.081

Personnel Chawn O'Dell

Weather Partly Sunny ~75°F

Well # MW-9S

Evacuation Metho disposable polyethylene bailer

Sampling Method disposable polyethylene bailer

Well Information:

Depth of Well *	18.07	ft.
Depth to Water *	9.44	ft.
Length of Water Column	8.63	ft.
Volume of Water in Well	1.41	gal.(s)
3X Volume of Water in Well	4.23	gal.(s)

Water Volume /ft. for:	
X	2" Diameter Well = 0.163 X LWC
	4" Diameter Well = 0.653 X LWC
	6" Diameter Well = 1.469 X LWC

Volume removed before sampling 4.6 gal.(s)

Did well go dry? NO

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.02
7.0 Standard	7.00
10.0 Standard	10.00

Conductivity Standard Readings	
84 S Standard	—
1413 S Standard	1413us/cm

Water parameters:

Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm
initial 0.25	initial 17.0 °C	initial 7.01	initial 882 us/cm
1.50	15.6	7.17	790
3.00	15.7	7.29	801
4.5	15.7	7.35	746

Water Sample:
Time Collected 1030

Physical Appearance at Start	
Color	Colorless
Odor	NO
Turbidity (> 100 NTU)	<100ntu
Sheen/Free Product	NO

Physical Appearance at Sampling	
Color	Brown
Odor	NO
Turbidity (> 100 NTU)	>100ntu
Sheen/Free Product	NO

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	voa	3	no	HCL	<2
quart	amber glass	2	no	none	~7

Notes:

O'Brien & Gere Engineers, Inc. **Standard Ground Water Sampling Log**

Date 08/05/99
Site Name NMPC South First Street
Location Fulton, NY
Project No 1118.081
Personnel Chawn O'Dell

Weather Partly Sunny; ~75°F
Well # MW-9D
Evacuation Metho disposable polyethylene bailer
Sampling Method disposable polyethylene bailer

Well Information:

Depth of Well * 31.83 ft.
Depth to Water * 11.06 ft.
Length of Water Column 20.77 ft.
Volume of Water in Well 3.39 gal.(s)
3X Volume of Water in Well 10.17 gal.(s)

Water Volume /ft. for:
X 2" Diameter Well = 0.163 X LWC
4" Diameter Well = 0.653 X LWC
6" Diameter Well = 1.469 X LWC

Volume removed before sampling 10.5 gal.(s)
Did well go dry? No-nearly

* Measurements taken from [X] Well Casing [ ] Protective Casing [ ] (Other, Specify)

Instrument Calibration:

pH Buffer Readings	
4.0 Standard	4.02
7.0 Standard	7.00
10.0 Standard	10.00

Conductivity Standard Readings	
84 S Standard	—
1413 S Standard	1413 us/cm

Water parameters:

	Gallons Removed	Temperature Readings	pH Readings	Conductivity Readings uS/cm
initial	0.25	17.8	6.89	~~6.89~~ 2320
	3.5	14.4	7.19	2030
	7.0	14.2	7.24	2320
	10.5	14.7	7.33	2760

Water Sample:
Time Collected 1130

Physical Appearance at Start

Color Colorless
Odor No
Turbidity (> 100 NTU) <100 ntu
Sheen/Free Product No

Physical Appearance at Sampling

Color Brown
Odor No
Turbidity (> 100 NTU) >100 ntu
Sheen/Free Product No

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	voa	3	no	HCL	<2
quart	amber glass	2	no	none	~7

Notes:

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	5/31/01	Personnel	C. O'Dell	Weather	Mostly Clear, ~55°F
Site Name	NMPC - South First St.	Evacuation Method	peristaltic pump	Well #	MW-1
Site Location	Fulton, NY	Sampling Method	peristaltic pump	Project #	1118.881

Well information:

Depth of Well * 19.42 ft.

Depth to Water * 4.66 ft.

Length of Water Column ______ ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column

Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute

Collect readings at every three minute intervals

	Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1134	0	4.65							
	4	6.32							350
	6	~~6.8~~ 6.94	11.01	7.25	708.0	210.2	3.63	46.2	350
1143	9	7.53	11.04	7.25	702.0	215.9	3.03	47.1	290
	12	8.06	11.30	7.24	704.0	219.8	3.02	46.5	290
1149	15	8.58	11.56	7.24	710	220.4	3.08	48.2	230
	18	8.72	11.80	7.22	712	221.4	3.08	47.1	220
	21	8.87	11.89	7.20	726	224.6	3.22	40.2	220
1158	24	8.91	11.86	7.20	714	226.1	3.30	20.1	220
	27	8.99	11.85	7.20	710	228.8	3.35	14.9	220
	30	9.04	11.84	7.20	709	230.2	3.37	14.6	220
1207	33	9.08	11.84	7.20	708	231.5	3.38	13.8	220
	36	9.20	11.85	7.23	705	234.1	3.51	11.6	220
	39	9.27	11.85	7.24	704	235.8	3.55	10.1	~~190~~ 220
1216	42	9.30	11.86	7.23	703	236.1	3.57	9.2	190
	45	9.31	11.91	7.24	703	236.6	3.62	10.1	190
1222	48	9.31	11.92	7.24	702	236.7	3.63	10.6	190
	51	9.31	11.93	7.23	704	237.1	3.65	10.5	190
	54	9.31	11.92	7.24	702	236.9	3.63	10.1	190

Water sample:

Time collected: 1250

Total volume of purged water removed: ______

Physical appearance at start		Physical appearance at sampling	
Color	GRAY	Color	Colorless
Odor	NO	Odor	NO
Sheen/Free Product	NO	Sheen/Free Product	NO

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

Ferrous Iron – 0 mg/L
Iron – 0 mg/L

O'Brien & Gere Engineers, Inc. — **Low Flow Ground Water Sampling Log**

Date	5/31/01	Personnel	C. O'Dell	Weather	Clear; ~60°F
Site Name	NMPC - South First St.	Evacuation Method	peristaltic pump	Well #	MW-4
Site Location	Fulton, NY	Sampling Method	peristaltic pump	Project #	

Well information:

Depth of Well * ______ ft.
Depth to Water * ______ ft.
Length of Water Column ______ ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

	Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
650	0	7.61							
	5	8.06	12.56	6.28	1262	-85.8	0.74	79.5	350
	8	8.17	12.98	6.23	1228	-73.3	0.72	76.1	350
701	11	8.21	13.14	6.22	1227	-69.0	0.60	69.1	320
	14	8.24	13.41	6.19	1230	-69.2	0.48	44.4	310
	17	8.29	13.35	6.18	1230	-74.1	0.36	21.2	310
	20	8.32	13.33	6.18	1231	-75.9	0.33	10.6	310
	23	8.32	13.30	6.16	1231	-76.2	0.30	8.93	270
716	26	8.31	13.34	6.17	1231	-76.8	0.32	8.70	270
719	29	8.31	13.35	6.16	1230	-76.9	0.31	8.56	270

Water sample:

Time collected: ______ Total volume of purged water removed: ______

Physical appearance at start		Physical appearance at sampling	
Color	Colorless	Color	Colorless
Odor	yes	Odor	yes
Sheen/Free Product	yes	Sheen/Free Product	yes

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: Collect BLIND Duplicate Sample.

Ferrous Iron - 4.4 mg/l
Iron - 5 (+) mg/L
Manganese - 0 mg/L

O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	6/1/01	Personnel	C. O'Dell	Weather	
Site Name	NMPC - South First St.	Evacuation Method	peristaltic pump	Well #	MW-5
Site Location	Fulton, NY	Sampling Method	peristaltic pump	Project #	

Well information:

Depth of Well *	ft.	* Measurements taken from		
Depth to Water *	ft.		X	Top of Well Casing
Length of Water Column	ft.			Top of Protective Casing
				(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1100 0	6.87							420
7	7.22	12.40	6.45	681.	-17.1	0.97	19.6	420
10	7.35	12.41	6.41	676	-26.2	0.68	18.1	420
13	7.48	12.55	6.40	652.0	-29.5	0.54	16.2	420
16	7.59	12.64	6.34	570	-36.9	0.34	14.3	350
19	7.63	12.91	6.32	550	-40.1	0.32	6.10	270
22	7.65	13.04	6.31	540	-43.3	0.29	3.35	250
25	7.65	13.08	6.30	539	-43.6	0.28	2.78	230
28	7.66	13.10	6.29	538	-46.2	0.25	2.51	230
31	7.66	13.11	6.28	538	-47.4	0.24	2.26	230
34	7.66	13.13	6.27	534	-50.2	0.24	2.31	230
37	7.66	13.14	6.27	532	-51.1	0.23	2.28	230

Water sample:

Time collected: 1200

Total volume of purged water removed:

Physical appearance at start		Physical appearance at sampling	
Color	Colorless	Color	Colorless
Odor	yes	Odor	yes
Sheen/Free Product	NO	Sheen/Free Product	NO

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

IRON - 5mg/l (+)
Ferrous Iron - 3.2 mg/l
Manganese - 0.5 mg/l

O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	5/3/01	Personnel	C. O'Dell	Weather	
Site Name	NMPC - South First St.	Evacuation Method	peristaltic pump	Well #	MW-8
Site Location	Fulton, NY	Sampling Method	peristaltic pump	Project #	

Well information:

Depth of Well * 18.06 ft.

Depth to Water * 8.84 ft.

Length of Water Column ______ ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column

Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute

Collect readings at every three minute intervals

	Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1357	0	8.85							
1404	7	9.12	12.61	6.55	762	-20.8	5.59	30.1	160
	10	9.25	11.10	6.51	747	-19.2	5.79	27.2	160
1410	13	9.39	10.72	6.49	742	-6.1	5.67	24.6	220
	16	9.49	10.72	6.49	743	-12.6	5.72	18.2	220
1416	19	9.58	10.72	6.49	744	-18.3	5.84	15.9	300
	22	9.71	10.66	6.49	746	-26.6	5.82	15.1	300
	25	9.81	10.79	6.52	750	-37.4	6.02	8.12	220
1425	28	9.89	10.83	6.52	752	-38.3	6.09	5.98	220
	31	9.95	10.81	6.53	754	-40.6	6.17	5.62	220
1431	34	10.00	10.83	6.54	757	-43.0	6.25	3.84	220
	37	10.02	10.84	6.54	757	-46.2	6.11	3.62	
	40	10.03	10.83	6.54	756	-47.6	6.06	3.71	
	43	10.03	10.82	6.54	756	-49.1	6.03	3.52	
1445	46	10.03	10.83	6.54	756	-49.5	6.02	3.49	220

Water sample:

Time collected: ______

Total volume of purged water removed: ______

Physical appearance at start
- Color: Colorless
- Odor: NO
- Sheen/Free Product: NO

Physical appearance at sampling
- Color: Colorless
- Odor: NO
- Sheen/Free Product: NO

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

Ferrous Iron - 2.5 mg/l

Iron - 5 (+) mg/L

Manganese 0.3 mg/l

O'Brien & Gere Engineers, Inc.			Low Flow Ground Water Sampling Log		
Date	6/1/01	Personnel	C. O'Dell	Weather	
Site Name	NMPC - South First St.	Evacuation Method	peristaltic pump	Well #	MW-95
Site Location	Fulton, NY	Sampling Method	peristaltic pump	Project #	

Well information:

Depth of Well * ______ ft.

Depth to Water * ______ ft.

Length of Water Column ______ ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	8.38							
6	9.02	10.61	6.58	751	180.2	2.02	13.6	325
9	9.19	10.55	6.49	751	195.6	1.46	12.1	325
12	9.30	10.54	6.48	751	196.7	1.35	10.85	325
15	9.35	10.54	6.47	751	195.2	1.30	10.13	325
18	9.36	10.54	6.46	751	197.1	1.27	9.26	260
21	9.36	10.60	6.43	751	205.9	1.16	8.93	260
24	9.36	10.63	6.41	751	206.7	1.13	8.27	260
27	9.36	10.63	6.40	751	208.7	1.11	8.15	260

Water sample:

Time collected: 1000

Total volume of purged water removed: ______

Physical appearance at start		Physical appearance at sampling	
Color	Colorless	Color	~~No~~ Colorless
Odor	No	Odor	No
Sheen/Free Product	No	Sheen/Free Product	No

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

Iron – 0.2 mg/l
Manganese – 0.1 mg/l
Ferrous Iron – 0 mg/l

O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	6/ /01	Personnel	C. O'Dell	Weather	
Site Name	NMPC - South First St.	Evacuation Method	peristaltic pump	Well #	MW-11
Site Location	Fulton, NY	Sampling Method	peristaltic pump	Project #	

Well information:

Depth of Well * ______ ft.

Depth to Water * ______ ft.

Length of Water Column ______ ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column

Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute

Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
130 0	2.15							300
5	2.16	14.25	6.79	597	-25.7	1.58	49.6	300
8	2.16	14.20	6.75	590	-21.2	1.50	41.2	300
11	2.16	14.14	6.71	583	-17.8	1.34	30.8	300
14	2.16	13.55	6.58	577	-11.5	0.55	15.2	300
17	2.16	13.40	6.54	572	-7.3	0.36	13.1	300
20	2.16	13.38	6.53	571	-5.1	0.29	11.9	300
23	2.16	13.37	6.53	570	-4.3	0.26	10.6	300
26	2.16	13.38	6.53	568	-3.9	0.24	10.1	300
29	2.16	13.35	6.53	565	-3.5	0.22	8.3	300
31	2.16	13.35	6.53	564	-3.3	0.20	8.1	300
34	2.16	13.32	6.53	564	-3.2	0.19	7.6	300
37	2.16	13.30	6.53	563	-3.1	0.19	7.2	300

Water sample:

Time collected: 1345

Total volume of purged water removed: ______

Physical appearance at start		Physical appearance at sampling	
Color	Colorless	Color	Colorless
Odor	Yes	Odor	Yes
Sheen/Free Product	No	Sheen/Free Product	No

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

Iron - 3.9 mg/l

Ferrous Iron - 3.2 mg/l

Manganese - 0.2 mg/l

1118/35165

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	7/12/04	Personnel	Scott Tucker	Weather	Overcast ~75°F
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-1
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 19.46 ft.

Depth to Water * 5.22 ft.

Length of Water Column 14.24 ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column

Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute

Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±0.3	Temperature 3%	pH ±0.1	Conductivity 3%	Oxidation Reduction Potential ±10	Dissolved Oxygen 10% (mg/l)	Turbidity 10% (NTU)	Flow Rate (ml/min).
1213	5.84	63.2	7.44	0.384	88	1.65	19	95
1216	5.93	61.6	7.42	0.380	90	0.78	15	85
1219	6.08	61.9	7.42	0.392	92	0.67	8.8	80
1222	6.19	61.5	7.43	0.378	94	0.53	10	80
1225	6.30	60.1	7.42	0.386	96	0.49	10	80
1228	6.33	60.0	7.42	0.384	97	0.45	8.5	85
1231	6.36	60.4	7.42	0.387	98	0.42	8.2	85
1234	6.38	60.1	7.42	0.385	99	0.41	9.5	85

Water sample:

Time collected: 1250

Total volume of purged water removed: ~0.5 gal

Physical appearance at start		Physical appearance at sampling	
Color	clear/flocculant? black	Color	clear/flocculant black?
Odor	no	Odor	no
Sheen/Free Product	no	Sheen/Free Product	no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	"	1	no	none.	

Notes:

O'Brien & Gere Engineers, Inc. **Low Flow Ground Water Sampling Log**

Date	7/8/04	Personnel	Scott Tucker	Weather	Overcast ~75°F
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-2
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 13.142 ft.

Depth to Water * 4.71 ft.

Length of Water Column 8.70 ft.

* Measurements taken from

X	Top of Well Casing PVC
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1316	—	66.1	7.01	0.984	—	1.58	—	—
1319	4.83	65.4	6.98	0.988	-21	0.83	65	120
1322	4.90	65.7	6.96	0.997	-16	0.66	35	100
1325	4.95	66.1	6.94	1.001	-4	0.55	14	100
1328	4.98	66.4	6.94	1.002	1	0.57	8.8	75
1331	5.04	67.0	6.94	1.002	4	0.56	6.8	80
1334	5.09	67.1	6.94	1.004	7	0.57	7.2	80

Water sample:

Time collected: 1350

Total volume of purged water removed:

Physical appearance at start		Physical appearance at sampling	
Color	Clear	Color	Clear
Odor	no	Odor	no
Sheen/Free Product	no	Sheen/Free Product	no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	"	1	no	no	

Notes: 1316: Rain.

O'Brien & Gere Engineers, Inc.
Low Flow Ground Water Sampling Log

Date	7/8/04	Personnel	Scott Tucker	Weather	
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-3
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 19.08 ft.
Depth to Water * 11.11 ft.
Length of Water Column 7.97 ft.

* Measurements taken from
- [X] Top of Well Casing PVC
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±0.3	Temperature 3%	pH ±0.1	Conductivity 3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) 10%	Turbidity (NTU) 10%	Flow Rate (ml/min).
1652	11.25	69.8	6.89	0.677	400	0.96	60	110
1655	11.26	65.0	6.84	0.680	425	0.54	38	90
~~1658~~ 1700	11.26	65.0	6.84	0.687	438	0.48	27	95
1703	11.26	64.7	6.84	0.688	442	0.51	32	95
1706	11.27	64.2	6.84	0.688	446	0.55	45	85
17.09	11.27	64.3	6.84	0.688	449	0.59	36	90
1712	11.27	64.6	6.85	0.691	451	0.58	30	80
1715	11.27	64.5	6.86	0.692	453	0.60	24	—
1718	11.27	64.2	6.86	0.690	458	0.72	15	80
1721	11.27	64.4	6.86	0.691	459	0.95	13	75
1724	11.27	64.4	6.86	0.688	461	1.05	9.4	70
1727	11.27	64.0	6.86	0.687	464	1.12	6.2	80
1730	11.27	63.1	6.86	0.686	467	1.24	—	—
1733	11.27	63.6	6.86	0.688	444	1.22	7.1	80
1736	11.27	62.9	6.86	0.687	449	1.32	3.7	80
1739	11.27	62.7	6.85	0.688	451	1.41	3.4	80
1742	11.27	62.7	6.85	0.687	452	1.47	2.3	80
1745	11.27	62.7	6.86	0.685	454	1.45	2.3	80
1748	11.27	62.7	6.86	0.683	455	1.42	2.0	80

Water sample:

Time collected: 1815
Total volume of purged water removed: ~2.0 gall.

Physical appearance at start		Physical appearance at sampling	
Color	clear	Color	clear
Odor	no	Odor	clear
Sheen/Free Product	no	Sheen/Free Product	no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40mL	glass	3	no	HCl	
2L	"	1	no	none	

Notes:

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	7/9/04	Personnel	Scott Tucker	Weather	
ame	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-4
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

15.10

Depth of Well * 16.10 ft.

Depth to Water * 7.76 ft.

Length of Water Column 8.34 ft.

* Measurements taken from

- [X] Top of Well Casing PVC
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±0.3	Temperature 3%	pH ±0.1	Conductivity 3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) 10%	Turbidity (NTU) 10%	Flow Rate (ml/min).
1230	7.89	65.5	6.49	0.886	-26	1.28	36	115
1233	7.89	64.4	6.46	0.889	-26	0.72	31	80
1236	7.90	65.9	6.46	0.875	-25	0.57	37	80
1239	7.91	66.1	6.45	0.886	-27	0.53	37	85
1242	7.92	66.6	6.45	0.893	-30	0.48	35	80
1245	7.93	66.4	6.45	0.908	-34	0.48	30	80
1248	7.93	66.7	6.46	0.911	-37	0.44	31	80
1251	7.95	66.6	6.45	0.918	-38	0.40	~~30~~ 28	85
54	7.96	66.4	6.45	0.922	-40	0.38	24	90
1257	7.96	66.5	6.46	0.928	-42	0.40	24	80
~~12~~ 1300	7.96	67.0	6.46	0.927	-43	0.36	20	80
1303	7.96	66.8	6.46	0.933	-44	0.37	20	80
1306	7.96	66.8	6.46	0.938	-45	0.37	18	80

2 .028 .037 2

Water sample:

Time collected: 1320

Total volume of purged water removed:

Physical appearance at start
- Color: Clear
- Odor: no
- Sheen/Free Product: no

Physical appearance at sampling
- Color: clear
- Odor: ~~slight~~ yes
- Sheen/Free Product: no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	"	1	no	none	

Notes:

O'Brien & Gere Engineers, Inc.		Low Flow Ground Water Sampling Log	
Date	7/12/04	Personnel	Scott Tucker
Weather	overcast 70°F		
Site Name	NIMO - Fulton	Evacuation Method	Low Flow
Well #	MW-5		
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow
Project #	35165		

Well information:

Depth of Well * 15.89 ft.

Depth to Water * 7.08 ft.

Length of Water Column 8.81 ft.

* Measurements taken from

- [X] Top of Well Casing PVC
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±0.3	Temperature 3%	pH ±0.1	Conductivity 3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) 10%	Turbidity (NTU) 10%	Flow Rate (ml/min).
0911	7.16	73.9	6.47	0.709	-70	1.09	15	80
0914	7.20	70.1	6.44	0.706	-55	0.61	11	85
0917	7.24	69.1	6.43	0.703	-52	0.54	10	85
0920	7.27	69.3	6.43	0.707	-51	0.50	12	85
0923	7.28	69.7	6.44	0.700	-50	0.46	11	80
0926	7.31	69.6	6.43	0.694	-49	0.42	13	80
0929	7.34	69.7	6.43	0.694	-49	0.40	12	80
0932	7.36	69.7	6.44	0.693	-48	0.38	13	80

Water sample:

Time collected: 0945

Total volume of purged water removed: ~0.5 gall

Physical appearance at start		Physical appearance at sampling	
Color	clear	Color	clear
Odor	yes	Odor	yes
Sheen/Free Product	no	Sheen/Free Product	sheen.

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	"	1	no	none.	

Notes: when tubing in hole removed, black stains observed along ~6ft of bottom of tubing / pumped odiferous material from bottom of well.

O'Brien & Gere Engineers, Inc. **Low Flow Ground Water Sampling Log**

Date	7/9/04	Personnel	Scott Tucker	Weather	Overcast ~70°F
Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-6
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 36.80 ft.
Depth to Water * 6.85 ft.
Length of Water Column 29.95 ft.

* Measurements taken from
- [X] Top of Well Casing PVC
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ± 0.3	Temperature ± 3%	pH ± 0.1	Conductivity ± 3%	Oxidation Reduction Potential ± 10	Dissolved Oxygen ± 10% (mg/l)	Turbidity ± 10% (NTU)	Flow Rate (ml/min).
1041	7.84	61.0	8.00	0.374	-116	0.83	5.5	120
1044	8.11	60.5	7.98	0.375	-122	0.63	4.9	80
1047	8.40	61.8	7.98	0.373	-119	0.56	5.3	85
1050	8.69	61.9	7.96	0.372	-116	0.52	3.8	80
1053	9.06	62.4	7.97	0.373	-111	0.51	5.2	-
1056	9.24	62.0	7.97	0.372	-110	0.51	5.8	85
1059	9.50	61.1	7.97	0.373	-107	0.52	4.6	80
1102	9.75	61.2	7.99	0.373	-111	0.49	4.9	75
1105	9.98	61.7	7.97	0.373	-112	0.49	3.7	-
1108	10.21	62.6	7.96	0.373	-104	0.55	4.2	80
1111	10.43	62.6	7.95	0.371	-90	0.57	4.2	75
1114	10.62	62.7	7.95	0.370	-84	0.63	6.2	-
1117	10.80	62.9	7.97	0.371	-86	0.59	5.0	75
1120	11.00	62.7	7.98	0.371	-93	0.60	5.1	75
1123	11.24	62.7	7.99	0.370	-97	0.55	4.9	75
1126	11.39	62.8	7.99	0.370	-97	0.56	3.8	75
1129	11.58	62.6	7.99	0.371	-97	0.60	4.4	75
1132	11.75	63.0	8.00	0.371	-98	0.58	5.5	75
1135	11.88	63.2	8.00	0.370	-98	0.60	3.9	75

Water sample: 1.857 0.011

Time collected: 1150 Total volume of purged water removed: 1.5

Physical appearance at start		Physical appearance at sampling	
Color	clear	Color	clear
Odor	no	Odor	slight
Sheen/Free Product	no	Sheen/Free Product	no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L		1	no	none	

Notes:

O'Brien & Gere Engineers, Inc.					Low Flow Ground Water Sampling Log
Date	7/9/04	Personnel	Scott Tucker	Weather	
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-7S
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 16.51 ft.

Depth to Water * 8.65 ft.

Length of Water Column ____ ft.

* Measurements taken from

X	Top of Well Casing PVC
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column

Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute

Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±0.3	Temperature 3%	pH ±0.1	Conductivity 3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) 10%	Turbidity (NTU) 10%	Flow Rate (ml/min).
1522	8.90	58.6	6.83	0.626	-34	0.69	11	100
1525	8.96	59.8	6.84	0.616	-36	0.55	4.1	95
1528	9.00	60.1	6.85	0.617	-37	0.52	3.6	95
1531	9.05	60.3	6.85	0.613	-39	0.50	4.2	95

Water sample:

Time collected: 1545

Total volume of purged water removed: ~0.5 gall

Physical appearance at start		Physical appearance at sampling	
Color	Clear	Color	clear
Odor	none	Odor	slight
Sheen/Free Product	none	Sheen/Free Product	no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	"	1	no	none.	

Notes:

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	7/9/04	Personnel	Scott Tucker	Weather	
[illegible]ame	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-7A
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well *	30.04 ft.	* Measurements taken from	X	Top of Well Casing PVC
Depth to Water *	8.26 ft.			Top of Protective Casing
Length of Water Column	21.78 ft.			(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1400	8.41	62.9	8.30	0.809	-1	2.43	100	100
1403	8.41	61.2	8.29	0.812	-4	1.37	120	80
1406	8.42	61.3	8.29	0.808	-5	1.21	120	90
1409	8.46	61.3	8.29	0.812	-6	1.18	130	~~85~~ 90
1412	8.44	60.9	8.29	0.830	-9	1.37	140	85
1415	8.43	61.5	8.30	0.811	-7	1.08	130	85
1418	8.43	61.4	8.29	0.811	-5	1.03	140	85
1421	8.44	61.2	8.26	0.815	-9	1.02	180	90
[illegible]24	8.45	61.9	7.87	0.831	-109	0.85	180	90
1427	8.48	62.4	7.56	0.856	-122	0.64	160	90
1430	8.46	62.5	7.50	0.862	-122	0.58	130	75
1433	8.44	63.2	7.48	0.866	-122	0.58	120	75
1436	8.43	63.7	7.46	0.867	-121	0.51	110	75
1439	8.43	62.9	7.46	0.873	-121	0.47	110	75
1442	8.43	62.0	7.44	0.873	-120	0.46	95	75
1445	8.44	61.8	7.44	0.874	-120	0.46	92	75

Water sample:

Time collected: 1500

Total volume of purged water removed: ~1.5 gall.

Physical appearance at start		Physical appearance at sampling	
Color	yellow	Color	clear/murky
Odor	yes	Odor	slight
Sheen/Free Product	no	Sheen/Free Product	none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	"	1	no	none.	

Notes:

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	7/8/04	Personnel	Scott Tucker	Weather	
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	~~MW-3~~ MW-8S
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 18.10 ft.
Depth to Water * 9.23 ft.
Length of Water Column 8.87 ft.

* Measurements taken from

- [X] Top of Well Casing PVC
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±0.3	±3% Temperature	±0.1 pH	±3% Conductivity	Oxidation Reduction Potential ±10	Dissolved Oxygen ±10% (mg/l)	±10% Turbidity (NTU)	Flow Rate (ml/min).
0918	9.46	58.7	6.57	0.666	170	1.17	80	105
0921	9.49	58.1	6.56	0.669	170	0.72	90	105
0924	9.57	57.9	6.55	0.667	170	0.56	75	125
0927	9.62	57.4	6.54	0.664	168	0.46	55	—
0930	9.67	58.0	6.55	0.655	166	0.45	40	110
0933	9.69	57.9	6.55	0.647	162	0.41	34	100
0936	9.72	58.2	6.55	0.634	156	0.41	31	100
0939	9.76	58.4	6.55	0.625	150	0.38	28	105
0942	9.82	58.4	6.55	0.618	145	0.40	35	—
0945	9.85	58.1	6.55	0.612	141	0.39	26	115
0948	9.89	58.2	6.55	0.607	138	0.38	29	115
0951	9.93	58.2	6.55	0.604	135	0.38	30	—
0954	9.95	58.0	6.55	0.604	133	0.38	22	110
0957	9.98	58.2	6.55	0.604	131	0.37	20	100
0900	9.98	58.7	6.55	0.602	130	0.39	14	95
1003	10.00	59.1	6.56	0.603	129	0.38	12	95
1006	10.00	59.2	6.56	0.604	129	0.35	13	95
1009	10.01	59.0	6.56	0.604	128	0.36	12	100

Water sample: 1.7 .019 .038 2.8

Time collected: 1030

Total volume of purged water removed: 2.0 gallons

Physical appearance at start
Color: clear/orange flocculation
Odor: no
Sheen/Free Product: no

Physical appearance at sampling
Color: clear
Odor: no
Sheen/Free Product: no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	"	1	no	no	

Notes: Tubing in well being used. / ~~Orange~~ Tubing replaced due to lack of seal / orange flocculant in water and on tubing removed from well /

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	7/8/04	Personnel	Scott Tucker	Weather	Overcast ~75
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-8D
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well *	33.47	ft.
Depth to Water *	9.52	ft.
Length of Water Column	23.95	ft.

* Measurements taken from

X	Top of Well Casing PVC
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1041	~~9.52~~ 10.15	59.4	7.71	0.722	33	1.23	70	100
1044	10.64	57.8	7.71	0.725	-34	0.66	75	105
1047	10.97	57.2	7.71	0.726	-145	0.51	80	110
1050	11.39	57.3	7.71	0.725	-183	0.47	110	100
1053	11.77	57.5	7.71	0.726	-166	0.45	80	105
1056	12.16	57.8	7.71	0.726	-149	0.40	45	100
1059	12.63	57.8	7.71	0.726	-137	0.39	30	—
1102	12.86	58.3	7.72	0.725	-131	0.40	27	95
[illegible]5	13.22	58.0	7.72	0.727	-130	0.37	26	100
1108	13.58	58.3	7.72	0.729	-127	0.36	27	100
1111	13.93	58.1	7.72	0.729	-129	0.33	26	100
1114	14.40	57.9	7.71	0.730	-124	0.34	30	—
1118	14.96	57.9	7.72	0.727	-116	0.33	28	95
1121	15.14	57.7	7.72	0.730	-107	0.34	30	—
1124	15.49	57.5	7.72	0.730	-86	0.39	30	100
1127	15.79	57.6	7.72	0.729	-68	0.47	36	100
1130	16.23	57.6	7.72	0.731	-49	0.59	45	100
1133	16.48	57.8	7.73	0.725	-33	0.63	55	105
1136	16.90	57.0	7.73	0.729	-105	0.44	60	~~[illegible]~~ 100
1139	17.21	56.6	7.73	0.726	-81	0.46	50	100

Water sample:

Time collected: 1045

Total volume of purged water removed: 3.5 gall.

Physical appearance at start		Physical appearance at sampling	
Color	Clear	Color	clear
Odor	no	Odor	no
Sheen/Free Product	no	Sheen/Free Product	no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 mL	glass	3	no	HCl	
2L	"	1	no	none.	

Notes:

O'Brien & Gere Engineers, Inc.
Low Flow Ground Water Sampling Log

Date	7/8/04	Personnel	Scott Tucker	Weather	
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-8D continued
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * ______ ft.
Depth to Water * ______ ft.
Length of Water Column ______ ft.

* Measurements taken from
- [ ] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	3% Temperature	pH	3% Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l) 10%	10% Turbidity (NTU)	Flow Rate (ml/min).
1142	17.60	56.9	7.73	0.724	-51	0.58	55	105
1145	18.04	56.8	7.73	0.724	-38	0.65	50	105
1148	18.42	57.4	7.74	0.726	-37	0.66	45	110
1151	18.65	56.9	7.73	0.724	-39	0.71	45	—
1154	18.98	56.9	7.74	0.725	-41	0.71	55	100
1157	19.26	56.8	7.74	0.723	-40	0.70	50	105
1201	19.73	56.6	7.75	0.726	-38	0.76	50	80
1204	19.99	57.1	7.75	0.725	-36	0.80	50	85
1207	20.20	57.0	7.76	0.725	-34	0.80	50	-
1212	20.46	57.4	7.76	0.729	-44	0.70	55	65
1215	20.67	57.8	7.76	0.727	-43	0.74	50	60
1218	20.86	57.9	7.76	0.727	-42	0.78	50	—
1222	21.00	58.0	7.77	0.727	-42	0.77	50	60
1226	21.19	57.9	7.77	0.726	-45	0.74	60	60
1229	21.33	57.9	7.77	0.728	-48	0.73	55	60
1232	21.46	57.9	7.77	0.728	-46	0.73	55	60

Water sample:

Time collected: 1245

Total volume of purged water removed: .02 3.5 gall.

Physical appearance at start
Color: clear
Odor: no
Sheen/Free Product: no

Physical appearance at sampling
Color: clear
Odor: no
Sheen/Free Product: no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	"	1	no	none.	

Notes:

O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	7/8/04	Personnel	Scott Tucker	Weather	Overcast.
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-95
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 18.04 ft.

Depth to Water * 8.58 ft.

Length of Water Column ______ ft.

* Measurements taken from

X	Top of Well Casing PVC
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ± 0.3	Temperature 3%	pH 0.1	Conductivity 3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) 10%	Turbidity (NTU) 10%	Flow Rate (ml/min).
1318	8.72	59.8	6.78	0.710	374	1.96	40	80
1321	8.76	59.7	6.78	0.712	389	1.59	31	80
1324	8.81	59.7	6.78	0.713	400	1.62	21	90
1327	8.84	59.6	6.78	0.712	407	1.60	19	—
1330	8.90	59.1	6.78	0.712	410	1.58	17	90
1333	8.92	59.2	6.78	0.713	414	1.48	13	85
1336	8.94	60.1	6.78	0.713	415	1.35	13	—
1339	8.97	59.6	6.78	0.713	417	1.28	13	85
1343	8.99	59.4	6.78	0.713	420	1.32	12	90
1346	9.03	59.1	6.78	0.713	422	1.31	12	90
1349	9.03	59.0	6.78	0.713	423	1.31	13	90

Water sample:

Time collected: 1400

Total volume of purged water removed: 0.5

Physical appearance at start
Color: clear/brown flocculant
Odor: no
Sheen/Free Product: no

Physical appearance at sampling
Color: clear
Odor: no
Sheen/Free Product: no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	glass	1	no	none	

Notes:

O'Brien & Gere Engineers, Inc.
Low Flow Ground Water Sampling Log

Date	7/8/04	Personnel	Scott Tucker	Weather	
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-9D
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 32.88 ft.
Depth to Water * 10.42 ft.
Length of Water Column ____ ft.

* Measurements taken from
- [X] Top of Well Casing PVC
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water 0.3	Temperature 3%	pH 0.1	Conductivity 3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) 10%	Turbidity (NTU) 10%	Flow Rate (ml/min).
1430	11.71	56.6	7.55	1.470	62	0.59	9.9	100
1433	12.20	58.2	7.56	1.470	64	0.58	10	110
1436	12.37	58.6	7.56	1.470	67	0.59	10	85
1439	12.60	59.4	7.56	1.470	71	0.64	8.4	80
1442	12.91	59.6	7.57	1.470	74	0.75	9.0	80
1445	13.18	59.6	7.57	1.470	75	0.77	8.2	75
1448		~~59.2~~	~~7.57~~	~~1.470~~		~~1.64~~		ST
1454	13.53	63.0	7.61	1.424	57	1.92	4.8	65
1457	13.75	61.4	7.60	1.459	49	0.80	2.4	70
1500	14.05	59.8	7.59	1.458	46	0.50	2.6	95
1503	14.34	59.3	7.59	1.462	44	0.42	3.2	90
1506	14.56	59.2	7.59	1.468	44	0.44	2.1	70
1509	14.75	60.8	7.60	1.465	43	0.39	2.1	70
1512	14.94	60.8	7.60	1.460	44	0.41	2.2	65
1515	15.13	61.4	7.60	1.460	44	0.38	2.2	-
1518	15.31	61.0	7.59	1.456	45	0.38	2.2	80
1521	15.53	60.6	7.57	1.448	47	0.33	2.2	80
1524	15.78	59.8	7.58	1.457	49	0.39	3.0	80
1527	15.95	59.7	7.57	1.453	51	0.44	3.5	70
1530	16.14	60.0	7.56	1.448	55	0.49	3.1	70

Water sample:

Time collected: 1615 C049

Total volume of purged water removed: ~2 gall.

Physical appearance at start		Physical appearance at sampling	
Color	clear	Color	clear
Odor	no	Odor	no
Sheen/Free Product	no	Sheen/Free Product	no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 ml	glass	3	no	~~none~~ HCl	
2L	"	1	no	none	

Notes: 1448: Tubing adjusted, water level below tubing.

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	7/8/04	Personnel	Scott Tucker	Weather	
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-9D continued
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * ________ ft.
Depth to Water * ________ ft.
Length of Water Column ________ ft.

* Measurements taken from
- [ ] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±.3	3% Temperature	0.1 pH	3% Conductivity	Oxidation Reduction Potential ±10	Dissolved Oxygen 10% (mg/l)	10% Turbidity (NTU)	Flow Rate (ml/min).
1533	16.33	60.2	7.55	1.444	57	0.55	3.4	75
1536	16.53	60.9	7.55	1.432	58	0.53	3.2	80
1539	16.70	60.6	7.54	1.432	60	0.55	3.1	75
1542	16.92	59.8	7.52	1.425	64	0.60	3.1	75
1545	17.10	59.2	7.52	1.425	65	0.64	3.0	70
1548	17.22	60.1	7.51	1.423	64	0.59	3.1	70

Water sample: 1.7 .042
Time collected: 1615
Total volume of purged water removed: ________

Physical appearance at start
Color ________
Odor ________
Sheen/Free Product ________

Physical appearance at sampling
Color ________
Odor ________
Sheen/Free Product ________

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	7/9/04	Personnel	Scott Tucker	Weather	Overcast 70°F
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-10
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 14.98 ft.
Depth to Water * 7.84 ft.
Length of Water Column 7.14 ft.

* Measurements taken from

X	Top of Well Casing PVC
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±0.1	Temperature 3%	pH ±.1	Conductivity 3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) 10%	Turbidity (NTU) 10%	Flow Rate (ml/min).
0911	7.87	58.5	6.77	1.085	157	6.74	11	75
0914	7.90	57.9	6.77	1.080	161	6.51	11	100
0917	7.92	57.8	6.77	1.028	163	6.44	9.2	-
0920	7.93	58.0	6.78	1.024	164	6.09	9.2	95
0923	7.95	58.1	6.~~78~~	1.034	166	6.03	8.2	95
0926	7.95	58.1	6.78	1.033	167	6.02	8.5	85
0929	7.96	58.6	6.78	1.041	169	5.93	7.3	80
0932	7.96	58.7	6.79	1.~~040~~030	171	5.79	6.3	-
0935	7.99	58.1	6.79	1.044	172	5.71	6.9	85
0938	8.00	57.8	6.78	1.187	174	4.38	6.5	100
0941	8.03	57.4	6.78	1.190	176	4.29	4.6	105
0944	8.04	58.0	6.79	1.189	177	4.37	4.4	105
0947	8.05	58.3	6.79	1.187	178	4.32	2.9	105
0950	8.06	58.3	6.80	1.186	179	4.46	1.6	105
0953	8.08	58.5	6.80	1.181	181	4.56	0.55	100
0956	8.09	58.7	6.80	1.178	182	4.62	0.65	100

Water sample:

Time collected: 1015

Total volume of purged water removed: 1.5 gall.

Physical appearance at start		Physical appearance at sampling	
Color	clear	Color	clear
Odor	no	Odor	slight
Sheen/Free Product	no	Sheen/Free Product	no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	"	1	no	none	

Notes:

O'Brien & Gere Engineers, Inc.
Low Flow Ground Water Sampling Log

Date	7/12/04	Personnel	Scott Tucker	Weather	
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-11
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 11.91 ft.
Depth to Water * 2.65 ft.
Length of Water Column 9.26 ft.

* Measurements taken from

X	Top of Well Casing PVC
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±0.3	Temperature 3%	pH ±0.1	Conductivity 3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) 10%	Turbidity (NTU) 10%	Flow Rate (ml/min).
1012	2.65	68.9	6.62	0.571	24	1.50	1100	110
1017	2.66	67.6	6.61	0.574	23	0.67	750	95
1020	2.66	68.0	6.62	0.578	22	0.48	450	95
1023	2.66	69.0	6.61	0.558	25	0.46	310	95
1026	2.66	69.5	6.60	0.553	28	0.42	140	85
1029	2.66	69.8	6.59	0.540	28	0.42	45	85
1032	2.66	70.1	6.58	0.533	33	0.40	22	85
1035	2.66	70.3	6.58	0.530	36	0.37	11	85
1038	2.66	70.2	6.58	0.528	38	0.39	8.0	85
1041	2.66	70.2	6.58	0.527	40	0.38	5.9	85
1044	2.66	70.2	6.58	0.526	42	0.36	5.3	85
1047	2.66	69.7	6.58	0.525	43	0.34	4.3	85
1050	2.66	69.7	6.58	0.525	44	0.33	3.6	80
1053	2.66	69.5	6.58	0.525	45	0.34	3.4	80
1056	2.66	69.5	6.58	0.524	47	0.34	2.5	80
1059	2.66	69.5	6.58	0.523	48	0.34	3.0	80

Water sample:

Time collected: 1115

Total volume of purged water removed: 1 gall.

Physical appearance at start
Color: Clear/Flocculant
Odor: no
Sheen/Free Product: no

Physical appearance at sampling
Color: clear
Odor: no
Sheen/Free Product: no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	3	no	HCl	
2L	"	1	no	none.	

Notes: Slight black stain, silty material at bottom of tube removed from ~~bottom tube~~ well.

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	7/7/04	Personnel	Scott Tucker	Weather	
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-12S
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

Depth of Well * 15.59 ft.

Depth to Water * 5.23 ft.

Length of Water Column 10.36 ft.

* Measurements taken from

- [X] Top of Well Casing PVC
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth ±0.3 To Water	±0.3% Temperature	±0.1 pH	±3% Conductivity	Oxidation ±10 Reduction Potential	Dissolved Oxygen ±10% (mg/l)	Turbidity 10% (NTU)	Flow Rate (ml/min).
1340	5.72	64.9	6.76	0.626	~~0.626~~ 270	1.83	3.3	120
1343	5.68	61.6	6.71	0.629	251	0.62	2.7	—
1346	5.72	61.8	6.71	0.630	247	0.49	1.7	115
1349	5.79	61.8	6.71	0.629	246	0.43	1.5	—
1352	5.85	61.6	6.71	0.629	248	0.39	2.2	130
1355	5.90	61.5	6.71	0.630	247	0.40	16	100
1358	5.94	62.5	6.72	0.628	248	0.42	15	—
1401	6.01	62.0	6.73	0.628	247	0.44	10	100
1404	6.04	62.0	6.73	0.628	244	0.43	8.1	—
1407	6.07	62.3	6.74	0.630	243	0.43	8.4	90
1410	6.10	62.5	6.74	0.629	240	0.43	7.4	90
1413	6.13	62.5	6.75	0.632	237	0.42	7.2	100
1416	6.15	62.4	6.75	0.631	235	0.44	6.6	~~90~~ 100
1419	6.20	62.6	6.75	0.634	232	0.43	6.3	100
1422	6.24	62.2	6.75	0.634	231	0.45	6.3	100

1.8 .018 .54 1.5

Water sample:

Time collected: 1425

Total volume of purged water removed: ~1 gal

Physical appearance at start		Physical appearance at sampling	
Color	Clear	Color	clear
Odor	no	Odor	no
Sheen/Free Product	no	Sheen/Free Product	no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	39	no	HCl	
~~2L~~ 2L	"	3	no	none	

Notes: MS/MSD collected

O'Brien & Gere Engineers, Inc.		Low Flow Ground Water Sampling Log			
Date	7/7/04	Personnel	Scott Tucker	Weather	Overcast ~80°F
Site Name	NIMO - Fulton	Evacuation Method	Low Flow	Well #	MW-12D
Site Location	S. 1st Ft, Fulton, NY	Sampling Method	Low Flow	Project #	35165

Well information:

			* Measurements taken from	
Depth of Well *	27.83	ft.	X	Top of Well Casing PVC
Depth to Water *	7.05	ft.		Top of Protective Casing
Length of Water Column	20.78	ft.		(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±0.3	Temperature °F ±3%	pH ±.1	Conductivity mS/cm ±3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) 10%	Turbidity (NTU) 10%	Flow Rate (ml/min).
1122	—	67.0	7.54	0.660	337	2.86	23	135
1126	8.17	59.7	7.49	0.701	334	3.03	26	195
1129	8.56	58.9	7.48	0.705	329	2.86	26	100
1132	8.76	60.0	7.49	0.707	326	2.83	27	110
1135	8.96	60.6	7.50	0.703	327	2.71	26	100
1138	9.18	60.3	7.50	0.703	328	2.66	29	110
1141	9.32	60.1	7.50	0.703	329	2.77	28	125
1144	9.40	60.0	7.51	0.691	327	2.55	28	120
[illegible]	9.54	60.3	7.52	0.680	324	2.43	32	110
1150	9.59	60.5	7.51	0.690	320	2.44	30	110
1153	9.66	60.9	7.51	0.693	316	2.40	31	110
1156	9.70	62.5	7.53	0.687	311	2.32	26	100
1159	9.75	63.1	7.53	0.682	307	2.25	22	—
1202	9.79	63.3	7.53	0.677	304	2.15	24	85
1205	9.90	62.4	7.53	0.681	299	2.14	22	100
1208	9.92	62.5	7.53	0.674	295	2.16	25	105
1211	9.95	62.1	7.54	0.676	290	2.12	22	110

Water sample:

Time collected: 1225

Total volume of purged water removed: 1.5 gall.

Physical appearance at start		Physical appearance at sampling	
Color	clear	Color	clear
Odor	no	Odor	no
Sheen/Free Product	no	Sheen/Free Product	no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40ml	glass	6	n	HCl	
2L	glass	2	n	none.	

Notes: DUP-7 collected

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/3/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Windy ~65F p-sunny
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-1 ~~(10')~~ (10')
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * ________ ft.
Depth to Water * 3.87 ft.
Length of Water Column ________ ft.

* Measurements taken from
- [X] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
54	4.47	14.1°C	7.86	1.68	151	5.85	—	150
59	5.11	14.0°C	7.92	0.762	151	4.64	3.69	150
04	5.39	13.9	7.98	not working	153	3.63	3.53	150
09	5.48	14.0	8.04		153	4.40	5.30	~~150~~ 125
14	5.49	14.2	8.07		153	4.06	5.36	150
19	5.65	14.0	8.09		153	4.08	48.54	125
24	5.67	14.1	8.08		159	3.99	4.31	125
157 29	5.65	14.2	8.08		155	4.14	4.50	125

Water sample:

Time collected: 1500
Total volume of purged water removed: ~1.5 gallons

Physical appearance at start
Color: colorless
Odor: no
Sheen/Free Product: no/no

Physical appearance at sampling
Color: colorless
Odor: no
Sheen/Free Product: no/no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: 10' sample depth

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O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	110305	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny/Windy +70°F
Name	South First Street	Evacuation Method	Low Flow	Well #	MW-2-110305
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Elapsed Time	Depth To Water ±0.3	±3% Temperature	pH ±.1	±3% Conductivity	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) ±10%	Turbidity (NTU) ±10%	Flow Rate (ml/min).
0	6.79 ft	14.7°c	7.29	0.993 ms/cm	-33	9.47	112	200
1438	6.78	14.5	7.39	0.994	-40	5.34	101.8	200
1441	6.83	14.2	7.35	0.992	-39	4.27	115	200
1444	6.87	14.2	7.30	0.989	-36	3.69	96.7	200
1447	6.92	14.1	7.27	0.984	-35	3.48	73.4	200
1450	6.95	14.0	7.23	0.982	-32	3.37	69.9	200
1453	6.99	14.0	7.21	0.981	-30	3.29	57.7	200
1456	6.99	14.0	7.19	0.978	-28	3.24	46.9	200
1459	7.01	14.0	7.18	0.975	-25	3.19	40.3	200
1502	7.03	13.9	7.15	0.974	-23	3.17	32.9	200
1505	7.05	13.9	7.14	0.971	-21	3.13	29.5	200
1508	7.09	13.9	7.14	0.971	-21	3.06	30.1	200
1511	7.10	13.9	7.13	0.966	-21	3.06	28.3	200
1514	7.10	13.9	7.12	0.968	-20	3.03	27.6	200
1517	7.12	13.8	7.11	0.966	-17	3.03	24.7	200
1520	7.15	13.8	7.10	0.964	-15	3.02	21.5	200
1523	7.15	13.8	7.10	0.966	-16	3.03	22.0	200
1526	7.16	13.8	7.10	0.963	-14	3.02	20.4	200
1529	7.17	13.8	7.09	0.962	-12	3.15	18.5	200
1532								
1535								
Water sample:	.2	.4	.1	.03	10	.4	2.5	

Time collected: 1538

Total volume of purged water removed: 2.7 gallons

Physical appearance at start		Physical appearance at sampling	
Color	Colorless	Color	colorless
Odor	N	Odor	N
Sheen/Free Product	N/N	Sheen/Free Product	N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: TDofW - 13.68 DTW - 3.68 / MS/MSD Taken

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/3/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny/Breezy 50°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-3-8 1/2 ft
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 18.76 ft.
Depth to Water * 9.96 ft.
Length of Water Column 8.8 ft.

* Measurements taken from
- [X] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±.3	°C ±3% Temperature	±.1 pH	±3% Conductivity	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) ±10%	Turbidity (NTU) ±10%	Flow Rate (ml/min).
0	10.04	15.1	6.44	.686	203	7.62	35.0	200
0845	10.06	15.2	6.48	.696	208	6.04	18.9	200
0848	10.06	15.2	6.47	~~.707~~ .702	217	4.84	9.93	200
0851	10.05	15.2	6.47	.703	221	4.53	7.73	200
0854	10.05	15.2	6.47	.707	226	4.21	4.67	200
0857	10.05	15.2	6.48	.708	229	4.05	4.46	200
0900	10.05	15.2	6.49	.709	231	3.92	3.41	200
0903	10.05	15.2	6.49	.709	233	3.82	3.45	200
0906	10.05	15.2	6.49	.709	234	3.77	3.66	200
0909	10.05	15.3	6.50	.712	234	3.77	3.47	200
0912								
0915								

Water sample: 3 .5 .1 .02 10 .5 .8

Time collected: 0917

Total volume of purged water removed: 2.5 gal

Physical appearance at start
Color: Colorless
Odor: N
Sheen/Free Product: N/N

Physical appearance at sampling
Color: Colorless
Odor: N
Sheen/Free Product: N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: Dupe-2 Taken

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O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/07/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny 70°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-3 12ft
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 18.76 ft.
Depth to Water * 10.00 ft.
Length of Water Column 8.76 ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±.03	Temperature ±3%	pH ±.1	Conductivity ±3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) ±10%	Turbidity (NTU) ±10%	Flow Rate (ml/min).
0	10.00	~~15.5~~ 15.3	6.53	0.747	223	5.93	26.4	220
1033	10.04	15.4	6.50	0.738	228	4.69	18.1	200
1036	10.05	15.5	6.48	0.729	235	4.34	9.64	200
1039	10.05	15.6	6.48	0.725	240	4.20	10.97	200
1042	10.05	15.6	6.49	0.724	242	4.14	4.31	200
1045	10.05	15.6	6.48	0.726	244	4.14	8.00	200
1048	10.05	15.6	6.49	0.728	246	4.04	2.92	200
1051	10.05	15.5	6.49	0.729	249	3.90	2.79	200
1054	10.05	15.5	6.48	0.730	250	3.81	2.60	200
1057	10.05	15.5	6.49	0.726	251	3.76	2.34	200
1100								

Water sample: 3 .5 .1 .062 10 .4 1.1
Time collected: 1105
Total volume of purged water removed: 2 gal

Physical appearance at start
Color: Colorless
Odor: N
Sheen/Free Product: N/N

Physical appearance at sampling
Color: Colorless
Odor: N
Sheen/Free Product: N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

O'Brien & Gere Engineers, Inc. **Low Flow Ground Water Sampling Log**

Date	11/3/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny 45°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW4 (8ft)
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 15.79 ft.

Depth to Water * 6.59 ft.

Length of Water Column ______ ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ft	Temperature °C	pH	mS/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	6.59	16.1	7.05	0.97	-99	6.88	151	200
1245	6.95	16.2	7.07	0.96	-100	6.34	85.6	200
1248	6.99	16.2	7.06	0.96	-101	6.04	58.2	200
~~1241~~ 1251	7.00	16.2	7.06	0.95	-102	5.84	41.7	200
1254	7.01	16.1	7.05	0.95	-102	5.76	30.8	200
1257	7.01	16.2	7.05	0.95	-103	5.64	23.3	200
1300	7.02	16.2	7.05	0.95	-104	5.49	18.6	200
1303	7.02	16.2	7.04	0.96	-105	5.40	18.1	200
1306	7.04	16.2	7.05	0.96	-107	5.32	14.6	200
1309	7.04	16.2	7.05	0.96	-107	5.25	14.8	200
1312	7.05	16.2	7.07	0.96	-108	5.21	13.5	200
1315	7.05	16.2	7.05	0.96	-109	5.14	14.2	200
1318	7.06	16.2	7.06	0.97	-110	5.08	12.1	200
1321	7.06	16.2	7.06	0.97	-111	4.98	11.2	200
1324	7.07	16.1	7.06	0.97	-111	4.95	10.26	200
1327	7.08	16.2	7.06	0.98	-112	4.86	8.93	200
1330	7.09	16.2	7.07	0.98	-112	4.79	8.86	200
1333	~~7.01~~ 7.10	16.2	7.08	0.98	-112	4.74	8.26	200
1336	7.10	16.1	7.07	0.98	-112	4.68	7.49	200
1339	7.10	16.2	7.07	0.99	-113	4.61	7.22	200

Water sample:

Time collected: 1420

Total volume of purged water removed: ~~5~~ 6.5 gal

Physical appearance at start
Color: Colorless
Odor: N
Sheen/Free Product: N/N

Physical appearance at sampling
Color: Colorless
Odor: MEP
Sheen/Free Product: N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: Duplicate Taken

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/2/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny/Breezy 40°F
Name	South First Street	Evacuation Method	Low Flow	Well #	MW 4 (8 ft)
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1342	7.10	16.2	7.07	0.98	-113	4.58	7.01	200
1345	7.10	16.1	7.06	0.99	-113	4.53	6.27	200
1348	7.10	16.1	7.06	0.99	-113	4.47	5.78	200
1351	7.11	16.1	7.06	0.99	-113	4.46	5.55	200
1354	7.11	16.2	7.06	0.99	-113	4.41	5.77	200
1357	7.11	16.2	7.05	0.99	-113	4.36	5.21	200
1400	7.11	16.1	7.05	0.99	-113	4.30	4.72	260
1403	7.11	16.2	7.05	0.99	-113	4.28	5.26	200
1406	7.11	16.2	7.05	0.99	-114	4.23	4.52	200
1409	7.12	16.2	7.05	0.99	-114	4.20	4.61	200
1412	7.13	16.2	705	0.99	-114	4.18	4.44	200
1415								

Water sample:

Time collected: 1420

Total volume of purged water removed: 6 gallons

Physical appearance at start
- Color: colorless
- Odor: W
- Sheen/Free Product: N/N

Physical appearance at sampling
- Color: colorless
- Odor: MPG
- Sheen/Free Product: N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	11/2/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny/Breezy 40°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-4 (12')
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 15.79 ft.
Depth to Water * 6.84 ft.
Length of Water Column 8.95 ft.
1.45 x3 - 4.4

* Measurements taken from
- [X] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	6.84	15.2	6.90	1.10	-90	6.70	101.3	200
1507	6.99	15.5	6.91	1.13	-97	4.22	62.7	200
1510	7.00	15.7	6.92	1.15	-102	3.81	47.1	200
1513	7.00	15.8	6.96	1.16	-106	3.63	33.9	200
1516	7.01	15.9	6.97	1.16	-109	3.48	30.2	200
1519	7.01	15.9	6.99	1.15	-110	3.40	32.0	200
1522	7.03	15.9	7.01	1.12	-111	3.35	36.1	200
1525	7.03	16.0	7.01	1.08	-110	3.29	34.5	200
1528	7.03	15.9	7.01	1.07	-110	3.28	28.5	200
1531	7.03	15.9	7.01	1.06	-110	3.29	24.7	200
1534	7.03	15.9	7.01	1.05	-110	3.26	21.4	200
1537	7.03	15.9	7.02	1.04	-110	3.23	15.2	200
1540	7.04	15.9	7.02	1.04	-110	3.22	13.0	200
1543	7.04	15.9	7.02	1.04	-110	3.20	10.23	200
1546	7.04	15.9	7.02	1.03	-110	3.20	7.51	200
1549	7.04	16.0	7.02	1.03	-111	3.19	7.55	200
1552	7.04	15.9	7.01	1.03	-111	3.19	6.23	200
1555	7.04	15.9	7.01	1.03	-111	3.17	5.60	200
1558	7.04	15.9	7.01	1.03	-110	3.16	4.49	200
1601	7.04	15.9	7.01	1.03	-110	3.16	4.19 .733	200

Water sample:

Time collected: 1620

Total volume of purged water removed: 3.5 Gallons

Physical appearance at start		Physical appearance at sampling	
Color	Colorles	Color	Colorless
Odor	MPG	Odor	MPG
Sheen/Free Product	N/N	Sheen/Free Product	Y/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: Possible sheen from purge bucket

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/02/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny/Breezy 40°F
Name	South First Street	Evacuation Method	Low Flow	Well #	MW-4-(12')
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1604	7.04	16.0	7.01	1.02	-110	3.14	4.64	200
1607	7.04	16.0	7.01	1.02	-110	3.14	4.82	200

Water sample:
Time collected: ~~1620~~ 1620 JK

Total volume of purged water removed: 3.5 Gallons

Physical appearance at start
- Color: Colorless
- Odor: MPG
- Sheen/Free Product: Y/N

Physical appearance at sampling
- Color: Colorless
- Odor: MPG
- Sheen/Free Product: Y/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: Possible sheen from purge bucket

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/02/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Night calm <40°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-5 ~~Calm~~ [illegible]
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 15.58 ft.
Depth to Water * 6.03 ft.
Length of Water Column ______ ft.

* Measurements taken from
- [x] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±.3%	Temperature ±3%	pH ±.01	Conductivity ±3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) 10%	Turbidity (NTU) 10%	Flow Rate (ml/min).
0	6.03	14.5	6.87	.639	-60	5.17	45.5	150
~~0~~1718	6.18	14.8	6.74	0.628	-65	3.89	41.9	200
1721	6.20	14.9	6.76	0.615	-68	3.64	41.9	200
1724	6.20	15.0	6.79	0.610	-70	3.50	41.5	200
1727	6.22	15.1	6.81	0.609	-73	3.37	34.4	200
1730	6.22	15.2	6.83	0.603	-75	3.30	29.8	200
1733	6.23	15.2	6.84	0.600	-77	3.23	24.1	200
1736	6.23	15.3	6.85	0.600	-78	3.21	15.3	200
1739	6.22	15.2	6.88	0.594	-80	3.19	13.6	200
1741	6.23	15.2	6.88	0.591	-80	3.17	11.4	200
1744	6.24	15.3	6.90	0.603	-81	3.10	10.94	200
1747	6.24	15.3	6.90	0.592	-82	3.10	9.82	200
1750	6.24	15.3	6.89	0.588	-83	3.10	7.13	200
1753	6.24	15.2	6.90	0.591	-83	3.11	7.13	200
1756	6.24	15.1	6.90	0.590	-84	3.10	5.92	200
1759	6.25	15.2	6.90	0.590	-84	3.06	5.33	200
1802	6.25	15.1	6.91	0.588	-85	3.06	~~[illegible]~~ 4.99	200
1805	6.25	15.2	6.92	0.588	-85	3.06	5.21	200
Water sample:	.02	.5	.01	.02		.4	1	

Time collected: 1815
Total volume of purged water removed: 2 Gal

Physical appearance at start
Color Colorless
Odor MPG
Sheen/Free Product N/N

Physical appearance at sampling
Color Colorless
Odor MPG
Sheen/Free Product Slight Sheen/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

O'Brien & Gere Engineers, Inc.		Low Flow Ground Water Sampling Log	
Date	11/2/05	Personnel	Scott Tucker/Jay Kavanaugh
Weather			
Site Name	South First Street	Evacuation Method	~~Low Flow~~ bailer
Well #	MW-6		
Site Location	Fulton, NY	Sampling Method	~~Low Flow~~ bailer
Project #	1118/35165		

Well information:

Depth of Well * 36.76 ft.

Depth to Water * 6.31 ft.

Length of Water Column 30.45 ft.

1 vol = ~~3.55~~ 5 3 vol = ~~10.5~~ 15

* Measurements taken from

- [ ] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	mS/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
initial		15.1	7.59	0.373	152	7.94		
5		12.9	8.02	0.3668	-79	7.04		
10		12.3	8.22	0.425	-127	6.17		
15	Dry at 12 gallons							

Water sample:

Time collected: ~~1035~~ 1110

Total volume of purged water removed: 12 gal ~~15~~ gallons

Physical appearance at start

Color colorless

Odor no ~~no~~

Sheen/Free Product no/no

Physical appearance at sampling

Color ~~colorless~~ brown

Odor ~~no~~ petroleum

Sheen/Free Product no/no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

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36.49
22

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	10/1/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Overcast 55°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW7 (11 ft)
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 16.02 ft.

Depth to Water * 8.22 ft.

Length of Water Column ______ ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column

Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute

Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	8.22	15.83	6.81	0.422	-81	0.00	8.9	200
1156	8.40	15.68	6.75	0.417	-80	0.00	8.6	200
1159	8.42	15.60	6.74	0.415	-74	0.00	6.7	200
1202	8.45	15.64	6.72	0.413	-71	0.00	5.6	200
1205	8.47	15.59	6.71	0.413	-71	0.00	4.5	200
1208	8.50	15.62	6.71	0.412	-69	0.00	4.1	200
1211	8.51	15.60	6.70	0.413	-70	0.00	4.1	200
[illegible]14	8.52	15.61	6.72	0.412	-71	0.00	3.9	200
[illegible]17	8.53	15.61	6.73	0.411	-71	0.00	3.7	200
1220	8.55	15.51	6.74	0.411	-73	0.00	4.3	200
1223	8.60	15.52	6.76	0.409	-77	0.00	3.3	200
1226	8.60	15.51	6.78	0.409	-77	0.00	3.3	200
1229	8.66	15.57	6.79	0.409	-78	0.00	2.6	200
1232	8.66	15.51	6.78	0.409	-78	0.00	2.7	200

Water sample:

Time collected: 1245

Total volume of purged water removed: 3

Physical appearance at start		Physical appearance at sampling	
Color	Colorless	Color	Colorless
Odor	Sulfur	Odor	Sulfur
Sheen/Free Product	N/N	Sheen/Free Product	N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

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O'Brien & Gere Engineers, Inc.			Low Flow Ground Water Sampling Log		
Date	11/1/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Partly Cloudy Breezy 55°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-7 (SF+)
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 16.02 ft.

Depth to Water * ~~[illegible]~~ 7.67 ft.

Length of Water Column ______ ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	°C Temperature	pH	mS/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	7.67	15.67	6.67	0.432	-40.0	0.98	35	250
1037	7.68	15.50	6.61	0.431	-46	0.00	20	200
1040	8.09	15.44	6.59	0.426	-65	0.00	16	200
1043	8.15	15.49	6.57	0.423	-63	0.00	9.8	200
1046	8.21	15.51	6.56	0.422	-73	0.00	7.4	250
1049	8.26	15.60	6.58	0.423	-79	0.00	8.0	250
1052	8.30	15.62	6.58	0.424	-83	0.00	5.8	250
1055	8.32	15.61	6.60	0.424	-84	0.00	5.7	200
1058	8.35	15.75	6.62	0.424	-88	0.00	6.5	200
1101	8.40	15.71	6.63	0.425	-89	0.00	2.8	200
1104	8.41	15.75	6.64	0.426	-91	0.00	5.9	200
1107	8.47	15.71	6.65	0.423	-91	0.00	5.6	200
1110	8.56	15.69	6.65	0.400	-91	0.00	4.2	200
1113	8.60	15.53	6.65	0.415	-91	0.00	5.6	200
1116	8.60	15.71	6.65	0.415	-91	0.00	6.0	200
1119	8.61	15.67	6.65	0.415	-91	0.00	6.6	200

Water sample:

Time collected: ~~1130~~ 1135

Total volume of purged water removed: 4 gallons

Physical appearance at start
Color: colorless
Odor: N
Sheen/Free Product: N/N

Physical appearance at sampling
Color: Colorless
Odor: Sulfur
Sheen/Free Product: N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

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O'Brien & Gere Engineers, Inc. **Low Flow Ground Water Sampling Log**

Date 11/2/05 Personnel Scott Tucker/Jay Kavanaugh Weather Sunny/Breezy 50°
Site Name South First Street Evacuation Method ~~Low Flow~~ bailer Well # MW-7D
Site Location Fulton, NY Sampling Method ~~Low Flow~~ bailer Project # 1118/35165

Well information:

Depth of Well * 30.71 ft.
Depth to Water * 7.5 ft.
Length of Water Column 23.21 ft.
4
12

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature °C	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	7.5	14.67	7.38	0.434	-77	3.30		
4		12.60	7.11	0.489	-131	3.41		Bailed
8		12.11	7.04	0.477	-144	3.42		
12		12.03	7.05	0.469	-145	3.41	132	

Water sample:

Time collected: 1035 Total volume of purged water removed: 12 Gallons

Physical appearance at start
Color Colorless
Odor N
Sheen/Free Product N/N

Physical appearance at sampling
Color Colorless
Odor N
Sheen/Free Product N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

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O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	11/1/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Overcast, windy, light rain ~55°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-8
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * ______ ft.

Depth to Water * 7.48 ft.

Length of Water Column ______ ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column

Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute

Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1456	7.72	13.71	6.69	0.299	~~13.71~~ -74	0.63	44.3	250
59		13.68	6.48	0.300	-62	—	—	250
02	7.98	13.65	6.45	0.300	-61		41.3	250
05	8.00	13.64	6.41	0.301	-62		38.0	250
08	8.01	13.48	6.45	0.301	-63		35.1	250
11	8.03	13.62	6.45	0.302	-67		29.0	250
14	8.07	13.54	6.46	0.302	-71		21.4	250
17	8.09	13.59	6.48	0.303	-75		16.06	200
20	8.10	13.57	6.48	0.303	-76		14.0	200
28	8.11	13.70	6.48	0.302	-81		10.96	150
31	8.20	13.62	6.48	0.303	-82		8.31	175
→ 34	8.18	13.42	6.50	0.303	-84		7.86	150
37	8.19	13.49	6.51	0.302	-85		6.94	150
40	8.19	13.46	6.51	.302	-85		5.97	150
43	8.21	13.49	6.52	.302	-86		5.24	
46	8.22	13.51	6.53	.303	-87		5.47	

temp [illegible]

Water sample:

Time collected: 1530

Total volume of purged water removed: ~3 gallons

Physical appearance at start		Physical appearance at sampling	
Color	colorless	Color	colorless
Odor	no	Odor	N
Sheen/Free Product	N/N	Sheen/Free Product	N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	11/2/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny ~45°F, windy
Site Name	South First Street	Evacuation Method	~~Low Flow~~ bailer	Well #	MW-8D
Site Location	Fulton, NY	Sampling Method	~~Low Flow~~ bailer	Project #	1118/35165

Well information:

Depth of Well * 33.10 ft.

Depth to Water * 7.99 ft.

Length of Water Column 25.11 ft.

1 vol = 4.1 3 vol = 12.3

* Measurements taken from

✓	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column

Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute

Collect readings at every three minute intervals

Elapsed Time	Depth To Water	°C Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
initial		13.61	7.48	0.440	50	8.47		
4.1		11.88	7.50	0.462	-98	2.78		
8.2	Dry at 7 gallons						Er 3	
12.3								

Water sample:

Time collected: 1305

Total volume of purged water removed: 7 gallons

Physical appearance at start

Color: colorless

Odor: no

Sheen/Free Product: no/no

Physical appearance at sampling

Color: brown/dark brown

Odor: organic/muck

Sheen/Free Product: no/no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

O'Brien & Gere Engineers, Inc. — **Low Flow Ground Water Sampling Log**

Date	11/1/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Rainy 45°F
Site Name	South First Street	Evacuation Method	Low Flow Bailer	Well #	MW-8D
Site Location	Fulton, NY	Sampling Method	Low Flow Bailer	Project #	1118/35165

Well information:

Depth of Well * 33.1 ft.
Depth to Water * 7.81 ft.
Length of Water Column 25.29 ft.

25.29×0.163=4.12g ×3=12.4

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature °C	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	7.81	12.4	6.90	.092	29	12.92	411	200
1422	10.41	12.2	7.38	0.848	-8	10.46	220	200
1425	11.14	12.2	7.47	0.848	-20	9.67	103.5	200
1428	11.95	12.1	7.49	0.840	0	8.79	75.2	200
1431	12.81	12.7	7.43	0.837	-3	8.48	48.6	200
1434	13.79	12.0	7.48	0.836	-16	8.02	44.6	200
1437	14.35	12.0	7.54	0.834	-22	7.02	42.6	200
1440	15.21	12.0	7.56	0.832	-29	7.33	47.1	200
1443	15.81	12.0	7.63	0.830	-41	7.10	38.1	200
1446	16.37	12.0	7.64	0.829	-46	6.84	37.7	200
1449	16.67	11.9	7.69	0.829	-52	6.62	39.3	200
1452	17.38	11.9	7.72	0.830	-58	6.40	38.2	200
1455	17.96	11.9	7.81	0.828	-64	6.24	38.3	200
1458	18.23	11.9	7.80	0.828	-67	6.04	36.7	200
1501	19.21	11.8	7.86	0.825	-71	5.84	34.6	200
1504	19.51	11.7	7.89	0.827	-76	5.65	35.5	200
1507	20.19	11.7	7.95	0.827	-80	5.49	34.9	200

Water sample:

Time collected: ______ Total volume of purged water removed: ______

Physical appearance at start		Physical appearance at sampling	
Color	Colorless	Color	
Odor	N	Odor	
Sheen/Free Product	N/N	Sheen/Free Product	

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

O'Brien & Gere Engineers, Inc. — **Low Flow Ground Water Sampling Log**

Date	11/2/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-8D
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1512	21.00	11.7	7.98	0.827	-83	5.10	34.0	200
1515	21.41	11.7	7.91	0.826	-87	5.06	36.3	200
15.18	22.17	11.7	7.91	0.826	-88	4.88	34.8	200
15.21	22.44	11.6	7.93	0.824	-91	4.89	32.6	200
1524	23.25	11.6	7.94	0.324	-93	4.85	29.9	200
1527	23.58	11.7	7.97	0.324	-95	4.78	34.2	200
1530	23.85	11.6	7.97	0.825	-93	4.72	35.5	200
1533	23.98	11.6	7.99	0.924	-99	47.5	33.2	200
1536	24.42	11.5	7.99	0.925	-101	[illegible]	30.9	200
1539	25.31	11.6	8.00	0.925	-103	4.77	32.9	200
1542	25.65	11.4	7.99	0.927	-99	4.79	32.3	60
1545	25.81	11.3	7.99	0.929	-103	4.56	32.1	90
1548	26.01	11.3	8.00	0.931	-106	4.43	32.6	120
1551	26.03	11.3	8.04	0.931	-112	4.41	32.0	60
1554	26.16	11.2	8.04	0.933	-115	4.70	33.5	60
1557	26.18	11.1	8.03	0.935	-113	4.47	33.7	60
1603								

Water sample:

Time collected: ________

Total volume of purged water removed: ________

Physical appearance at start

Color ________

Odor ________

Sheen/Free Product ________

Physical appearance at sampling

Color ________

Odor ________

Sheen/Free Product ________

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	11/2/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-8D
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1603	26.21	11.1	8.05	0.835	-120	4.82	34.5	60
1607	26.10	11.0	8.06	0.840	-125	4.80	34.9	60
1610	26.24							

Will bail

drawdown to much

Water sample:

Time collected: ________ Total volume of purged water removed: ________

Physical appearance at start
Color ________
Odor ________
Sheen/Free Product ________

Physical appearance at sampling
Color ________
Odor ________
Sheen/Free Product ________

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

O'Brien & Gere Engineers, Inc.		**Low Flow Ground Water Sampling Log**			
Date	11/03/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny/Breezy 70°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-95
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well *	17.69	ft.	* Measurements taken from	
Depth to Water *	6.95	ft.	X	Top of Well Casing
Length of Water Column	10.74	ft.		Top of Protective Casing
				(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column

Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute

Collect readings at every three minute intervals

Elapsed Time	Depth To Water ±0.3	Temperature ±3%	pH ±.1	Conductivity ±3%	Oxidation Reduction Potential ±10	Dissolved Oxygen (mg/l) ±10	Turbidity (NTU) ±10%	Flow Rate (ml/min).
0	7.55	14.2	6.57	0.944	215	6.30	46.1	250
1230	7.62	14.3	6.56	0.944	218	4.28	34.1	200
1233	7.63	14.2	6.56	0.946	219	3.91	260	200
1236	7.64	14.2	6.57	0.946	220	3.70	18.9	200
1239	7.66	14.2	6.57	0.946	221	3.54	15.0	200
1242	7.71	14.1	6.58	0.946	221	3.43	12.8	200
1245	7.75	14.1	6.58	0.946	221	3.36	10.27	200
1248	7.80	14.2	6.58	0.946	222	3.31	10.86	200
1251	7.82	14.2	6.59	0.946	222	3.27	9.32	200
1254	7.83	14.0	6.59	0.945	222	3.24	8.78	200
1257	7.83	14.2	6.59	0.944	222	3.18	9.78	200
1300	7.83	14.2	6.60	0.943	222	3.19	9.00	200

Water sample: 2.3 .4 .1 0.03 10 .4 1.5

Time collected: 1310 Total volume of purged water removed: 3 gall

Physical appearance at start		Physical appearance at sampling	
Color	Colorless	Color	Colorless
Odor	N	Odor	N
Sheen/Free Product	N/N	Sheen/Free Product	N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

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O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/2/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Overcast 40°F
Site Name	South First Street	Evacuation Method	~~Low Flow~~ bailer	Well #	MW 9 D
Site Location	Fulton, NY	Sampling Method	~~Low Flow~~ bailer	Project #	1118/35165

Well information:

Depth of Well * 31.56 ft.
Depth to Water * 9.21 ft.
Length of Water Column 22.35 ft.
Volume 3.6
X3 11

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	9.21	12.64	5.95	0.769	-19	4.92	E	
3.6		12.48	6.83	0.785	-103	3.67		Bailed
7.2		12.02	7.15	0.722	-121	1.75		
11		11.83	7.24	0.811	-120	1.59	E>3	

Water sample:

Time collected: 0915
Total volume of purged water removed: 11 gallons.

Physical appearance at start
Color: Colorless
Odor: N
Sheen/Free Product: N/N

Physical appearance at sampling
Color: Brown
Odor: N
Sheen/Free Product: N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: Lamont 20/20 used for Turbidity

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O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/1/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Rainy 40°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW 10 11FT
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 14.47 ft.

Depth to Water * 4.14 ft.

Length of Water Column ______ ft.

* Measurements taken from

- [X] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	4.14	14.8	6.76	0.721	125	7.74	118	200
1700	7.40	14.9	6.66	0.696	132	6.50	115	200
1703	7.42	14.9	6.65	0.714	133	6.39	45.6	200
1706	7.43	15.0	6.62	0.689	141	6.08	54.4	200
1709	7.47	15.0	6.61	0.654	147	6.33	13.8	200
1712	7.49	15.1	6.60	0.653	151	6.34	13.8	200
1715	7.50	15.1	6.59	0.633	156	6.31	9.49	200
1718	7.50	15.1	6.59	0.635	160	6.35	7.50	200
1721	7.51	15.1	6.58	0.630	163	6.72	5.82	200
1724	7.51	15.2	6.57	0.632	166	7.03	6.07	200
1727	7.53	15.2	6.57	0.634	~~170~~ 170.0	6.36	5.84	200
1730	7.54	15.2	6.56	0.635	172.0	6.28	6.20	200
1733	7.54	15.3	6.56	~~0.627~~ 0.634	174	6.28	6.24	200
1736	7.55	15.3	6.56	0.628	177	6.25	6.22	200
1739	7.55	15.3	6.55	0.633	~~179~~ 179	6.29	6.56	200
1742	7.57	15.3	6.55	0.626	181	6.18	6.50	200
1745	7.57	15.3	6.55	0.629	182	6.18	6.36	200
1748	7.58	15.3	6.55	0.623	184	6.16	4.47	200
1751	7.58	15.3	6.55	0.628	185	6.19	4.25	200
1754	7.61	15.3	6.55	0.625	187	6.16	3.63	200

Water sample:

Time collected: 1815

Total volume of purged water removed: 3 gallons

Physical appearance at start
- Color: Colorless
- Odor: N
- Sheen/Free Product: N/N

Physical appearance at sampling
- Color: colorless
- Odor: N
- Sheen/Free Product: N/N

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/1/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Rainy 40°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW 10 11ft
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1758	7.61	15.4	6.55	6.35	189	6.11	4.23	200
1801								
	Notes							

Water sample:

Time collected: ______ Total volume of purged water removed: ______

Physical appearance at start
Color ______
Odor ______
Sheen/Free Product ______

Physical appearance at sampling
Color ______
Odor ______
Sheen/Free Product ______

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: Turbidity began to rise, other parameters stable - sampled

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/2/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	p-sunny, windy, ~45°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-11[illegible] (5')
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 11.91 ft.

Depth to Water * ~~0.8~~ 1.0 ft.

Length of Water Column 10.91 ft.

1 vol = 1.8   3 vol = 5.4

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
27	1.04	12.92	6.20	0.257	29	0.00	64.1	200
30	1.04	12.87	6.11	0.257	32	0.00	47.7	200
33	1.04	12.81	6.06	0.254	34	0.00	37.1	200
36	1.04	12.86	6.03	0.254	33	0.00	34.1	~~250~~ 200
39	1.04	12.85	6.03	0.253	34	0.00	27.8	~~250~~ 200
42	1.04	12.89	6.03	0.253	32	0.00	28.0	200
45	1.04	12.74	6.04	0.250	33	0.00	20.2	200
48	1.04	12.84	6.03	0.252	29	0.00	18.8	200
[illegible]1	1.04	12.81	6.04	0.249	28	0.00	16.0	200
54	1.04	12.78	6.05	0.250	27	0.00	17.1	200
57	1.04	12.84	6.05	0.248	28	0.00	16.8	200

Water sample:

Time collected: 1610

Total volume of purged water removed: ~2 gallons

Physical appearance at start
- Color: Colorless
- Odor: no
- Sheen/Free Product: no/no

Physical appearance at sampling
- Color: colorless
- Odor: no
- Sheen/Free Product: no/no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: MS/MSD

O'Brien & Gere Engineers, Inc.
Low Flow Ground Water Sampling Log

Date	11/2/04	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Clear, ~40°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-11- (10')
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 11.91 ft.

Depth to Water * ~~11~~ 1.04 ft.

Length of Water Column 10.87 ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
16	1.04	13.60	6.15	0.249	21	0.00	59.2	200
19	1.04	13.49	6.12	0.246	21	0.00	47.8	200
22	1.04	13.36	6.12	0.245	20	0.00	37.9	200
25	1.04	13.34	6.12	0.244	19	0.00	33.2	200
29	1.04	13.23	6.13	0.244	17	0.00	27.6	200
32	1.04	13.16	6.14	0.244	15	0.00	24.7	200
35	1.04	13.07	6.14	0.243	14	0.00	22.9	200
39	1.04	13.16	6.16	0.242	11	0.00	21.1	200
42	1.04	13.15	6.17	0.242	10	0.00	20.5	200
45	1.04	13.09	6.17	0.241	9	0.00	16.4	200
48	1.04	13.11	6.18	0.240	8	0.00	14.7	200
51	1.04	13.08	6.18	0.240	6	0.00	13.3	200
54	1.04	13.04	6.18	0.240	5	0.00	12.4	200
57	1.04	13.06	6.18	0.240	4	0.00	11.3	200
00	1.04	13.03	6.19	0.240	4	0.00	11.2	200
03	1.04	13.06	6.19	0.239	3	0.00	8.93	200
06	1.04	13.03	6.19	0.239	2	0.00	8.54	200
09	1.04	13.05	6.19	0.239	1	0.00	8.84	200

Water sample:

Time collected: 1745

Total volume of purged water removed: 2.5-3 gallons.

Physical appearance at start
Color colorless
Odor no
Sheen/Free Product no

Physical appearance at sampling
Color colorless
Odor no
Sheen/Free Product See notes

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: possible sheen on purge water

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O'Brien & Gere Engineers, Inc.					Low Flow Ground Water Sampling Log
Date	11/3/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny ~65°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-12S (12')
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well *	15.53	ft.	* Measurements taken from	
Depth to Water *	4.37	ft.	X	Top of Well Casing
Length of Water Column	11.16	ft.		Top of Protective Casing
				(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

	Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
1208	40	4.54	14.9	6.93	0.479	211	7.33	11.3	150
	45	5.47	14.8	7.04	0.745	208	6.21	6.17	150
	Start over, cell was leaking								
	53	5.75	14.8	7.22	1.12	204	7.05	5.18	160
	58	5.82	14.9	7.21	not working	207	7.27	4.16	100
	03	5.83	15.0	7.25	~~27.5~~	205	8.40	4.04	125
	08	5.79	14.9	7.23		205	8.29	3.59	125
	13	5.65	15.0	7.26		204	8.36	3.94	75
	18	5.63	15.0	7.24		206	7.87	2.96	125
	23	5.63	14.9	7.26		206	7.84	2.97	125
	28	5.71	15.0	7.26		209	7.94	2.78	125
	readings from new Horiba U-22 S/N000012 (post sample)							pump never turned off	
	44	—	14.5	6.61	0.730	210	8.20	—	125
	49	—	14.5	6.61	0.730	208	6.72	—	125
	54	—	14.5	6.62	0.730	206	6.42	—	125

Water sample:

Time collected: 1315

Total volume of purged water removed: ~1.5-2 gallons

Physical appearance at start		Physical appearance at sampling	
Color	colorless	Color	colorless
Odor	no	Odor	no
Sheen/Free Product	no/no	Sheen/Free Product	no/no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

1 of 2

O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	11/3/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny ~60°F
Site Name	South First Street	Evacuation Method	Low Flow	Well #	MW-12S (8.5')
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Well information:

Depth of Well * 15.53 ft.

Depth to Water * 4.06 ft.

Length of Water Column 11.47 ft.

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column

Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute

Collect readings at every three minute intervals

	~~Elapsed~~ Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
52	24	5.40	14.5	6.90	1.01	127	4.12	16.6	200
	27	5.74	14.5	6.96	89.4	140	3.83	10.6	200
	30	5.89	14.5	7.07	53.1	145	3.84	9.34	150
	33	5.95	14.5	7.09	31.3	156	3.75	7.27	175
	36	6.03	14.6	7.12	41.6	165	3.05	6.283	200
	39	6.12	14.6	7.16	24.2	171	3.19	5.74	200
	42	6.18	14.7	7.18	19.1	174	3.84	4.25	200
	45	6.26	14.7	7.22	14.6	177	3.10	3.48	200
	~~48~~ 50	6.42	14.8	7.24	3.97	178	3.11	3.06	225
	~~51~~ 53	6.51	14.8	7.26	4.12	177	3.27	3.34	200
	56	6.59	14.8	7.26	2.83	175	3.25	3.83	200
	59	6.64	14.8	7.29	3.19	171	3.03	3.96	200
	02	6.75	14.8	7.31	3.00	169	3.23	3.87	200
933	05	6.95	14.9	7.33	2.06	167	3.45	5.79	200
	10	7.02	14.9	7.41	2.25	164	3.38	7.70	125
	17	7.04	14.9	7.40	1.50	177	3.70	7.19	125
	22	7.10	14.9	7.41	1.47	185	4.17	5.74	125
	27	7.11	15.0	7.41	1.68	190	4.10	4.99	125
	32	7.08	15.0	7.45	2.13	192	4.66	4.78	125
	37	7.02	15.0	7.47	2.80	196	5.05	4.57	125

Water sample:

Time collected: 1045

Total volume of purged water removed: ~4.5 gallons.

Physical appearance at start

Color: colorless

Odor: none

Sheen/Free Product: no/no

Physical appearance at sampling

Color: colorless

Odor: no

Sheen/Free Product: no/no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: 933 - lowered pumping rate to 125 ml/min to reduce drawdown

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/3/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	Sunny ~60°F
Name	South First Street	Evacuation Method	Low Flow	Well #	MW-12S (8.5')
Site Location	Fulton, NY	Sampling Method	Low Flow	Project #	1118/35165

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen mg/L (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
42	6.94	15.0	7.50	5.06	200	5.99	3.89	125
47	6.81	14.9	7.52	8.02	202	7.40	3.22	125
52	6.78	14.9	7.53	21.9	202	7.35	2.77	125
57	6.72	14.9	7.51	probe ~~meter~~ not	202	7.64	2.65	125
02	6.67	14.9	7.50	working	203	7.84	3.66	125
	Sampling.							

Water sample:

Time collected: 1045

Total volume of purged water removed: ~ 4.5 gallons

Physical appearance at start		Physical appearance at sampling	
Color	colorless	Color	Colorless
Odor	no	Odor	no
Sheen/Free Product	no/no	Sheen/Free Product	no/no

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: 57 - Cond=53.6 02-68.7 Conductivity probe possibly not working due to erratic readings. will recalibrate after for next sample

W07 = 39

O'Brien & Gere Engineers, Inc. — Low Flow Ground Water Sampling Log

Date	11/2/05	Personnel	Scott Tucker/Jay Kavanaugh	Weather	
Site Name	South First Street	Evacuation Method	~~Low Flow~~ bailer	Well #	MW-12D
Site Location	Fulton, NY	Sampling Method	~~Low Flow~~ bailer	Project #	1118/35165

Well information:

Depth of Well * 27.80 ft.

Depth to Water * 5.61 ft.

Length of Water Column 22.19 ft.

1vol = 3.61 3Vol 10.8

* Measurements taken from

X	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
initial		11.1	6.30	0.817	227	11.42		
3.6 gal		11.8	6.94	0.859	156	6.99		
7.2		11.5	7.43	0.778	38	6.36	Er3	
10.8	Dry at 8.5 gallons							

Water sample:

Time collected: 0925

Total volume of purged water removed: 8.5 gallons

Physical appearance at start
Color: Clear
Odor: no
Sheen/Free Product: no/no

Physical appearance at sampling
Color: brown
Odor: no
Sheen/Free Product: no/no

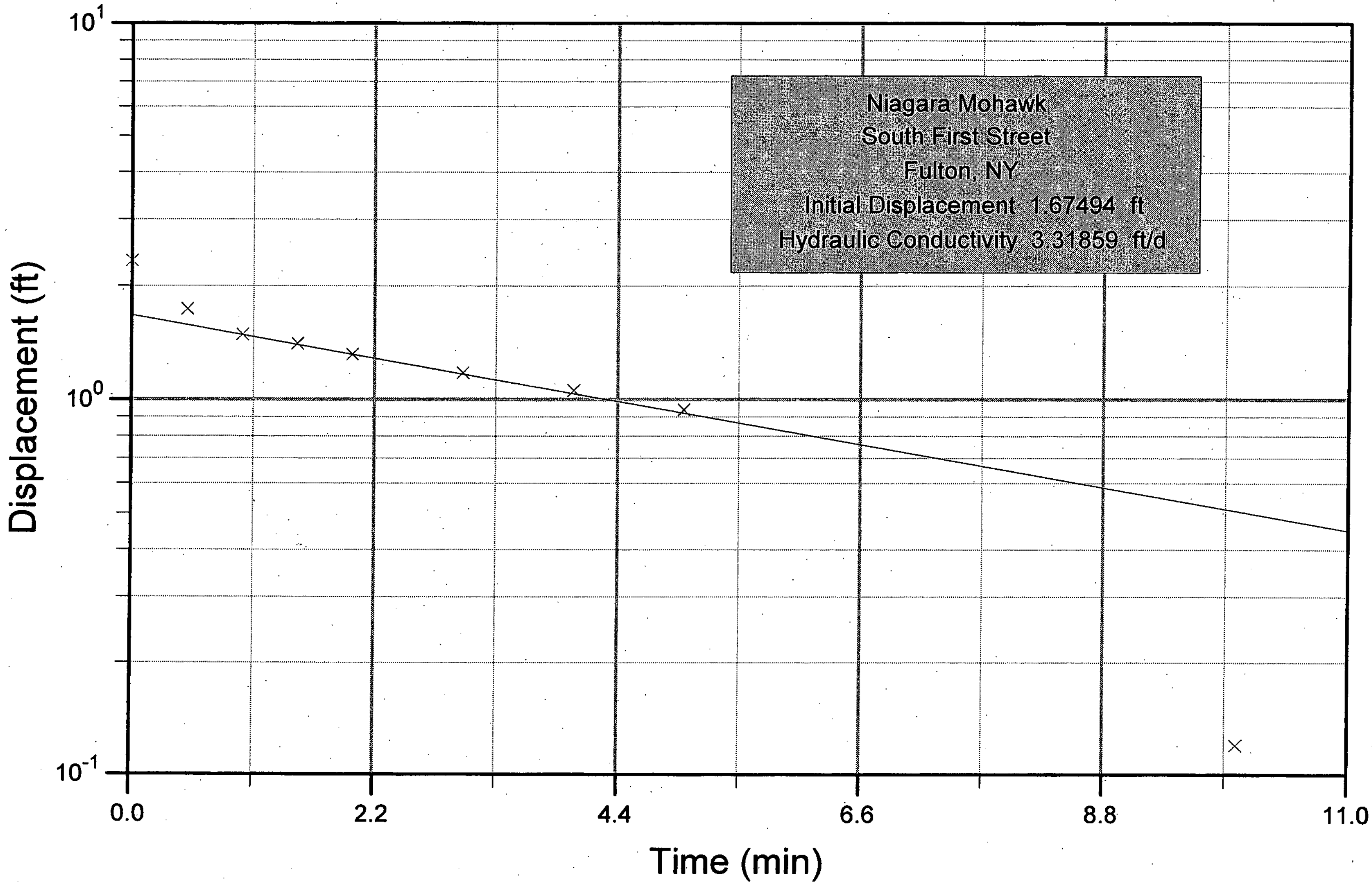
Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

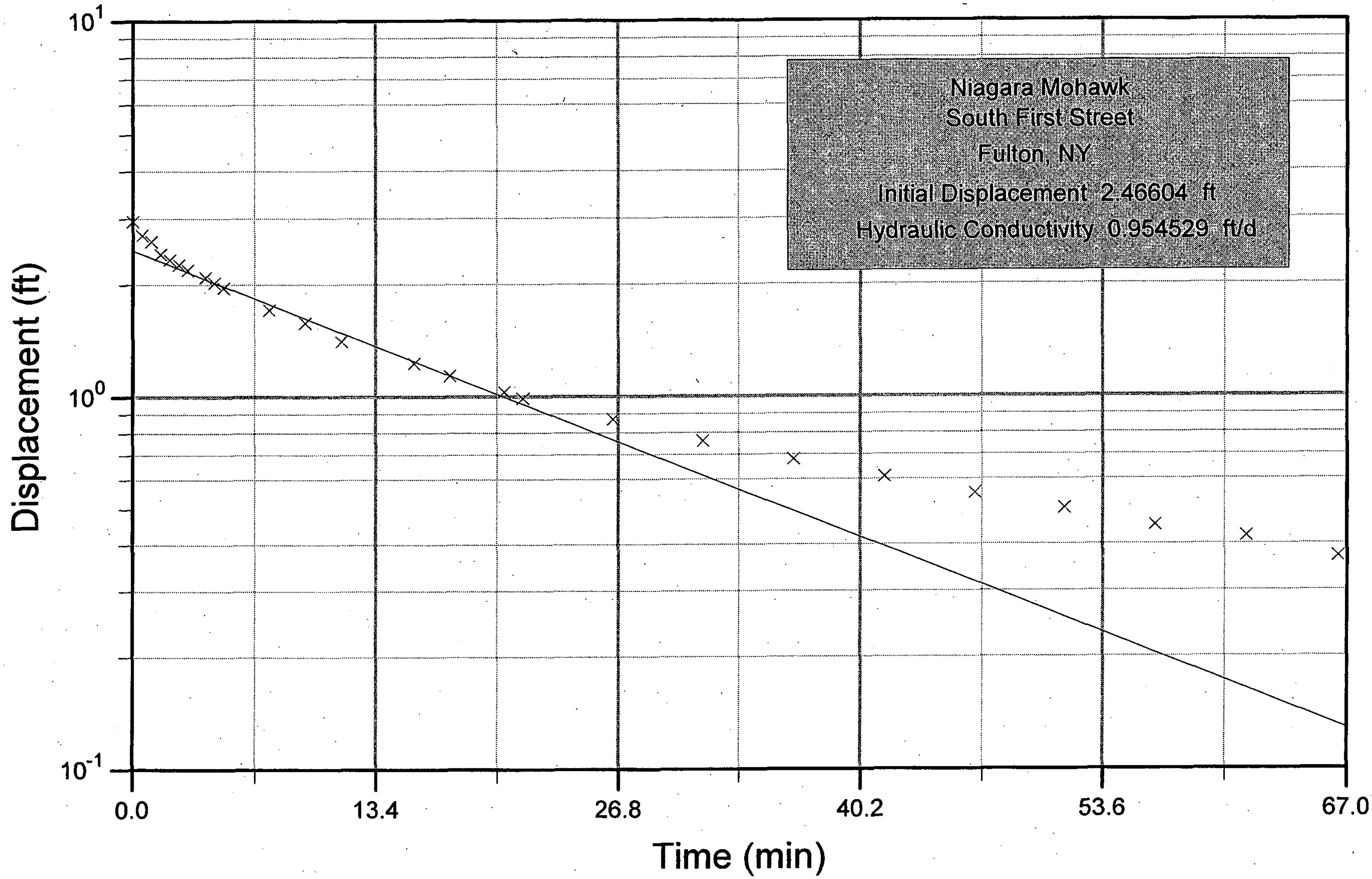
Notes:

Hydraulic conductivity test plots

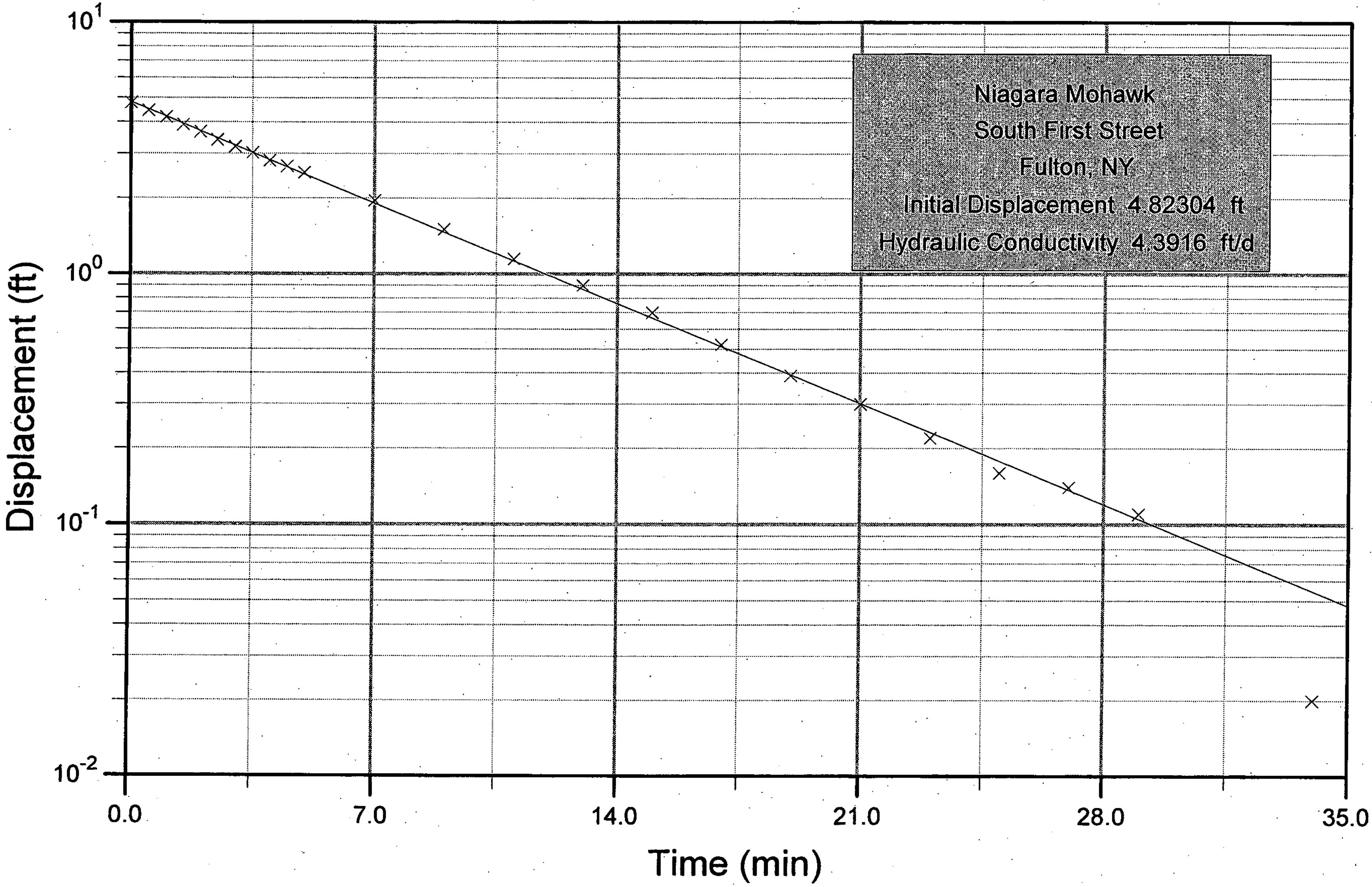
MW-3 Slug Test (2004)

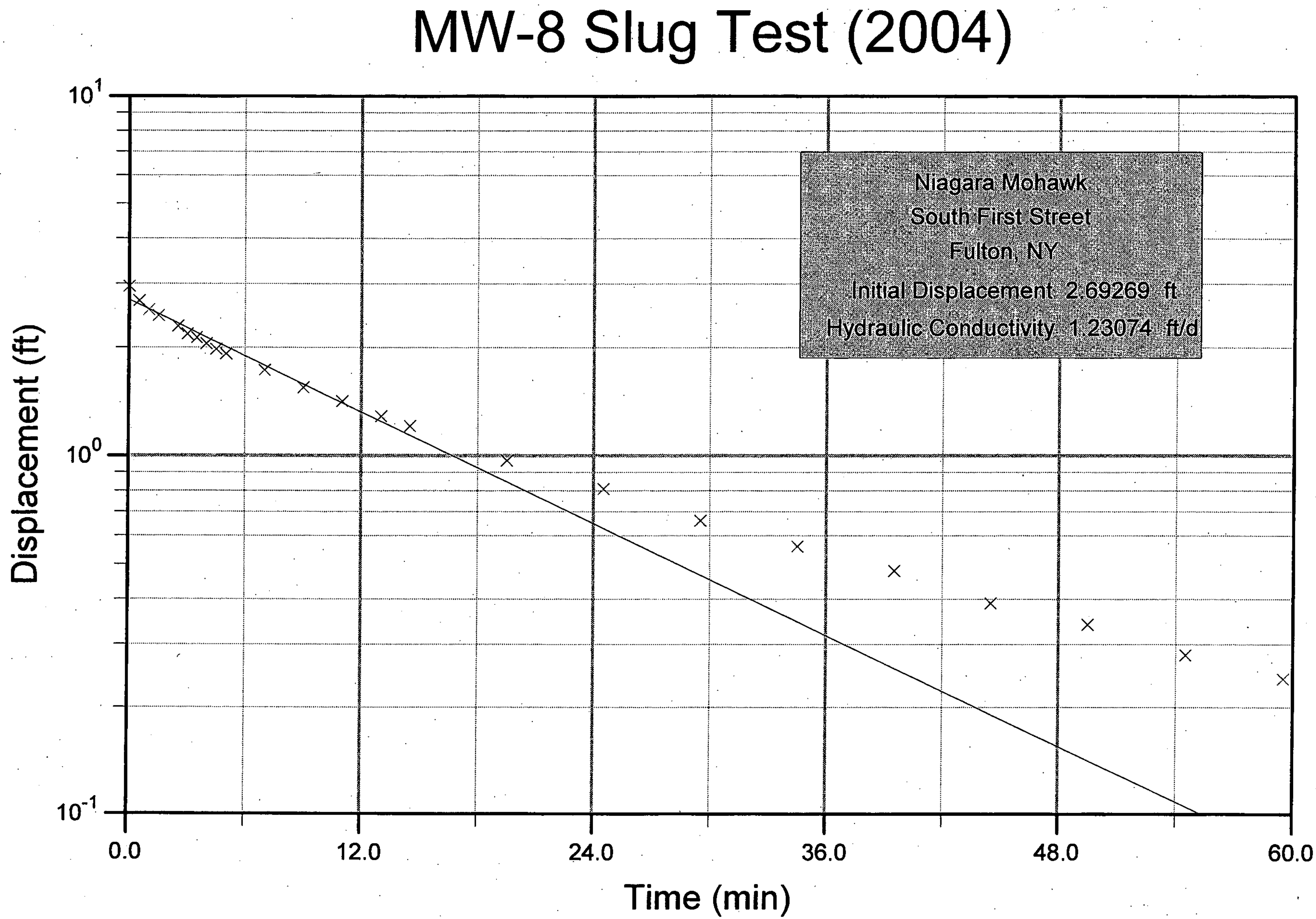


MW-7 Slug Test (2004)

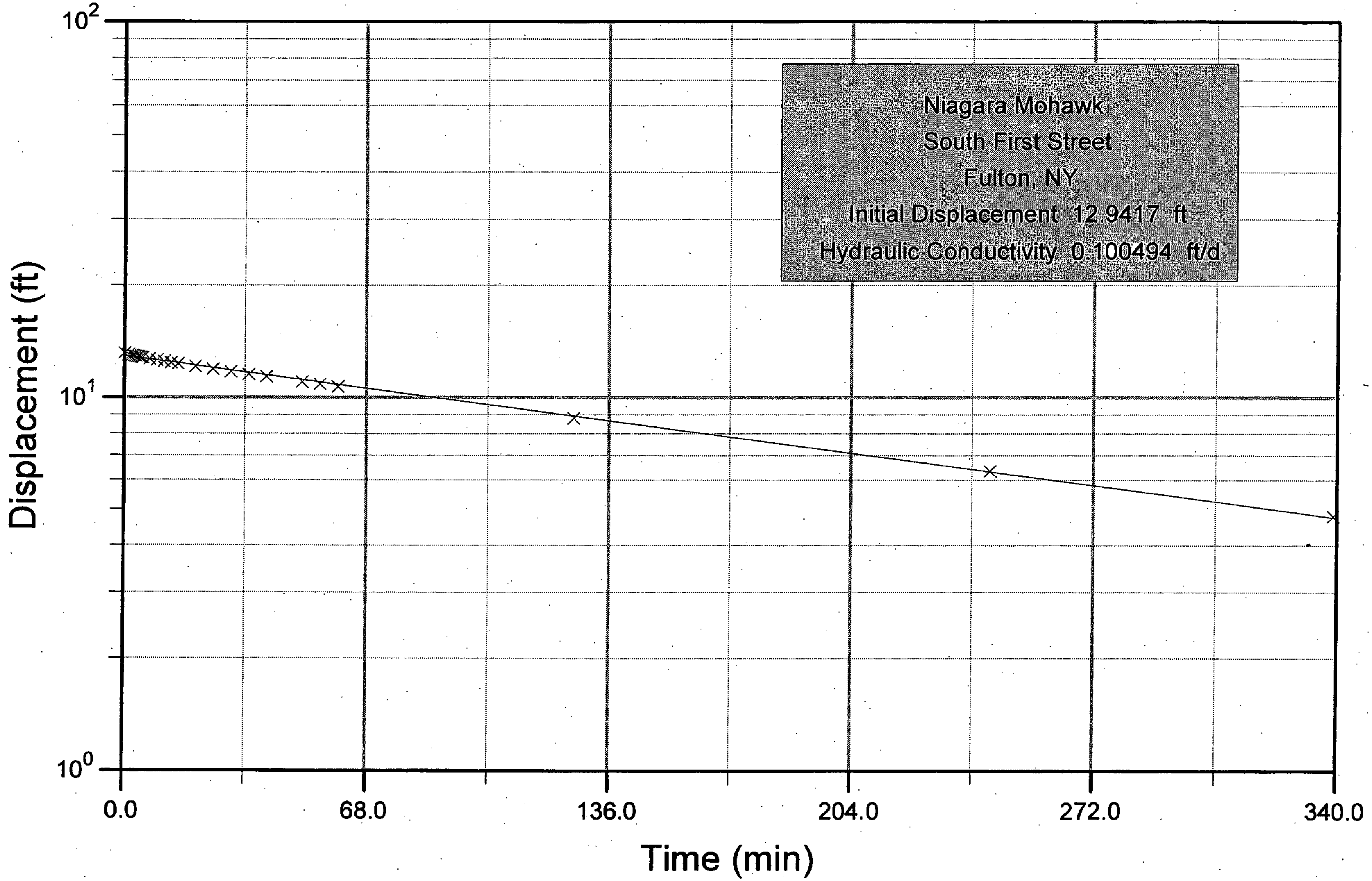


MW-7D Slug Test (2004)

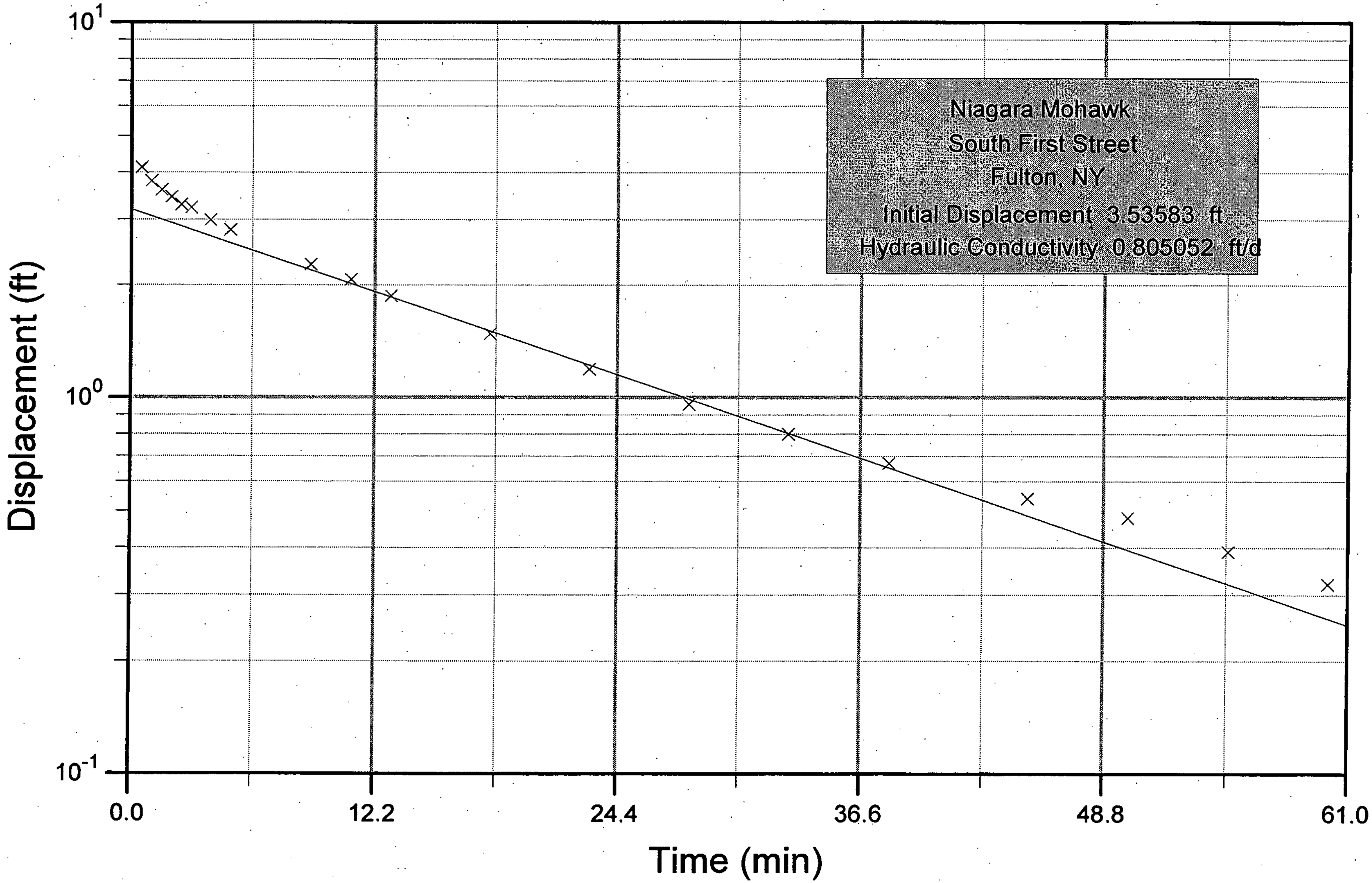



MW-8 Slug Test (2004)
Niagara Mohawk
South First Street
Fulton, NY
Initial Displacement 2.69269 ft
Hydraulic Conductivity 1.23074 ft/d
Displacement (ft)
10^1
10^0
10^{-1}
0.0
12.0
24.0
36.0
48.0
60.0
Time (min)

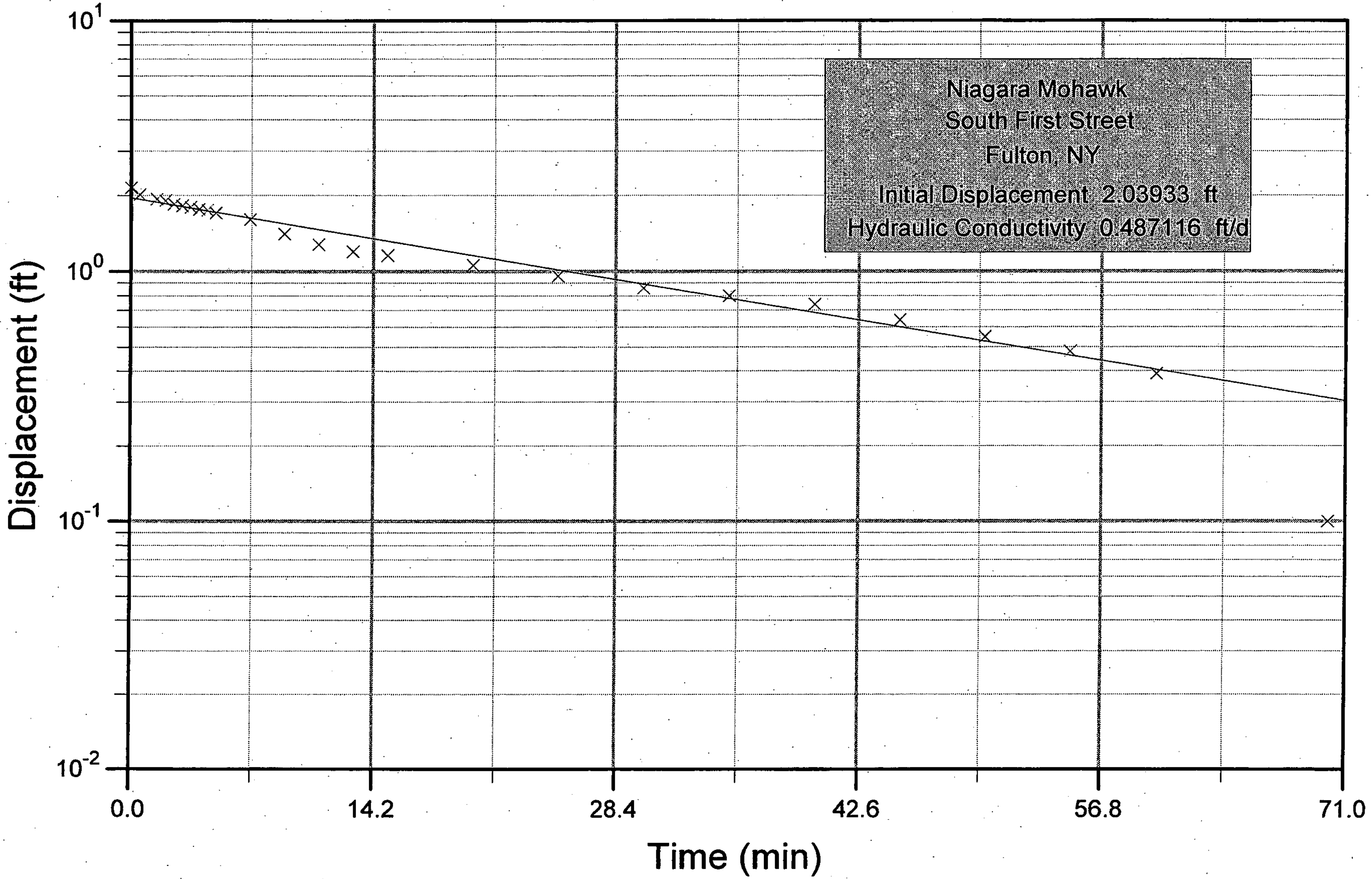
MW-8D Slug Test (2004)

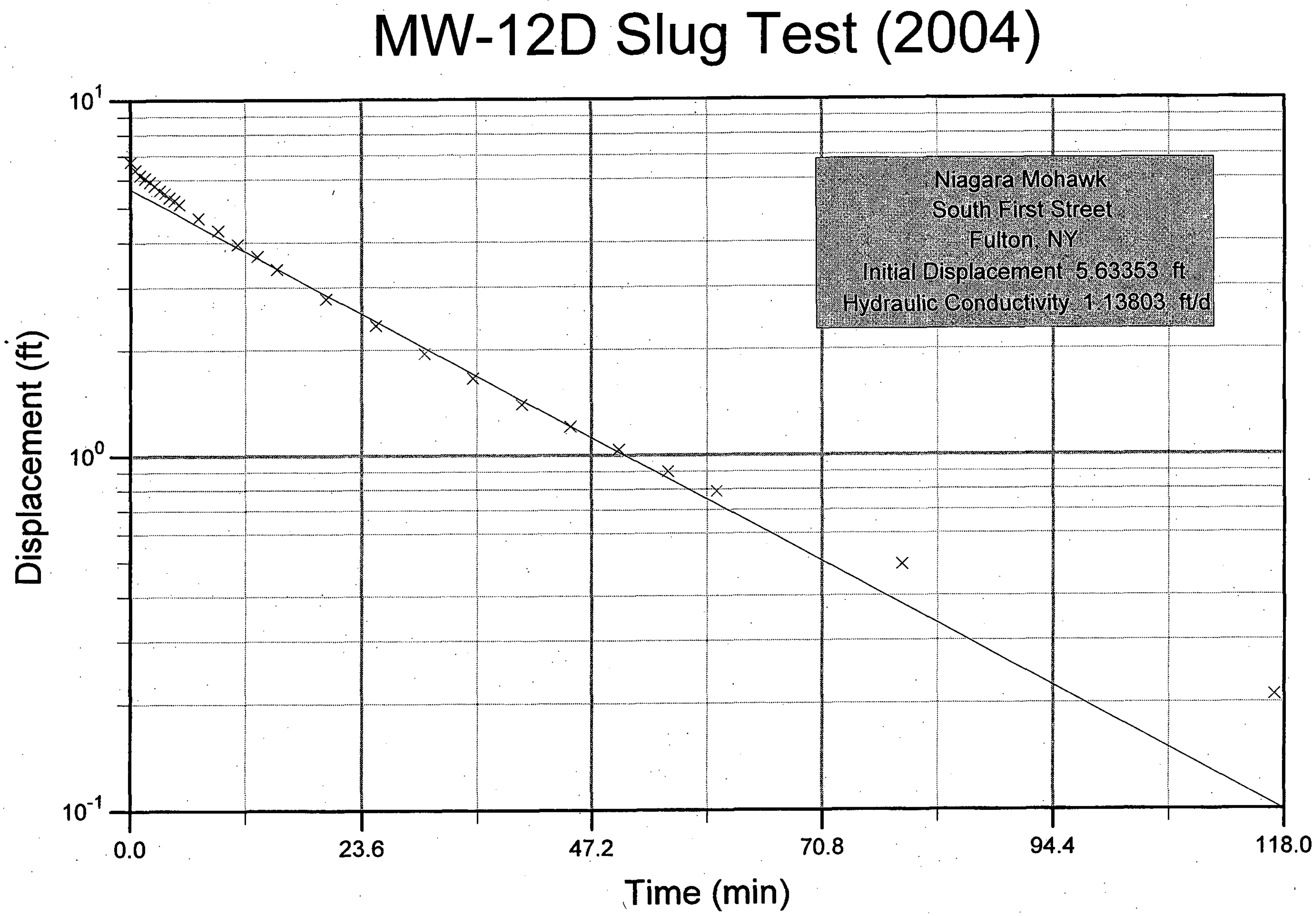


MW-9S Slug Test (2004)



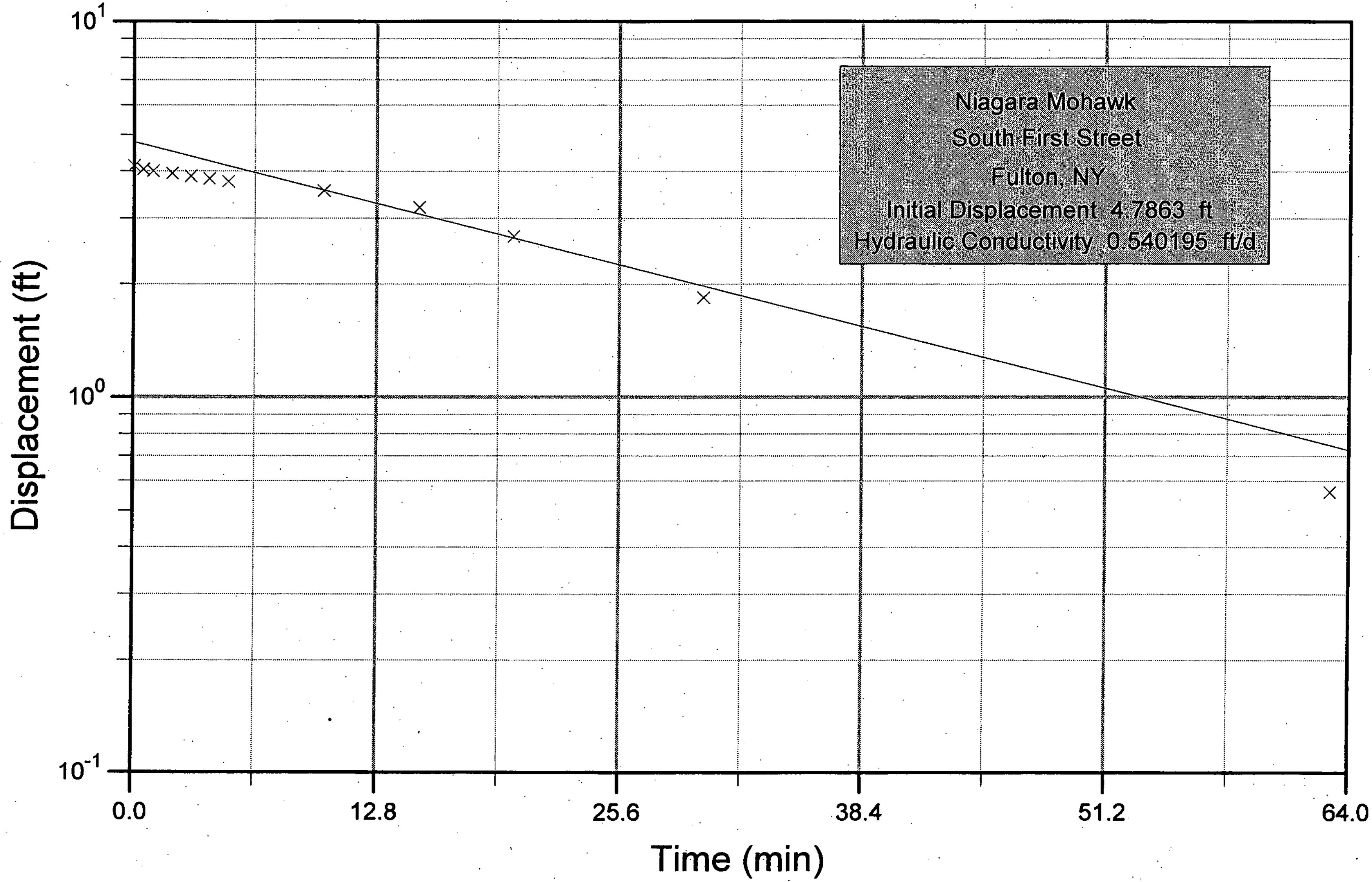
MW-12S Slug Test (2004)



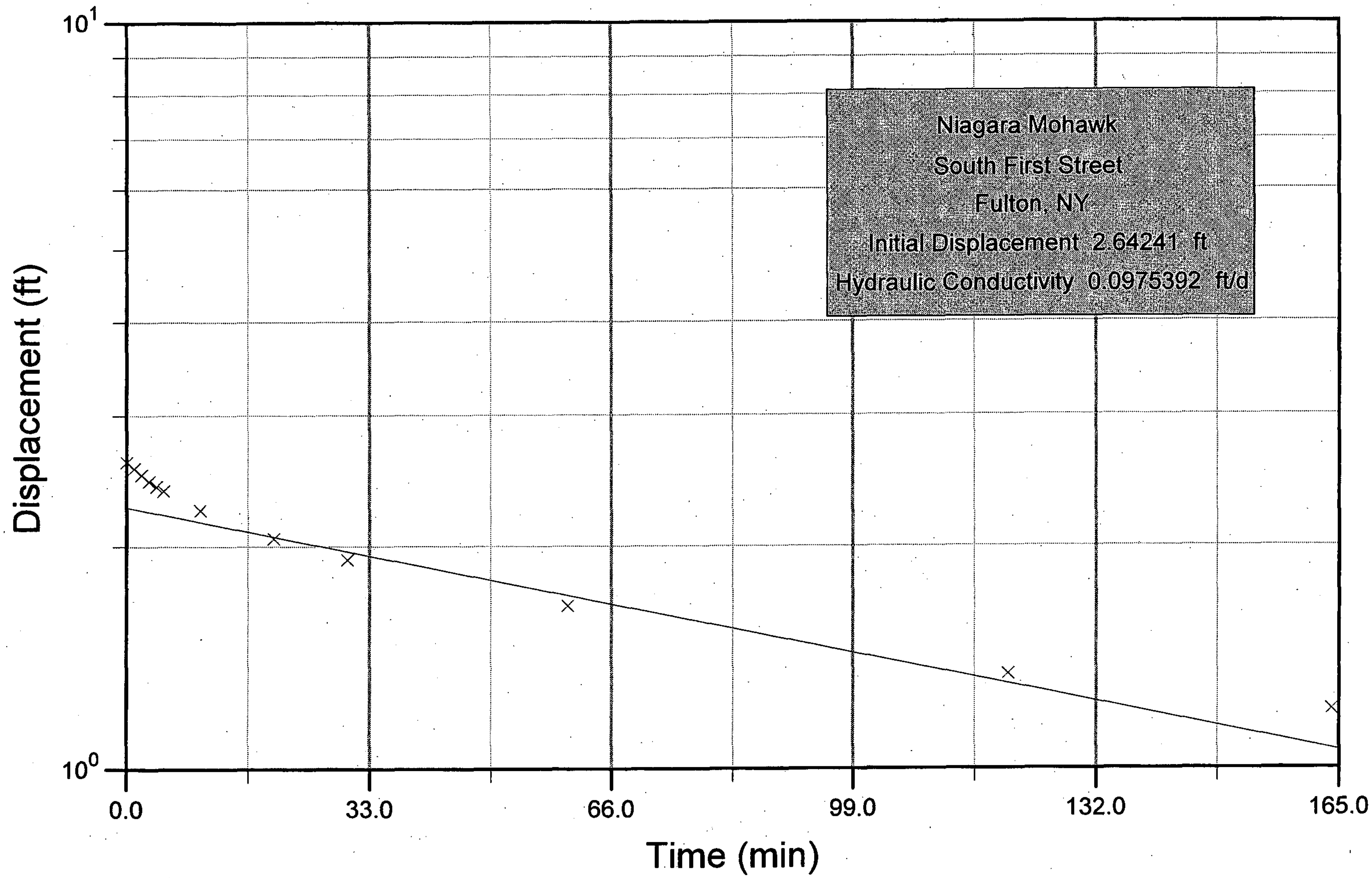


MW-12D Slug Test (2004)
Niagara Mohawk
South First Street
Fulton, NY
Initial Displacement 5.63353 ft
Hydraulic Conductivity 1.13803 ft/d
Displacement (ft)
10^1
10^0
10^-1
0.0
23.6
47.2
70.8
94.4
118.0
Time (min)

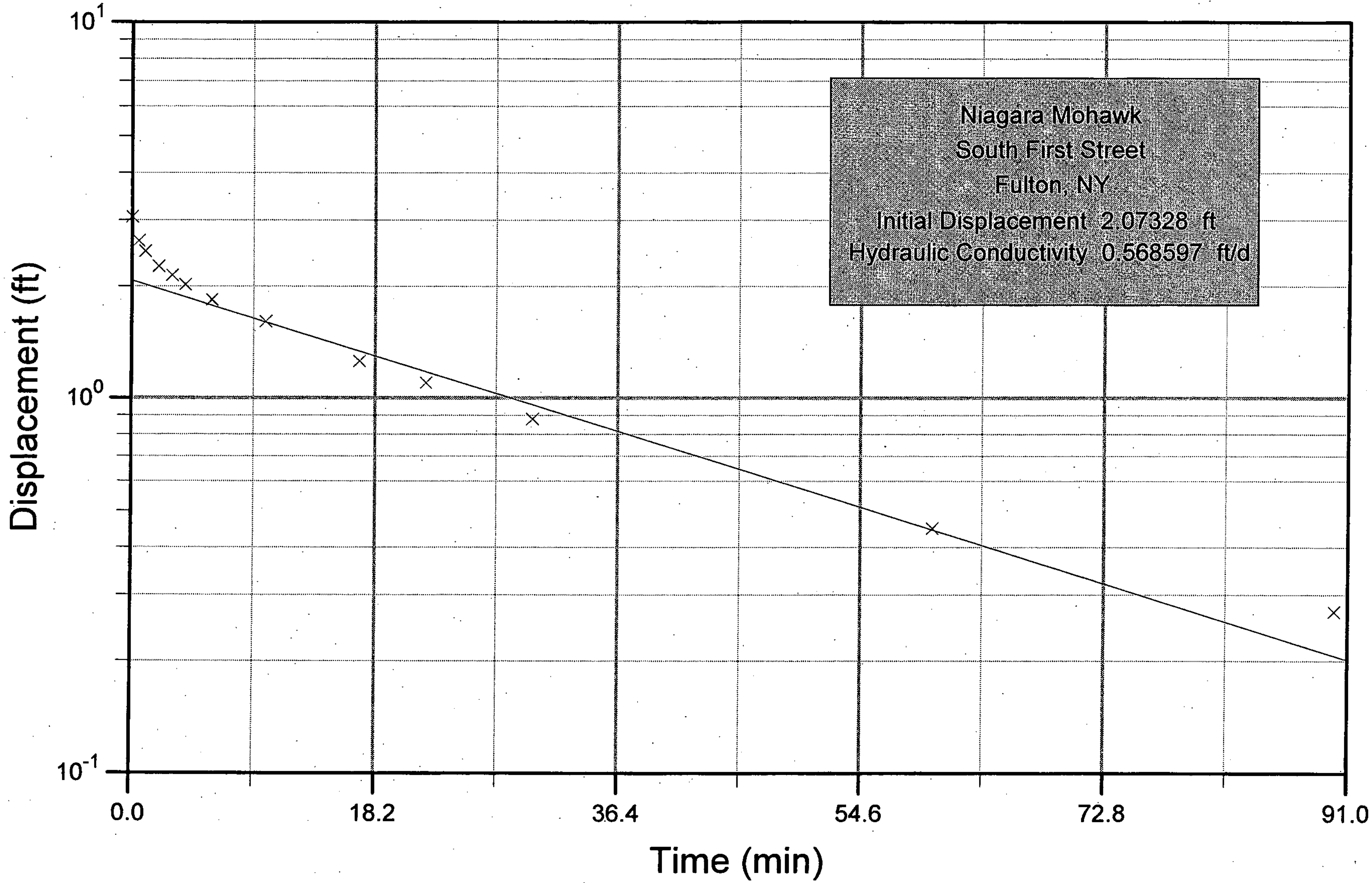
MW-1 Slug Test (1998)



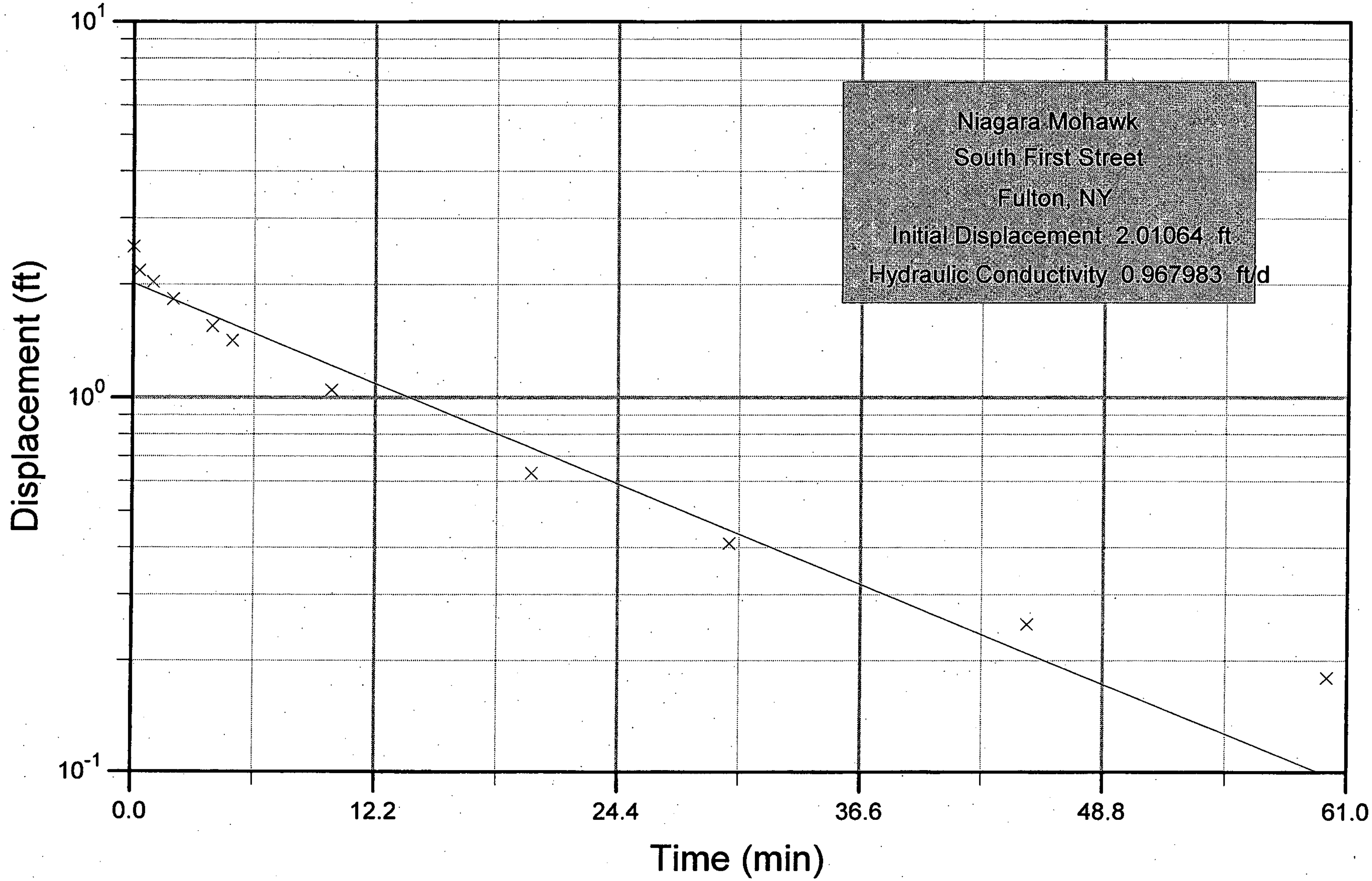
MW-6 Slug Test (1998)



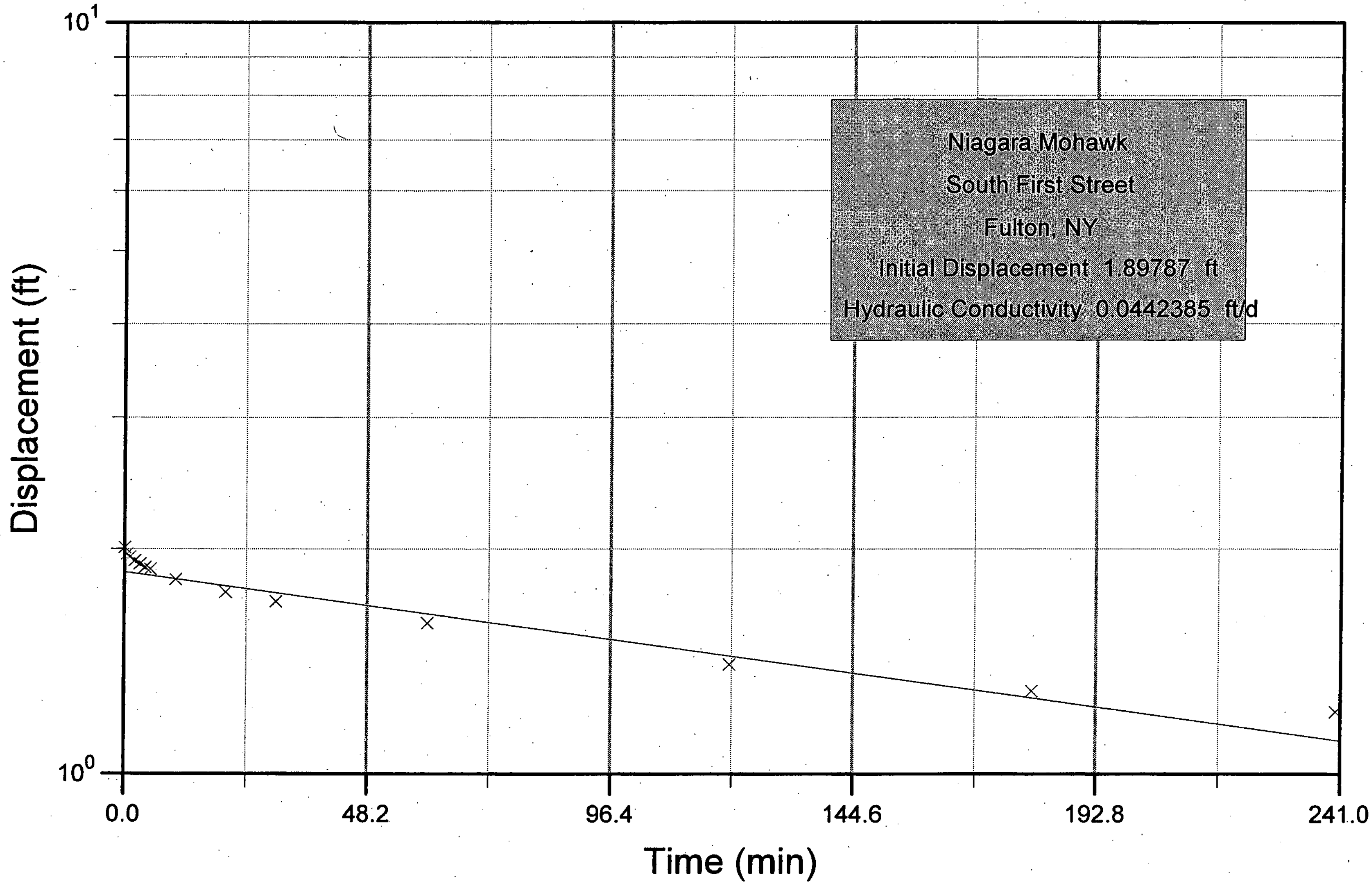
MW-7 Slug Test (1998)



MW-9S Slug Test (1998)



MW-9D Slug Test (1998)



Cultural resource assessment

PUBLIC ARCHAEOLOGY FACILITY REPORT

Department of Anthropology
State University of New York at Binghamton
Binghamton, New York

PHASE 1A CULTURAL RESOURCE ASSESSMENT
SOUTH FIRST STREET SITE PROJECT
FULTON, OSWEGO COUNTY, NEW YORK

PREPARED BY:

B. CURTIS WEST

PREPARED FOR:

O'BRIEN AND GERE ENGINEERS
5000 BRITTONFIELD PARKWAY
P.O. BOX 4873
SYRACUSE, NY 13221

July 16, 1998

PHASE 1A CULTURAL RESOURCE ASSESSMENT
SOUTH FIRST STREET SITE PROJECT
FULTON, OSWEGO COUNTY, NEW YORK

Permit Applicant: O'Brien and Gere Engineers, Inc.
Permit Number:
Location: Fulton (C), Oswego County (MCD 07541)

Report prepared by: B. Curtis West
Date: July 15, 1998
Affiliation: Public Archaeology Facility
Binghamton University
Binghamton, New York 13902-6000
(607) 777-4786

PROJECT SUMMARY

A Phase 1A cultural resource assessment was requested for the proposed South First Street Site project in the City of Fulton, Oswego County. The area consists of a vacant lot on the east side of South First Street, and a church property on the west side of the street, which contains a portion of the towpath of the Oswego Canal and abuts the Oswego River. The surrounding area is mixed residential and commercial. Fulton lies on the edge of the generally flat Erie-Ontario Lake Plain. The city is located atop a small escarpment through which cuts the Oswego River on its course to Lake Ontario. Background research into the prehistory of the surrounding area indicated that the parcel is situated in a zone of high prehistoric sensitivity. Twelve known prehistoric sites are located along and near this portion of the Oswego River. Background research into the history of the surrounding area indicated that the parcel is situated in a zone of high historic sensitivity, as it has been heavily used as a transportation route from colonial exploration through the development of the railroad. Four known historic sites are located within 3.2 km (2 mi) of the project area, ranging from a mid 18th century British fort to 19th century industrial sites. Fulton served as an important commercial and industrial center for the county during the 19th and into the 20th century.

The South First Street Site is located near to or at the location of the upper landing of the portage route around the Oswego Falls, and is considered to be an area of high sensitivity for both prehistoric and early historic archaeological sites associated with the river and the portage location. An archaeological reconnaissance including subsurface testing is recommended in the western parcel to identify the presence of these potential archaeological resources within the project area.

Part 1: DOCUMENTARY RESEARCH ADDENDUM SITE IDENTIFICATION

A. Documentary Research Addendum

1. ..X.. Local site inventory checked (specify)
Public Archaeology Facility

..X.. Division for Historic Preservation
National Register of Historic Places

..X.. New York State Museum

2. ..... Informants interviewed (name, address, specialty)

3. ..X.. Other sources checked (specify)

1900 Beauchamp, William M. Aboriginal Occupation of New York in *Bulletin of the New York State Museum,* No. 32, Vol. 7. University of the State of New York, Albany.

1866 Child, Hamilton *Child's Gazetteer and Business Directory of Oswego County, N. Y 1866-67.* Oswego Daily Commercial Advertising Office, Oswego, NY.

1895 Churchill, John C. (editor) *Landmarks of Oswego County, New York..* Albany, NY.

1877 Everts, L. H. & C0. *History of Oswego County, New York..* Philadelphia,, PA

1949 French, M. J. *Champlain's Incursion Against the Onondaga.* Ann Arbor, MI.

1993 Funk, Robert E. *Archaeological Investigations in the Upper Susquehanna Valley, New York State.* Persimmon Press, Buffalo.

1997 Hohman, Christopher D. *The Archaeology of the Niagara House Block, City of Niagara Falls, New York.* Public Archaeology Facility, Binghamton University, Binghamton.

1873 Hough, Franklin B. *Gazetteer of the State of New York.* New York, NY.

1996 Mann, Rob *Archaeological Excavations at the Ehler Site (12-HU-1022) An Early 19th Century Miami Indian Habitation Site Near the Forks of the Wabash, Huntington County, Indiana.* Prepared by Landmark Archaeological and Environmental Services, Inc. for the Indiana Department of Transportation.

1853-1883 O'Callaghan, E. B. Editor, *Documents Relative to the Colonial History of New York.* Albany, NY.

1920 Parker, Arthur C. The Archaeological History of New York in *The New York State Museum Bulletin*, Nos. 237, 238. The University of the State of New York, Albany.

1983 Riordan, Timothy B. "An Equal Space on Each Side of Your House;" A Brief Survey of the Potential for Archaeological Research in an Urban Setting. *Proceedings of the Symposium on Ohio Valley Urban and Historic Archaeology.* University of Louisville, Louisville, KY.

1980 Ritchie, William. *The Archaeology of New York State.*

1968 Snyder, Charles M. *Oswego: From Buckskins to Bustles* Empire Historical Publications Series No. 56

1970 Stewart, Alexander M. *French Pioneers in the Eastern Great Lakes Area 1609-1791.* The New York State Archeological Association, Rochester, NY.

1939 Soil Conservation Service. *Soil Survey of Oswego County, New York.*

1867 Stone, C. K. *Atlas of Oswego County, New York*

1987 Tanner, Helen Hornbeck *Atlas of Great Lakes Indian History* University of Oklahoma Press, Norman, OK.

1971 Tuck, James *Onondaga Iroquois Prehistory, A Study in Settlement Archaeology.* Syracuse University Press, Syracuse, NY.

1955 USGS. *7.5 minute, Fulton quadrangle.*

1991 West, Bryan C. *First Light on Anthony Wayne's Headquarters of Greene Ville: The Historic Archaeology of the Headquarters of the Legion of the United States (1793 to 1796).* Ball State University, Muncie, IN.

1975 Wright, J. Leitch Jr. *Britian and the American Frontier 1783-1815* University of Georgia Press, Athens, GA.

1993 Wurst, Louann and Nina Versaggi. *Under the Asphalt: The Archaeology of the Binghamton Mall Project.* Prepared for the The City of Binghamton Urban Renewal Agency by the Public Archaeology Facility, Binghamton University, Binghamton.

Results of Documentary Research: ENVIRONMENT AND SOILS

The project is located in the City of Fulton on the east side of the Oswego River. The project lies on the glaciated Ontario Erie Lake Plain. The topography is flat to gently rolling. The elevation of the present project area is approximately 110 m (350 ft) ASL.

The project area for the proposed South First Street Site project was used historically for the last two centuries. This use may have started with camps for travelers taking the portage around the Oswego Falls and continued through to the development of the commercial use of the area with the construction of the Oswego Canal. The area has been in mixed residential and commercial use throughout the 20th century. The present surface of the lot on the eastern side of First Street is covered by grass. The lot to the west is covered in grass and asphalt, and a metal building stands on the southern portion of this lot. To the rear of the western lot are the remains of the towpath of the Oswego Canal.

The soils of the entire project area are classified as "urban land" and are not typed by the USDA Soils Conservation Service. Subsurface testing of the site will be necessary to determine the existing soil profile, as well as to determine the potential for deep testing of buried alluvial deposits.

Results of Documentary Research: PREHISTORY

The prehistory of New York State began about 10,000 B.C., when Paleo-indian hunting bands migrated into the area pursuing big game such as mammoth and mastodon. These animals became extinct around 8000 B.C. and an extended period of small game hunting, fishing and gathering of wild plants started within localized territories. Archaeologists believe that these small bands of people moved their camps seasonally along the rivers, tributary streams, lakes and swamps of New York. By 1000 A.D., prehistoric groups practiced horticulture, mainly the planting of corn, beans and squash. Sedentary villages replaced the nomadic hunting camps, and in some areas ceremonial sites including mound building and other earthen structures were constructed. Although land use tended to become more sedentary in the Woodland period, groups still went out on hunting and fishing trips lasting several days to several months. Resource areas such as the rivers on the great lakes were popular for abundant seasonal fish and ell runs, as was noted by early explorers at the Oswego Falls (Stewart 1970).

The proposed project is located on the east side of the Oswego River, an area that has a long history of land use during prehistory. Ritchie notes that paleo-indian points have been found along the Oswego River and other water resources in Oswego County (1971). Ritchie also notes that sites through the Archaic and Woodland periods have been found along the rivers that flow into Oneida Lake, which is situated approximately 24 km (15 mi) to the southeast of the project area (Ritchie 1971).

A site files search was conducted at the New York State Museum, and the Office of Parks and Recreation in Albany (see Attachment F), and at the Public Archaeology Facility at SUNY Binghamton. The site files note at least 12 known sites ranging from the Paleo-Indian through the Contact time periods (9000 B.C. - A.D. 1760) within 3.2 km (2 mi) of the project area. The sites range from isolated point finds to large, multicomponent villages. Parker (1920) notes that several of these sites (OSWG-7 , and OSWG-7B and OSWG-9), both prehistoric villages and mound sites, are identified along the Oswego River. The project area lies on the eastern bank of the Oswego River (see site files correspondence, Attachment F).

The area adjacent to the Oswego River was used heavily throughout prehistory. Given the project's proximity to the river and its location near known prehistoric sites, the potential for prehistoric cultural deposits from ephemeral (campsites, processing locations) sites to villages is considered to be high.

Results of Documentary Research: HISTORY

The Oswego River and Falls have long been a conduit for travel from Lake Ontario, inland, to central New York State. This route was frequented by Native Americans and by those who wished to do business with them. The portage around the falls passed directly through the City of Fulton and was the primary reason for the settlement at this location.

The first European travelers to record the Oswego Falls in 1654 were Father Simon Le Moyne and his French Jesuit mission traveling to meet with the Oneida Indians (Churchill 1895) following the French and Iroquois Peace of 1653 (Stewart 1970). The River may have been the route of an earlier, and more famous Frenchman, Sieur Samuel de Champlain in 1615 (French, 1949). In that year, Champlain and a dozen Frenchmen accompanied a small army of Hurons in an attack against the Onondaga Iroquois (Stewart 1970). This raid on a fortified village of the Onondaga is argued by French to have been located on Lake Onondaga at modern Syracuse with the route up the Oswego River being the most direct way for an attack party coming from Lake Ontario. Others have argued that the objective was a fort on Nicholas Pond in Madison County to the north (Stewart 1970).

War between the French and the English led to the surrender of New France by Champlain in 1629, only to be given back over to France again in 1633. From 1634 into the 1640s, the French busied themselves with re-establishing their empire and missions among the Hurons, precluding the French from making inroads with the New York Iroquois (Stewart 1970).

The French had decided to create a Mission to the Onondaga, and to do so meant traversing the Oswego route from Lake Ontario to Lake Onondaga. Aside from the occasional explorer and war party, Le Moyne's 1654 trip was the first intended to establish a European colony in the area of the Onondaga (Stewart 1970). In 1656, twenty canoe loads of French colonists arrived in present-day New York in the area of the Salmon River. They followed the coast line to the mouth of the Oswego which they ascended to Lake Onondaga, reportedly stopping to camp at the portage at the Oswego Falls (Stewart 1970). The initial Onondaga Mission lasted for only twenty months, but from here other missions were made to the Cayuga, Oneida, and the Seneca (Stewart 1970).

Growing British influence with the Mohawk, following their conquest of the Dutch holdings along the Hudson river, led them to attempt expansion of trade to other Nations of the Iroquois. By the early 1700s, the British had established trade at the mouth of the Oswego River. A permanent presence was set up by Albany traders in 1720 and by 1722 they had established a military presence at the site named Fort Oswego (Snyder 1968).

During the French and Indian War, battles were waged off of Lake Ontario and along the Oswego River, with the military resources of the Northern colonies and the British army traveling to Oswego via the portage route at Oswego Falls (now Fulton). During the war, a post was built at the lower portage point, called Fort Bradstreet or Fort Oswego Falls (Everts 1877).

The trade route on the Oswego was to remain important between the French and Indian Wars and the Revolutionary War and still proved an important military artery between the Mohawk Valley and Lake Ontario (Everts 1877; Snyder 1968). During the Revolutionary War, the British and the colonists fought a number of battles at Fort Ontario (located at the confluence of Lake Ontario and the Oswego River). In 1782, an American assault was unsuccessful against the fort, stopping along the way to the fort at the upper portage at Oswego Falls to build siege ladders for the assault (Snyder 1968).

Between the revolution and the British surrender of the Fort at Oswego, American settlers began to make inroads along the Oswego River, and particularly at the portage. Lawrence Van Valfenburg maintained a tavern for river traffic at the Upper Portage at the Oswego Falls on the East bank of the river near Velverton Island (Everts 1877). Many Loyalists passed through the portage on their way to new lands in Canada, and many American settlers also passed this route on their journey to Northern Ohio with General Moses Cleveland (Snyder 1968). The salt trade from the salt springs on lake Onondaga became an important part of river commerce during the 1790s and would be a driving factor in the development of canal plans in the early 19th century (Everts 1877).

The Oswego River would once again become a contested site between the Americans and the British in the War of 1812. The Americans utilized the port at Oswego to harass Canadian shipping on the lake during 1812 and 1813. In 1814 the British, under General Drumond, attacked and burned the post and the town. The Americans fell back to Fulton to defend the river route and the towns of the interior; however, the British did not press the battle down the river (Snyder 1968; Wright 1975).

The Canal Era developed along the Oswego as a continuation of the flat boat trade, but traffic increased in 1794 with the completion of the Western Inland Navigation Company's canal and lock system that opened keel boat travel from Schenectady to Oswego Falls. The Falls were to be an obstacle on the river and the portage of goods was necessary until 1828, when the Oswego Canal locks were completed. This continued portage insured that a settlement would grow at Fulton (Everts 1877; Snyder 1968).

Water power at the falls ushered in an era of industrial development within Fulton by the mid 19th century. As the area grew, plank roads, railroads and, later, highways enhanced the area's transportation access and eventually replaced the importance of the canal and river transport systems.

Within the 19th century, little is known about the property on which the project area is located. Prior to 1867, the project area was probably used for farming or was woodlands. In 1867, although the properties along South First Street are subdivided, there are no structures located on them (Stone 1867, Appendix D.1). The Canal is noted adjacent to the Oswego River to the west of the parcel located on the west side of South First Street.

By 1911, the parcels on both sides of South First Street are owned by Fulton Fuel and Light Company. Within the parcel on the east side of South First Street, much of the property by 1911 and through 1924 is covered by two large gas holders (30,000 and 50,000 cubic ft), as well as an oil tank and gas tanks. By 1951, the structures have all been removed and the lot is noted as vacant. Within the parcel on the west side of South First Street, the eastern 15-24 m (50-80 ft) of the property is covered by 1911 and through 1924 by a coal shed and building related to the development of the fuel products by the Fulton Fuel and Light Company. By 1951, the buildings have been removed. In the southern end of the lot, in the vicinity of the present Cross Road Tabernacle building, a farm implement store has been constructed, which has since been removed (Appendices D.2-D.4).

Documentary Summary

..... no sites reported
..X.. sites reported (describe briefly)

At least 12 prehistoric sites are noted within 3.2 km (2 mi) of the project area with the sites largely being located along the Oswego River. These sites range from the Paleo-Indian period through the Archaic, and Woodland periods. Historic sites within 3.2 km (2 mi) include the Colonial period site of the fort at Oswego Falls on the lower landing of the portage at Fulton, historic 19th century features such as the remnants of the Oswego Canal, as well as 19th century industrial/commercial archaeological sites.

Potential for Archaeological Resources

As has been established in the archaeological literature of the past twenty years, urban settings have yielded important archaeological information. This information is frequently buried beneath the construction spoil of succeeding generations, especially during the 19th century and early 20th century (Riordan 1983; Wurst and Versaggi 1993; Hohman 1997). In areas along elevated river banks earlier deposits, especially those of 18th century occupations, can be buried intact by as much as two meters (6.6 ft) of urban fill or more (West 1991). The fill of the levee/canal towpath on the extreme western portion of the project is likely to have capped the 18th century surface existing at the time of canal construction. The fill associated with present lot on the west side of South First Street may also have served to cap an earlier land surface. This fill extends from the central portion of the lot to the edge of the levee/towpath to the western portion of the site. This fill is evident on this property only, as the elevation of the adjacent properties is considerably lower to the north and to the south of this parcel. In the vicinity of the project area Lawrence Van Valfenburg is reported to have maintained a tavern (during the late 18th century) for river traffic at the Upper Portage of the Oswego Falls on the East bank of the river near Velverton Island (Everts 1877). If any portion of this site is located of the western lot, the presence of the fill and the levee/towpath would potentially serve to preserve archaeological materials associated with the tavern or the upper portage site in general. This portion of the parcel is therefore considered to have a high sensitivity for intact historic resources and a moderate sensitivity for buried prehistoric or resources.

Although much of the project area on the west side of South First Street is under asphalt or built up fill, the known history and prehistory of the area suggest that the potential for buried intact archaeological deposits on the western portion of the parcel is high. In addition, a portion of the towpath of the Oswego Canal remains intact at the western edge of the parcel on the west side of South First Street. The Canal system in New York has been determined to be National Register eligible. Although the towpath itself may have limited archaeological information, it may serve to cover earlier archaeological materials. The features associated with the filled in canal would likewise need to be mapped and photographed due to the thematic NRHP eligibility of these canal structures.

On the east side of South First Street (and on the eastern half of the lot on the west side of South First Street) the former location of the gas storage tanks and gas and oil tanks, suggests that these portions of the parcel have been disturbed by the excavation and construction of the fuel tanks, as well as the demolition of the structures in the mid 20th century. Therefore, these portions of the parcel are considered to have a low sensitivity for any intact prehistoric or historic resources.

END PART 1

If site evaluation is not completed at this time, proceed to Part 3.

PART 3: SUPPORTIVE DATA

Reports should include the items listed below. Bracketed information is optional. Put a check next to each item appended.

PLEASE NOTE: Most attachments listed below often provide precise locational and compositional data on archaeological sites. This information is confidential to protect the resource from vandalism. All attachments with site specific information should be omitted from report copies which will be available to the general public.

..A.. **qualifications of the principal investigator(s)**

..B.. **Topographic map with project area noted**

..C.. **map(s) of test locations, field inspection, and areas of cultural material; maps must have title, legend, bar scale, and directional arrow.**

.... **record of soil stratigraphy in each test unit.**

..... **artifact catalog**

.D.. **copies of relevant, supplemental historic maps**

.E.. **photographs of the project area**

.F... **site files correspondence**

For reports on surveys which include Site Evaluation and Definition (Part 2 above), the following items should be included:

..... **project area map with site boundaries delineated (mark "Confidential: For Office Use Only").**

..... **site inventory forms (mark "Confidential: For Office Use Only")**

..... **soil profiles**

..... **photographs, as appropriate, characterizing project area and documenting salient cultural remains.**

..... **recommendations**

Certification: I certify that I directed the cultural resource investigation reported here, that my observations and methods are fully reported, and that this report is complete and accurate to the best of my knowledge.

July 16, 1998 — **date**

B. Curtis West / NV — **signature of preparer**

ATTACHMENT A.1: QUALIFICATIONS OF THE PRINCIPAL INVESTIGATOR and PROJECT DIRECTOR

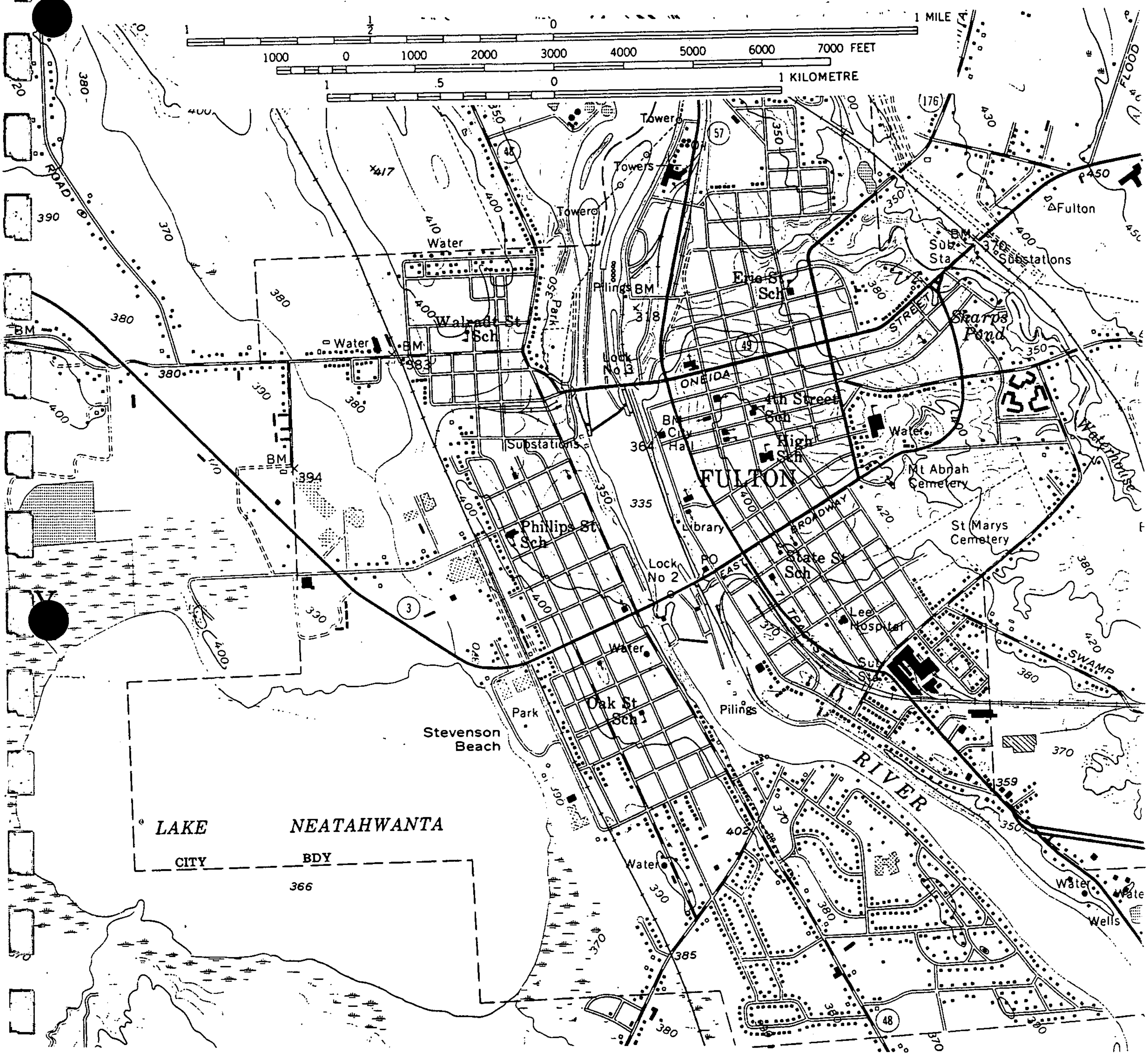
Dr. Nina M. Versaggi
Director and Principal Investigator, Public Archaeology Facility

Versaggi received her doctorate in Anthropology from SUNY-Binghamton in 1988, her MA from SUNY University at Binghamton in 1976 and her BA from Rutgers University in 1974. She has been active in professional archaeology since 1972. Professional positions held include Director of the Public Archaeology Facility since 1988, Partner in Compliance Survey Associates for 6 years, Guest Curator at the Roberson Museum and Science Center, and Post-doctoral Fellow at the Hartwick College Museums. She serves as principal investigator for all current and past projects of the Public Archaeology Facility whose recent projects include the Rainbow Plaza Data Recovery in Niagara Falls and the state-wide highway subcontract with the New York State Museum and NYSDOT. She has authored "Hunter to Farmer: 10,000 Years of Susquehanna Valley Prehistory," "Prehistoric Hunter-Gatherer Settlement Models: Interpretating the Upper Susquehanna Valley," and "Upland Foraging Sites in the Northeast: Engendering Prehistory," which are based on NYSDOT and pipeline prehistoric data. She is a member of the board for the Preservation Association of the Southern Tier, and for the New York Archaeological Council she chairs the Professional Survey and Report Standards Committee. She serves as an Adjunct Associate Professor at Binghamton University.

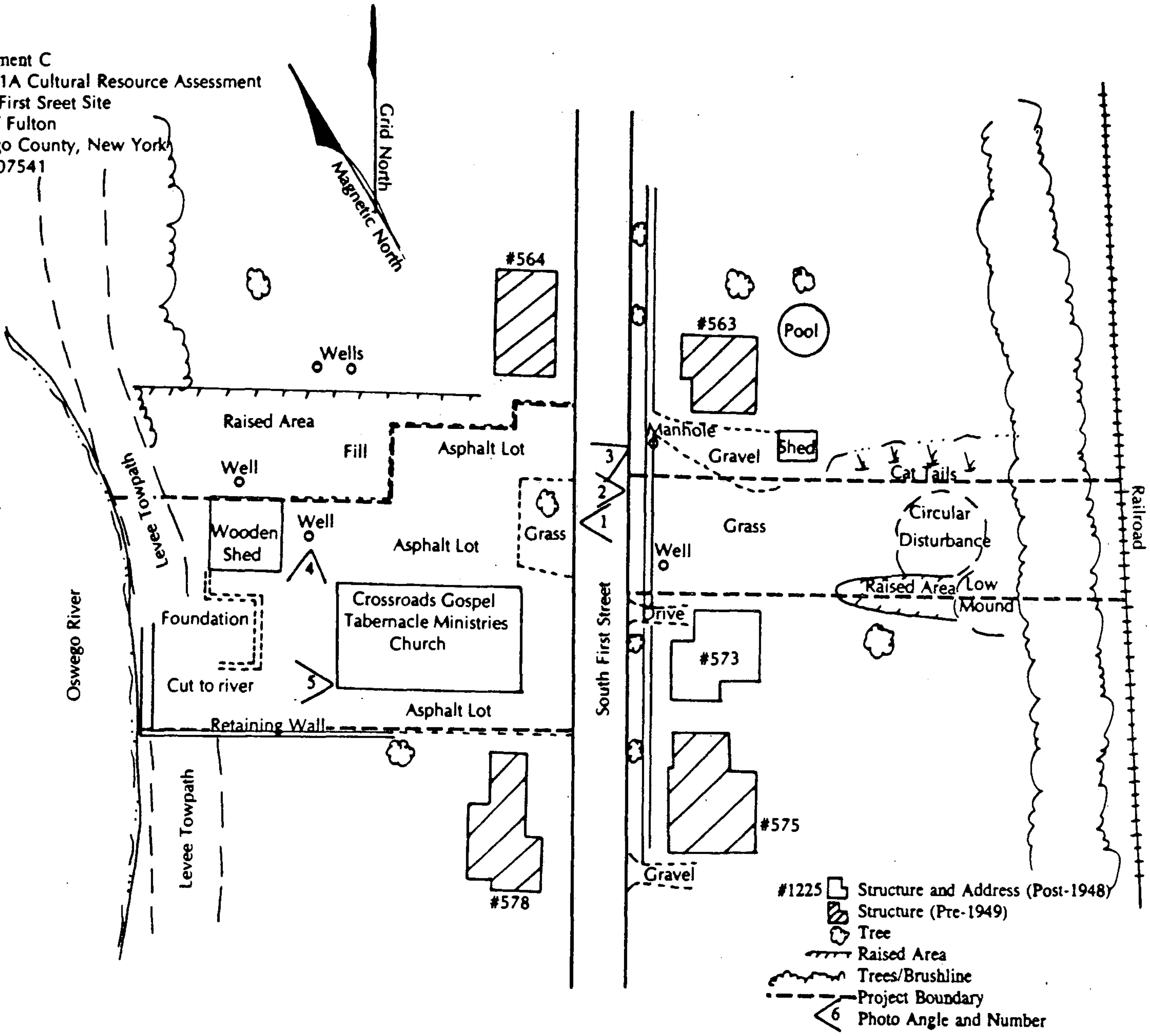
B. Curtis West
Project Director, Public Archaeology Facility

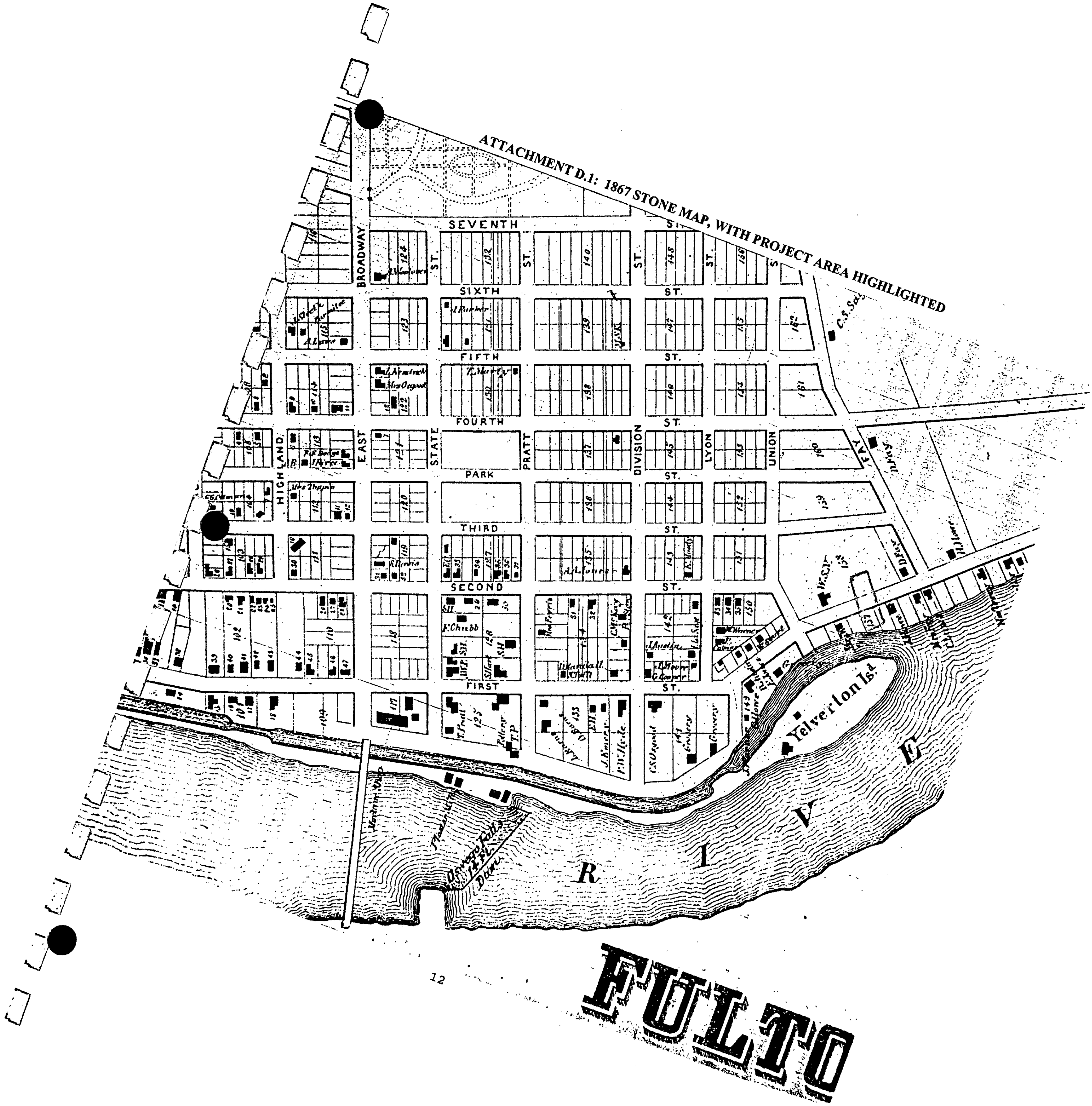
West received his MA in Anthropology from Ball State University in 1991 and his B S in Anthropology, History, and Geography from Ball State University 1987. He has worked in professional archaeology since 1986 and in 1998 joined the staff of the Public Archaeology Facility. He has served as project director and coordinator on many transportation and pipeline corridor projects in New York, Connecticut, Pennsylvania, Ohio West Virginia, Indiana, Georgia, and Oregon. Mr. West has also served as Principal Investigator in his own private consulting business in West Virginia. He has served as project director on a wide range of site examinations and surveys, as well as historic and prehistoric site Data Recoveries. His research interests include Late Colonial and Federal Era Historic Archaeology, Past Landscape Studies, Eastern North American prehistory, and Cultural Resource Management Law. The author of numerous cultural resource management reports, he currently directs projects for PAF's statewide highway contract with the State Museum and other projects in New York State and Pennsylvania.

ATTACHMENT B: 1978 USGS MAP, WITH PROJECT AREA HIGHLIGHTED

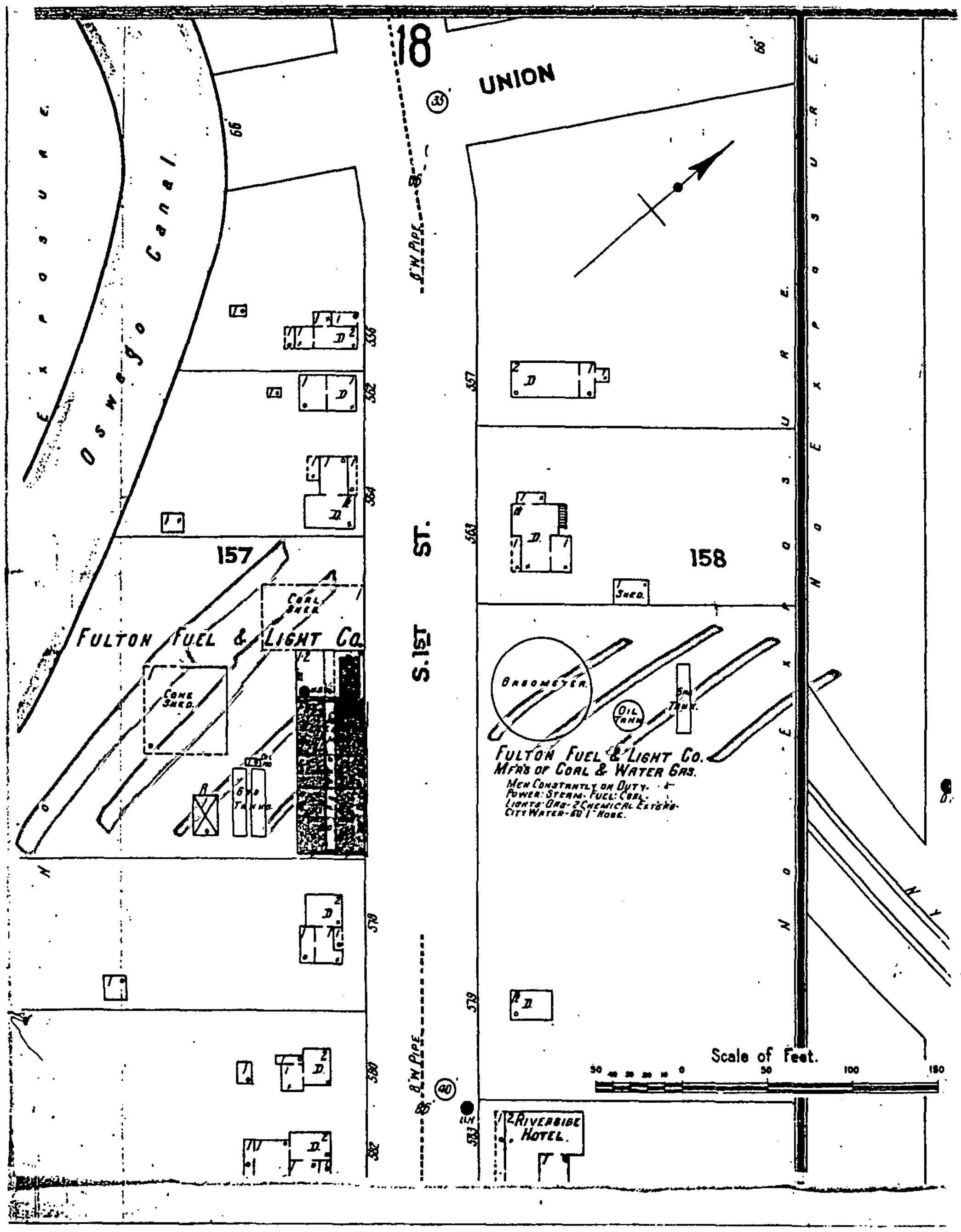


Attachment C
Phase 1A Cultural Resource Assessment
South First Sreet Site
City of Fulton
Oswego County, New York
MCD 07541

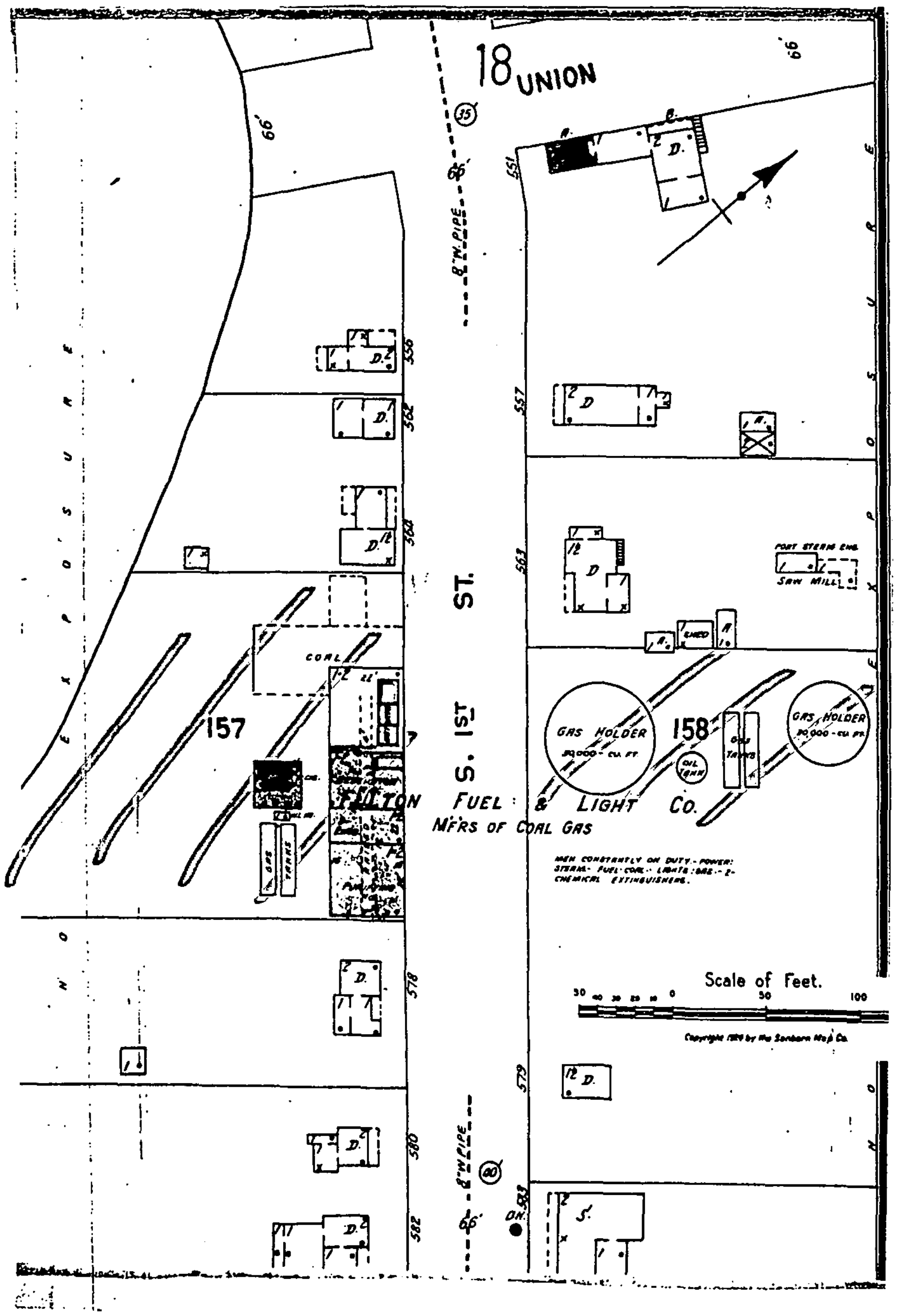



ATTACHMENT D.1: 1867 STONE MAP, WITH PROJECT AREA HIGHLIGHTED
SEVENTH
SIXTH
FIFTH
FOURTH
PARK
THIRD
SECOND
FIRST
BROADWAY
HIGHLAND
EAST
STATE
PRATT
DIVISION
LYON
UNION
FAY
ST.
Yelverton Isd.
R I V E
FULTO
12

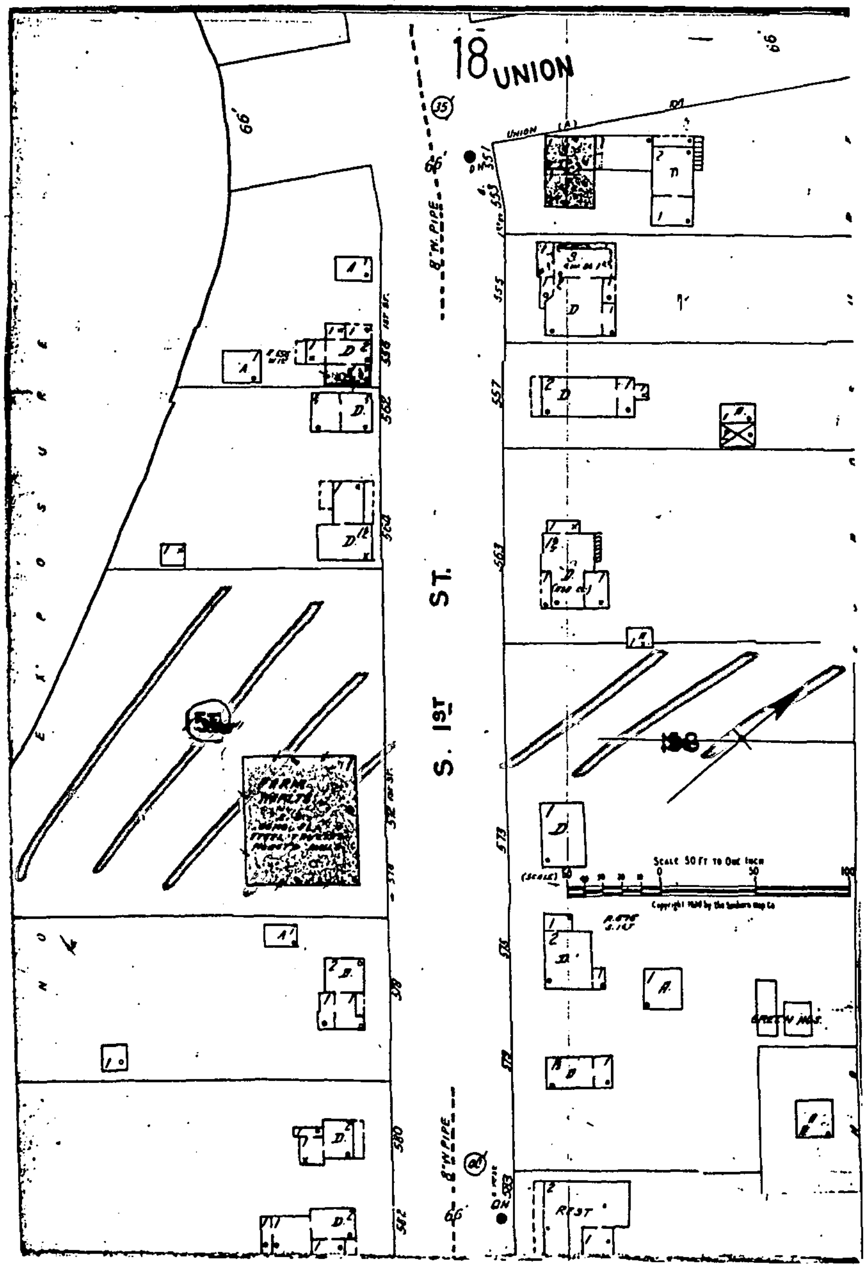
ATTACHMENT D.2: 1911 SANBORN MAP, WITH PROJECT AREA HIGHLIGHTED



ATTACHMENT D.3: 1924 SANBORN MAP, WITH PROJECT AREA HIGHLIGHTED



ATTACHMENT D.4: 1951 USGS MAP, WITH PROJECT AREA HIGHLIGHTED



ATTACHMENT E: PROJECT AREA PHOTOGRAPHS

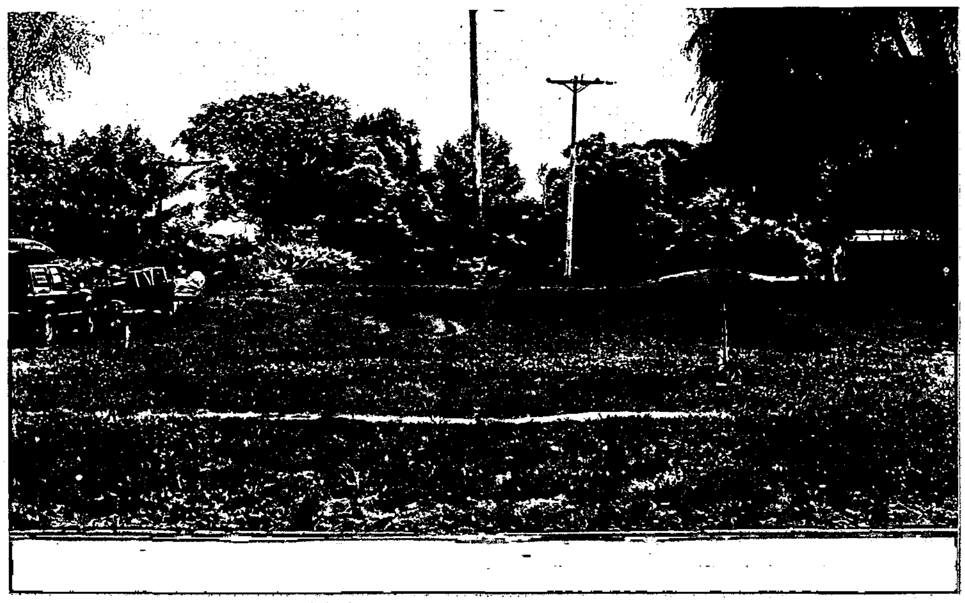


Photo 1. Facing east, grassy parcel on east side of South First Street.

Photo 2. Facing west, asphalt parking area in parcel on west side of South First Street.

Photo 3. Facing southwest, asphalt parking and post-1948 Crossroads Tabernacle Church structure.


Photo 4. Facing south, Oswego Canal towpath to the south of the parcel on the west side of South First Street.

Photo 5. Facing west, asphalt parking area adjacent to canal towpath and Oswego River.

ATTACHMENT F: SITE FILES CORRESPONDENCE

CONFIDENTIAL

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION
Field Services Bureau Files Search

DATE: 4/2/98
CONDUCTED BY: B. Ross

Project: Niagara Mohawk Gasline, South First Street
Minor Civil Division: city of Fulton (07541), town of Volney
County: Oswego
USGS Quadrangle: Fulton

1. Archaeological Sites (within 3.2 km/2 mi radius of project area):

Refer to attached table.

2. Projects and Surveys within or adjacent minor civil division (MCD):

Unnumbered, 92PR0227. Includes survey of James R. Fairgrieve School, 07541.000017 on South Seventh Street - determined not eligible, 6/92.

Unnumbered, 98PR0561. Handicapped Access for NR listed South First Street, Fulton post office.

Unnumbered, 95PR1285. *Cultural Resource Assessment of Sealright Property Feasibility Study, South First Street and East Broadway, City of Fulton,* Hartgen Archaeological Associates, 8/94. Stage IA recorded no sites. Includes building 07541.000019 at 314 South First Street for the Oswego River Valley Industrial Interpretive Center.

OPR Report #2. *Cultural Resource Survey of PIN 3750.55, Oneida Street Bridge, city of Fulton, towns of Volney and Granby, Oswego County, NY,* SUNY Binghamton PAF, 9/78. Seven sites identified within Stage 1B for DOT. A07541.0000009-15 (9 & 13 prehistoric, 12, 14 & 15 historic and 11 unidentified). This includes Item 1, Sites 2-7 within 3.2 km of current project area. AND 1980 supplemental survey by Gordon DeAngelo recorded no sites.

OPR Report #10. *City of Fulton Stage IA Cultural Resource Survey Wastewater Treatment and Collection Facilities 201 Wastewater Facilities Plan, City of Fulton, C-36-1009,* Pratt & Pratt, 10/77 for EPA. Nine prehistoric sites recorded. A07505.000002-8 includes Item 1, Sites 1 and 10 and A07541.000007 (Item 1, Site 9) within 3.2 km of current project area. AND Stage IB, 8/78, did not identify any sites. Surveys on east side of city.

OPR Report #15. *Cultural Resource Literature Search and Site Inventory for Oswego Basin, DACW 49-80-C-0029,* Deborah Swartz, 10/80. Multi-MCD survey along Lake Ontario, Oneida and Oswego Rivers.

OPR Report #19. *Stage IA Cultural Resoruce Survey, Oswego County Energy Recovery Facility, town of Volney,* Stephen Oberon, 8/82. No sites recorded in project area near CR 57 and Walkins Road. AND Stage IB, 9/82; no sites.

OPR Report #26. *Stage IB Cultural Resource Survey of the Fulton Hydro Station, city of Fulton,* Neil Johnson, 4/83 for FERC. No sites identified within project area near CR 57 near Volney town line.

OPR Report #30. *A Cultural Resource Survey Report, Dutch Ridge Road/Route 481, PIN 3107.05, towns of Volney and Scriba,* Syracuse University, 10/86 for DOT. No sites identified within 66.8 acres surveyed.

Niagara Mohawk Project, city of Fulton

OPR Report #35. *Stage IA/B Cultural Resource Survey of PIN 3751.21, BIN 2-20939-0, North Sixth Street over Conrail, City of Fulton,* NYSM, 12/88 for DOT. No sites identified within 5.2 acres surveyed.

OPR Report #49. *Stage IA/B Cultural Resource Survey of PIN 3107.09.101, Route 481, northern Fulton city line to Route 57, town of Volney,* NYSM, 1/90 for DOT. No sites identified within 48 acres surveyed.

OPR Report #50. *Stage IA/B Cultural Resource Survey of PIN 3107.10.101, Route 481, Dutch Ridge Road to Oswego City Boundary, town of Fulton,* NYSM, 2/90 for DOT. No sites identified within 21.8 acres surveyed.
OPR Report #52. *Stage I Cultural Resource Survey of the Fulton City School District, NW Quadrant Elementary School, town of Granby, Oswego County,* Pratt and Pratt, 8/89. No sites identified within 57 acres surveyed near Melrose Road.

OPR Report #56. *Stage IA/B Cultural Resource Survey of the First Ward Sewer and Water Project, City of Fulton,* 11/90. No sites identified within 15.1 acres surveyed near the railroad at the western end of the city.

OPR Report #57. *Cultural Resource Survey of the Fulton YMCA Project, city of Fulton,* Pratt & Pratt, 10/90. No sites identified within four acres surveyed near Tannery Creek on west side of city.

3. State/National Register Listed and Eligible Properties (within or adjacent to project area):

Only NR property within the city is the US post office at 214 South First Street. 90NR2156, 90THM004, 07541.000016. Listed 5/11/89 as part of thematic listing for USPO in NYS built between 1858 and 1943.

All NR listed properties within adjacent town of Volney are barn, house, tavern related to an early settler and family, the Van Burens.

4. Structure Inventories within or adjacent to project area:

07541.000001	115 South First Street	Dewitt W. Gardner House
07541.000005	177 South First Street	Pratt House

The following do not have inventory forms.

out	07541.000016	214 South First Street	US Post Office	NR listed, 98PR0561
out	07541.000019	314 South First Street	Sealright Building	95PR1285 project
out	07541.000015	Oswego Canal		

5. National Register Staff Comments and Concerns:

None.

CONFIDENTIAL
OPRHP/NYSM Site Files
Fulton Niagara Mohawk Gasline Project

Item 1. Archaeological Sites, page 1 of 2. Fulton Quadrangle

SITE NUMBER	SITE NAME	DIST. From Project/Dist. From water	Elevation/Slope	Cultural Affiliation/Site Type	Testing/Type/Interval Artifacts	Report
A07505.000002 NYSM 2164 1) prehistoric	Indian Point Site FLT 5-3	0.8 km (0.5 mi) N / 46 m (150 ft) E of Oswego River	113 m (370 ft) amsl; gentle slope	Paleoindian to Late Woodland camps?	stps & units by landowners in 1960s stps (1977) during survey	OPR Report #10 & RMSC files
A07541.000010 2) historic	Oswego Falls Fort	1.9 km (1.2 mi) N / 30 m (100 ft) E of river	98 m (320 ft) amsl; gentle slope	1756-1759 fort site	no visible evidence	documented in OPR Report 2
A07541.000011 NYSM 4419 & 6887 3) prehistoirc	ACP OSWG - 7, 7B, 8 Beauchamp 3	1.6 km (1 mi) NW / 488 m (1600 ft) W of Oswego River	122 m (400 ft) amsl; gentle slope	bone hill at Oswego Falls may be extension of A07541.000007	no visible evidence	"
A07541.000012 4) historic	Perkins Seal-Right Factory Site	0.6 km (0.4 mi) N / 122 m (400 ft) E of river	113 m (370 ft) amsl; gentle slope	19th century ? factory site	no visible evidence	"
A07541.000013 May be same as NYSM 1258 and 1259 5) prehistoric	ACP OSWG - 7 Perkins Site	1.6 km (1 mi) W / mouth of creek at north side of Lake Neatahwanta	113 m (370 ft) amsl; flat	Late Archaic; Laurentian or Point Pennisula	no visible evidence	"
A07541.000014 6) historic	SUBi-881 A - I	1.4 km (0.9 mi) N / 46 m (150 ft) E of river	110 m (360 ft) amsl; gentle slope	mill complex (19th century?)	under urban renewal project parking lot	"
A07541.000015 7) historic	SUBi-882 Oswego Canal	"	"	19th century canal		"
A07541.000007 NYSM 6887 8) prehistoric	probably ACP OSWG - 7B	1.8 km (1.1 mi) NW / 46 m (150 ft) W of Oswego River	104 m (340 ft) amsl; gentle slope	Late Woodland burial mounds (described by Parker as burial place) May be extension of A07541.000011	no visible evidence	documented in OPR Report #10
A07541.000008 9)historic		1.1 km (0.7 mi) S / 61 m (200 ft) E of river	107 m (350 ft) amsl; gentle slope	Indian settlement of four to five cabins, c. 1743	no visible evidence	Pratt report C-36-732
A07505.000008 NYSM 1260 10) prehistoric	Candee Site FLT 3-5	1.9 km (1.2 mi) S / adj. to Ley Creek & 61 m from Lake Neatahwanta	113 m (370 ft) amsl; flat	Late Archaic	landowner excavation and collection	documented in OPR Report #10
NYSM 4449 11) prehistoric	ACP OSWG	covers large area including project area; south 1.6 km and north 3.2 km /along east side Oswego River	101 - 122 m (330 - 400 ft) amsl; gentle slope	unidentified prehistoric camp		Refer to Parker 1922
NYSM 4421 12) prehistoric	ACP OSWG - 9	1.4 km (0.9 mi) S / 457 m (1500 ft) W of river	113 - 116 m (370 - 380 ft) amsl; gentle slope	unidentified prehistoric village		"

CONFIDENTIAL
OPRHP/NYSM Site Files
Fulton Niagara Mohawk Gasline Project

Item 1. Archaeological Sites, page 2 of 2. Fulton Quadrangle

SITE NUMBER	SITE NAME	DIST. From Project/Dist. From water	Elevation/Slope	Cultural Affiliation/Site Type	Testing/Type/interval Artifacts	Report
NYSM 4420 13) prehistoric	ACP OSWG - 8	covers large area from 1.3 - 4 km (0.8 - 2.5 mi) W surrounding Lake Neatahwanta	113 m (370 ft) amsl; flat to gentle slope	unidentified scattered camps around the lake		Refer to Parker 1922
NYSM 7370 14) prehistoric		2.6 km (1.6 mi) S covering large area 30 - 91 m (100 - 300 ft) E of Oswego River	110 -113 m (360 - 370 ft) amsl; gentle slope	unidentified prehistoric		
NYSM 1258 15) prehistoric	FLT 1-3, RMSC 1-5, Case Farm Site	1.6 km (1 mi) W / west side of creek at mouth of Lake Neatahwanta	113 m (370 ft) amsl; gentle slope	may be associated with A07541.000013 & NYSM 1259 transitory prehistoric site with at least two cultures		
NYSM 1259 16) prehistoric	FLT 2-3, Lysack Site	same, but on east side of creek	"	may be associated with A07541.000013 & NYSM 1258 transitory site of multiple cultures likely a fishing village		

Ground water user survey summary

1118.081

NIAGARA MOHAWK

NIAGARA MOHAWK POWER CORPORATION/300 ERIE BOULEVARD WEST, SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

July 27, 1998

Mr. Gardiner Cross
Division of Environmental Remediation
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

RE: Groundwater Well Survey
Fulton (S. First St.) Site

Dear Mr. Cross:

Niagara Mohawk has substantially completed the monitoring well survey of property owners adjacent to the Fulton (S. First St.) Site as required by the focused RI/FS work plan. The purpose of the well survey was to determine if any domestic wells exist on the closest 12 properties adjacent to the site. A summary of the survey activities and the survey results are presented below:

- The City of Fulton Water Department was contacted on April 8, 1998. Mr. Roger Parsons confirmed that all 12 adjacent properties are connected to the city water supply.

- A well survey questionnaire was sent to the 12 property owners on May 26, 1998. Seven property owners responded to the questionnaire. Copies of the responses are attached. All seven owners indicated that a well did not exist on their property.

- A second letter was sent to property owners and tenants on June 10, 1998. The letter presented the preliminary results of the questionnaire and provided responses to property owner comments.

- On June 29, Mr. Gary Robinson of the NYS Department of Health and I attempted to interview the five property owners that did not respond to the questionnaire. The property owners of 555 and 562 South First St. were interviewed and indicated that no well was present on their property. A vacancy notice was posted at the residence at 575 South First Street. Following the interviews, Mr. Robinson indicated that the remaining two property owners could be interviewed by telephone.

- The telephone numbers for the two remaining residences are not published in the telephone directory. The property at 580 South First St. is located two lots away from the site on the East (upgradient) Side of South First Street. The property owner resides in Davenport, Iowa. The property at 557 South First St. is located on the West Side of South First Street three lots away from the site. This residence is located on the opposite side (south) of the site from the former canal bed.

- Mr. Gary Robinson was verbally provided the results of the well survey on July 27, 1998 and expressed his satisfaction with the survey results.

Please contact me (315)428-5015 if you have any questions or comments regarding the results of the well survey.

Sincerely,

Charles Willard
Environmental Affairs Department

cc: Mr. Gary Robinson (NYSDOH, Syracuse)
Ms. D. Wright (OBG)
Internal Distribution List

CFW/dkm

GROUNDWATER WELL SURVEY
CITY OF FULTON
SOUTH FIRST STREET

Neighbor: Ray LaFrate
Residence: 579 S. First St., Fulton, NY 13069

The City of Fulton Water Department has advised Niagara Mohawk that your residence is connected to the city water supply system. Please indicate if you operate a groundwater well at your residence by marking the appropriate box below:

____ YES, I operate a well at my residence in addition to receiving my city-supplied water.

_X_ NO, I do not operate a well at my residence in addition to receiving my city-supplied water.

____ I would feel more comfortable speaking to you in person to provide my response. Please contact me to arrange a personal interview.

If you have any comments or concerns regarding this questionnaire, please provide them in the space below, or attach an additional sheet if needed:

Would this in any way affect our drinking water – or any water that we use?

If you do not complete and return this questionnaire, it will be assumed that you desire a personal interview.

GROUNDWATER WELL SURVEY
CITY OF FULTON
SOUTH FIRST STREET

Neighbor: Rev. John Coleman
Residence: 2578 Co Rt 57, Fulton, NY 13069; as owner of 578 S. First St., Fulton, NY 13069

The City of Fulton Water Department has advised Niagara Mohawk that your residence is connected to the city water supply system. Please indicate if you operate a groundwater well at your residence by marking the appropriate box below:

____ YES, I operate a well at my residence in addition to receiving my city-supplied water.

_X_ NO, I do not operate a well at my residence in addition to receiving my city-supplied water.

____ I would feel more comfortable speaking to you in person to provide my response. Please contact me to arrange a personal interview.

If you have any comments or concerns regarding this questionnaire, please provide them in the space below, or attach an additional sheet if needed:

Thank You

If you do not complete and return this questionnaire, it will be assumed that you desire a personal interview.

GROUNDWATER WELL SURVEY
CITY OF FULTON
SOUTH FIRST STREET

Neighbor: The Crossroads Tabernacle Church
Residence: 576 S. First St., Fulton, NY 13069

The City of Fulton Water Department has advised Niagara Mohawk that your residence is connected to the city water supply system. Please indicate if you operate a groundwater well at your residence by marking the appropriate box below:

____ YES, I operate a well at my residence in addition to receiving my city-supplied water.

✓ NO, I do not operate a well at my residence in addition to receiving my city-supplied water.

____ I would feel more comfortable speaking to you in person to provide my response. Please contact me to arrange a personal interview.

If you have any comments or concerns regarding this questionnaire, please provide them in the space below, or attach an additional sheet if needed:

No Questions

Well informed

Thanks

If you do not complete and return this questionnaire, it will be assumed that you desire a personal interview.

GROUNDWATER WELL SURVEY
CITY OF FULTON
SOUTH FIRST STREET

Neighbor: Nick Taranto
Residence: 556 S. First St., Fulton, NY 13069

The City of Fulton Water Department has advised Niagara Mohawk that your residence is connected to the city water supply system. Please indicate if you operate a groundwater well at your residence by marking the appropriate box below:

____ YES, I operate a well at my residence in addition to receiving my city-supplied water.

__✓__ NO, I do not operate a well at my residence in addition to receiving my city-supplied water.

_____ I would feel more comfortable speaking to you in person to provide my response. Please contact me to arrange a personal interview.

If you have any comments or concerns regarding this questionnaire, please provide them in the space below, or attach an additional sheet if needed:

____

____

____

____

____

____

If you do not complete and return this questionnaire, it will be assumed that you desire a personal interview.

GROUNDWATER WELL SURVEY
CITY OF FULTON
SOUTH FIRST STREET

Neighbor: Joseph or Judy Catalone
Residence: 573 S. First St., Fulton, NY 13069

The City of Fulton Water Department has advised Niagara Mohawk that your residence is connected to the city water supply system. Please indicate if you operate a groundwater well at your residence by marking the appropriate box below:

____ YES, I operate a well at my residence in addition to receiving my city-supplied water.

_X_ NO, I do not operate a well at my residence in addition to receiving my city-supplied water.

____ I would feel more comfortable speaking to you in person to provide my response. Please contact me to arrange a personal interview.

If you have any comments or concerns regarding this questionnaire, please provide them in the space below, or attach an additional sheet if needed:

____

____

____

____

____

____

If you do not complete and return this questionnaire, it will be assumed that you desire a personal interview.

GROUNDWATER WELL SURVEY
CITY OF FULTON
SOUTH FIRST STREET

Neighbor: Paul Lewchanin
Residence: 562 S. First St., Fulton, NY 13069

The City of Fulton Water Department has advised Niagara Mohawk that your residence is connected to the city water supply system. Please indicate if you operate a groundwater well at your residence by marking the appropriate box below:

____ YES, I operate a well at my residence in addition to receiving my city-supplied water.

_✓_ NO, I do not operate a well at my residence in addition to receiving my city-supplied water.

____ I would feel more comfortable speaking to you in person to provide my response. Please contact me to arrange a personal interview.

If you have any comments or concerns regarding this questionnaire, please provide them in the space below, or attach an additional sheet if needed:

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If you do not complete and return this questionnaire, it will be assumed that you desire a personal interview.

GROUNDWATER WELL SURVEY
CITY OF FULTON
SOUTH FIRST STREET

Neighbor: George Ashby
Residence: 564 S. First St., Fulton, NY 13069

The City of Fulton Water Department has advised Niagara Mohawk that your residence is connected to the city water supply system. Please indicate if you operate a groundwater well at your residence by marking the appropriate box below:

____ YES, I operate a well at my residence in addition to receiving my city-supplied water.

_X_ NO, I do not operate a well at my residence in addition to receiving my city-supplied water.

____ I would feel more comfortable speaking to you in person to provide my response. Please contact me to arrange a personal interview.

If you have any comments or concerns regarding this questionnaire, please provide them in the space below, or attach an additional sheet if needed:

No comments, Thank you

If you do not complete and return this questionnaire, it will be assumed that you desire a personal interview.

DUSRs

Data Validation Services

Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429

November 22, 1996

Chawn O'Dell
O'Brien & Gere Engineers
5000 Brittonfield Parkway
Syarcuse, NY 13221

RE: **D**ata **U**sability Summary **R**eport for NMPC-Fulton South First St. Site Data Packages
OBG Labs data packages for samples collected 7-8-96 through 9-4-96

Dear Mr. O'Dell:

Review has been completed for the data packages generated by O'Brien and Gere Laboratories, pertaining to samples collected at the Niagara Mohawk Fulton Site. Nineteen soil and twelve aqueous field samples were analysed for full TCL CLP, twenty four soil field samples were analysed for BTEX/ PAH/CN (MGP Indicators), three samples were analysed for TCLP (volatiles, semivolatiles, metals), and two samples were analysed for TCLP benzene. Matrix spikes/duplicates, and equipment/trip blanks were also processed. Methodologies utilized are those of the 1991 NYSDEC ASP/SW846.

The data packages submitted contained full deliverables for validation, but this usability report is generated from review of the summary form information, with some review of associated raw data. Full validation has not been performed; however, the reported summary tables have been reviewed for application of validation qualifiers per USEPA Region II SOPs HW-2 and HW-6. All conclusions are based upon assumption of accurate reported values on the summary forms, and compliance in sample processing.

The following items were reviewed:

* Laboratory Narrative Discussion
* Custody Documentation
* Holding Times
* Surrogate and Internal Standard Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlations
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Instrumental Tunes
* Calibration Standards
* Instrument IDLs
* Method Compliance

Those items listed above which show deficiency are discussed within the text of this narrative, and on the attached Qualification Summary. All other items were determined to be acceptable.

Attached to this narrative is a summary of the validation qualifiers resulting from the review. Resubmission communcations, copies of laboratory case narratives and laboratory NYSDEC Sample Preparation and Analysis Summary Forms are attached to this text, and should be reviewed in conjunction with this report.

The following text discusses quality issues of concern.

In summary, most sample results are were generated with acceptable quality of processing, and are usable with some modifications/qualifications.
Major items of concern are:

a) Many responses reported as pesticides are evaluated to be interferences, and are not considered sample pesticide components (detailed later in text).
b) Tentatively Identified Compound values were incorrectly reported (corrections requested and provided under separate cover).
c) Reported volatile and semivolatile detection limits for those samples analysed for CLP TCL are recommended for adjustment to bring into compliance with the protocol and QAPP.

Some minor qualifications for reported values as estimated are indicated by quality parameter values. These are detailed in the attached Qualification Summary. Most result from typical processing or matrix effects.

DELIVERABLES

Although data package deliverables were to be consistent with the ASP Category B, these data packages were not. The packages contained most of the information required for full validation, but the information was not properly summarized; in most cases it was available in the raw data.

SOIL SAMPLES

General

Volatile and semivolatile samples, which were processed under the ASP 91-1 and 91-2 protocols, were reported with lower detection limits (CRDLs) that are not consistent with protocol requirements. The ASP protocols provide for sample CRDLs that correspond to the lowest concentration standards; therefore detection at, and linearity to, those levels are ensured and defensible.

Therefore, in keeping with the requirements of the project QAPP and protocols, recommendations are made herein (see Qualification Summary) to adjust upward the reported CRDLs for most volatile and semivolatile compounds processed by 91-1 and 91-2. In most cases, the CRDLs reported by laboratory are between one fifth or one half of the QAPP CRDL values (and lowest standard concentrations). Some compounds were reported at one tenth of the CRDL. Detected values below the adjusted CRDLs are considered estimated because linearity is not established to those levels.

Although these recommendations for adjustment of the reported CRDLs are made, it is noted that the instrumentation does show good sensitivity, and detection below the adjusted CRDLs is probable. Without system evaluation, accurate values for possible lower CRDLs are not known.

Results Report Forms do not contain all required information such as solids/moisture content, receive date and dilution factor. Sample weights/volumes were omitted or incorrect in some instances.

Client Sample IDs were not indicated on certain of the summary forms and in some of the raw data (the deliverables clearly require more complete identification incorporating the Client Sample ID). Because these were not readily available, the laboratory ID numbers are therefore used and are often referenced within this DUSR report in lieu of the Client Sample ID.

Field duplicate correlations were performed:

Blind Dup #1 is the field duplicate of SB1(6-8) (TCL/TAL)

Blind Dup #2 is the field duplicate of SB1(12-14) (MGP Indicators)

Most showed generally good correlation, outliers are denoted within this text.

Per client instruction, holding time evaluations have been performed in accordance with the 1995 updates of the NYSDEC ASP.

Accuracy and precision evaluations were performed on MW4(8-10), TP-2, SS4(0-24), and MW3(8-10).

Volatile Analyses

Multiple dilution analyses on given samples were not reported individually, but were combined onto single report forms.

No summaries for surrogate recoveries (Forms 2) or instrument tunes (Forms 5) were provided. The omitted surrogate summary forms were requested and provided under separate cover for future data reviews. Raw data includes forms to show proper tune performance; log pages show analysis times usually found on the Forms 5.

As noted in the case narrative, certain samples were overly diluted due to responses of nontarget analytes, resulting in elevated detection limits. These samples should have been reanalysed at lower dilution, even if done outside holding time. As it stands, the technical holding time would have been met.

Accuracy and precision values were primarily within recommended ranges. Some slightly outlying values were noted, but reported results are unaffected.

Field duplicate correlation was acceptable.

The same blank was reported for low and medium level analyses on 7/18/96. The medium level analysis blank should differ from the low due to addition of methanol, and should also have been reported with medium level values. Sample results are not recommended for qualification due to this processing.

Semivolatile Analyses

Multiple dilution analyses on given samples were not reported individually, but were combined onto single report forms.

No summaries for surrogate recoveries (Forms 2) or instrument tunes (Forms 5) were provided. The omitted surrogate summary forms were requested and provided under separate cover for future data reviews. Raw data includes forms to show proper tune performance; log pages show analysis times usually found on the Forms 5.

Certain of the accuracy and precision values were slightly out of recommended range, including duplicate correlations for matrix spike analytes also present in the unspiked sample. Some others were diluted out of detection due to sample compound levels. The variances were not of magnitude for qualification of sample results.

With the exception of that of samples SB1(6-8) and MW-4, field duplicate correlation was good. The variance observed in SB1(6-8) (detailed in the qualification section) indicate caution for possible nonhomogeneity in samples of similar matrix with high level detections of PAHs.

The attached Qualification Summary lists many BNA compounds for qualification due to standard responses. Most of the standard compound responses, while greater than the action level of 25%Difference, were below 40% Difference, thereby not showing a great bias to the reported results. The laboratory was not required to take corrective action.

The 91-2 protocol requires that samples submitted for BNA analysis be screened in order to determine the proper extraction level prior to expiration of the required holding time. This was not performed, and all extractions were done as low level. This results in an inability to evaluate surrogate recoveries (and therefore extraction efficiency) in those samples which should have been extracted at medium level. Due to high levels of the target compounds, many of those samples would have required dilution even at the medium level which would also have prohibited surrogate evaluation. No qualifications are recommended based upon this noncomplaint processing. It should be noted that in cases where excessive dilution is required (i.e. greater than 1:100), the extracting solvent may become saturated, and loss of analyte recovery may occur. Those sample showing very high detection limits (indicating strong dilution) may have falsely low reported values and detection limits.

Some sample exhibited repeated matrix effects causing depression of internal standard responses. The associated compounds have been recommended for qualification.

Pesticide/PCB Analyses

Certain analytes produced dual column percent differences exceeding 25%. These have been flagged as "P" by the laboratory. Those with values between 25%D and 50%D should be considered with estimated quantitations ("J" flag); those from 50%D to 90%D should be considered estimated, and tentative in indentification ("N"); those with variances exceeding 90%D should be rejected as qualitative identification, and reported values edited to reflect nondetection at the CRDL or at the originally reported value, whichever is greater. These are detailed in the qualification summary.

Accuracy and precision (when not diluted beyond evaluation), and field duplicate correlation were acceptable. The reported value of 37 ppb for endrin in the matrix spikes of SS4(0-24) should have been nondetection at that level (due to inability to resolve this compound from sample interferences).

Method blanks reported detections, most of which were less than the reported IDL for the lab processing, and represent system "noise." These exhibited high %D values, as discussed above. Sample reported detections were also observed to be integrations of system baseline background. This has been incorporated into the final pesticide evaluations in the qualification summary.

TCLP Analyses

The ZHE TCLP extract of SB1(6-8) was performed at 13 days from receipt, beyond the allowable 7 day holding time. Results are recommended for qualification.

Batch QC was reported in most cases for accuracy and precision, which were generally acceptable.

Metals/CN Analyses

Metals data were not properly flagged with laboratory QC flags (i.e. N, *, E)

Those equipment blanks which show detections of certain analytes are outlined in the Qualification Summary. The associated sample analytes with detected values at levels similar to those of the blank are to be considered a result of contamination and are therefore rejected. These are denoted on the attached qualifier summary, and are to be flagged as "R" (per SOP HW-2). However, it is appropriate to consider results for these sample analytes which are elevated detection limits corresponding to the originally reported values. Although the reported detections may be from contamination, it can be said that the analytes are not present at higher levels than those reported.

Those matrix spike recoveries, duplicate correlations, and field duplicate correlation outliers requiring qualification are listed on the attached qualification summary. These results were generally within acceptable ranges. Serial dilution of SS4(0-24), MW8(8-10) and Blind Dup#1 were also primarily acceptable.

Thallium standard recoveries associated with the soil analyses were elevated above allowable limits; these results are already qualified as estimated due to matrix spike recoveries.

AQUEOUS SAMPLES

General

Volatile and semivolatile samples, which were processed under the ASP 91-1 and 91-2 protocols, were reported with lower detection limits (CRDLs) that are not consistent with protocol requirements. The ASP protocols provide for sample CRDLs that correspond to the lowest concentration standards; therefore detection at, and linearity to, those levels are ensured and defensible.

Therefore, in keeping with the requirements of the project QAPP and protocols, recommendations are made herein (see Qualification Summary) to adjust upward the reported CRDLs for most volatile and semivolatile compounds processed by 91-1 and 91-2. In most cases, the CRDLs reported by laboratory are between one fifth or one half of the QAPP CRDL values (and lowest standard concentrations). Some compounds were reported at one tenth of the CRDL, including benzene, which was reported with a CRDL of 0.7 ug/L (lowest calibration standard is 10 ug/L). Detected values below the adjusted CRDLs are considered estimated because linearity is not established to those levels.

Although these recommendations are made, it is noted that the instrumentation does show good sensitivity, and detection below the adjusted CRDLs is probable. Without system evaluation, accurate values for possible lower CRDLs are not known. See the attached communication regarding the 0.7 ug/L benzene standard analysis which was requested, and performed successfully.

Results Report Forms do not contain all required information such as receive date and dilution factor. Sample weights and volumes were omitted or incorrect in some instances.

Client Sample IDs were not indicated on certain of the summary forms and in some of the raw data (the deliverables clearly require more complete identification incorporating the Client Sample ID). Because these were not readily available, the laboratory ID numbers are therefore used and are often referenced within this DUSR report in lieu of the Client Sample ID.

Accuracy and precision determinations were performed on MW-4 (first round) and MW-1 (second round).

Field duplicates were performed on MW-3 for both rounds.

Per client instruction, holding time evaluations have been performed in accordance with the 1995 updates of the NYSDEC ASP.

Volatile Analyses

No summaries for surrogate recoveries (Forms 2) or instrument tunes (Forms 5) were provided. The omitted surrogate summary forms were requested and provided under separate cover for future data reviews. Raw data includes forms to show proper tune performance; log pages show analysis times usually found on the Forms 5.

Accuracy and precision evaluations were acceptable.

Field duplicate correlation was acceptable.

Semivolatile Analyses

Multiple dilution analyses on given samples were not reported individually, but were combined onto single report forms.

No summaries for surrogate recoveries (Forms 2) or instrument tunes (Forms 5) were provided. The omitted surrogate summary forms were requested and provided under separate cover for future data reviews. Raw data includes forms to show proper tune performance; log pages show analysis times usually found on the Forms 5.

Matrix spike recoveries, and laboratory and field duplicate correlation was acceptable.

The attached Qualification Summary lists many BNA compounds for qualification due to standard responses. Most of the standard compound responses, while greater than the action level of 25%Difference, were below 40% Difference, thereby not showing a great bias to the reported results. The laboratory was not required to take corrective action.

Pesticide/PCB Analyses

Certain analytes produced dual column percent differences exceeding 25%. These have been flagged as "P" by the laboratory. Those with values between 25%D and 50%D should be considered with estimated quantitations ("J" flag); those from 50%D to 90%D should be considered estimated, and tentative in indentification ("N"); those with variances exceeding 90%D should be rejected as qualitative identification, and reported values edited to reflect nondetection at the CRDL or at the originally reported value, whichever is greater. These are detailed in the qualification summary.

Method blanks reported detections, most of which were less than the reported IDL for the lab processing, and represent system "noise." These exhibited high %D values, as discussed above. Sample reported detections were also observed to be integrations of system baseline background. This has been incorporated into the final pesticide evaluations in the qualification summary.

Field duplicate correlation was acceptable.

Metals/CN Analyses

Metals data were not properly flagged with laboratory QC flags (i.e. N, *, E)

The equipment blank for the second round of groundwaters shows detections of certain analytes. The associated sample analytes with detected values at levels similar to those of the blank are to be considered a result of contamination and are therefore rejected. These are denoted on the attached qualifier summary, and are to be flagged as "R" (per SOP HW-2). However, it is appropriate to consider results for these sample analytes which are elevated detection limits corresponding to the originally reported values. Although the reported detections may be from contamination, it can be said that the analytes are not present at higher levels than those reported.

Field duplicate correlation was acceptable, but the laboratory duplicate evaluation showed numerous outliers, although most were not of sufficient magnitude to warrrent qualification.

Accuracy and serial dilution evaluations were acceptable.

QUALIFICATION SUMMARY

Volatiles ASP91-1

1. J The solids content of MW4(8-10) was just below the action limit of 50%, at 48.9%. Due to possible nonhomogeneity from low solids content, the reported results for this sample should be considered estimated.
2. J Due to outlying holding time, the volatile TCLP results for SB1(6-8) should be considered estimated.
3. Volatile TICs are misreported for most samples (see attached resubmission communications). In some instances dilution factors were not incorporated, soil values were not corrected for moisture content, improper compounds were reported (i.e. BNA TCLs), none are properly labeled with the "B" flag to indicate contamination rather than sample constituency, and some errors exist in values. Per agreement with OBG, the laboratory is supplying, under separate cover, copies of the TIC "report forms", with correction factors indicated for application to sample values. This report does not incorporate those corrections, nor review for application of the "B" qualifier.
4. In keeping with the intent of the required protocol (ASP 91-1), which requires linearity determinations down to the reported detection limits, all sample results should be edited/qualified to meet those CRDLs outlined in the method and project QAPP. The laboratory can provide corrected results for each sample, incorporating dilution factors, moisture content, and weights not evident on the summary report forms.

   In addition, those detected values below the adjusted CRDLs should be considered estimated ("J" flag) because they are below the established linearity.

   These edits do not apply to BTEX or TCLP analyses, which are reported with acceptable limits per the required method EPA-8240.
5. The sample detected methylene chloride and acetone results should be edited to reflect nondetection at either the CRDL or at the originally reported value, whichever is greater.

   In addition, the same edits pertain to reported results for xylene in PZ1(6-10), MW4(8-10), MW3(22-24), MW4(18-20), and MW3(18-20); to 2-butanone in MW4(8-10) and Potwater, and to tetrachloroethene in all soil samples **except** MW1(6-8).
6. Tentatively Identified Compounds (TICs) which are named siloxanes and/or those flagged as "B" by the laboratory should not be considered sample components ("R" flag).
7. Due to standard responses, the following analyte results in the denoted samples should be considered estimated ("J" flag):
   a. acetone, carbon tetrachloride, and 1,2-dibromo-3-chloropropane in Z6034, Z6035, and Z6036, Z6037
   b. acetone in Z7714 and Z7713

Semivolatiles

1. The solids content of MW4(8-10) was just below the action limit of 50%, at 48.9%. Due to possible nonhomogeneity from low solids content, the reported results for this sample should be considered estimated.
2. Semivolatile TICs are misreported for most samples (see attached resubmission communications). In some instances dilution factors were not incorporated, soil values were not corrected for moisture content, improper compounds were reported (i.e. VOA TCLs), none are properly labeled with the "B" flag to indicate contamination rather than sample constituency, "A" flags (to indicate extraction artifacts) were not applied, and some errors exist in values. Per agreement with OBG, the laboratory is supplying, under separate cover, copies of the TIC "report forms", with correction factors indicated for application to sample values. This report does not incorporate those corrections, nor review for application of the "B" or "A" qualifiers.
   Tentatively Identified Compounds (TICs) which are flagged "A" and/or "B" should be disregarded as sample components. ("R" flag)
3. In keeping with the intent of the required protocol (ASP 91-2), which requires linearity determinations down to the reported detection limits, all sample results should be edited/qualified to meet those CRDLs outlined in the method and project QAPP. The laboratory can provide corrected results for each sample, incorporating dilution factors, moisture content, and weights not evident on the summary report forms.
   In addition, those detected values below the adjusted CRDLs should be considered estimated ("J" flag) because they are below the established linearity.
   These edits do not apply to PAH or TCLP analyses, which are reported with acceptable limits per the required method EPA-8270.
4. Several of the soil samples produced outlying responses for internal standards, and results of associated compounds in those samples should be considered estimated:
   a. di-n-octylphthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene in Z6215DL and Z6214
   b. benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene in Z6537 and Z6230
   c. nitrobenzene and hexachlorobutadiene in the TCLP extract Z6481
5. The field duplicate correlation of SB1(6-8) and Blind Dup#1 was poor for detected analytes. Values differed by as much as a factor of ten (naphthalene values were 92,000 ppb and 300,000 ppb; acenaphthene values were 17,000 ppb and 140,000 ppb; etc). Sample nonhomogeneity is suspected. Detected values for these two sample should be considered estimated. All soil semivolatile data should be used with caution in this respect.
6. The first and second round of groundwaters showed poor field duplicate correlation for naphthalene in MW-3. The reported naphthalene result in MW-3 and in the field duplicate should therefore be considered estimated.
7. Due to copresence in the blanks, reported detections of bis(2-ethylhexyl)phthalate are rejected,and results edited to reflect nondetection at the CRDL.

8. Due to standard responses, the following analyte results in the denoted samples should be considered estimated ("J"flag):
   a. 2,2-oxybis(1-chloropropane) hexachlorobutadiene hexachlorocyclopentadiene 2,4-dinitrophenol, 4-nitrophenol, 4-dinitro-2-methylphenol, pentachlorophenol, and bis(2-ethylhexyl)phthalate in Z6026,Z6027,Z6030,Z6029
   b. 2,4-dinitrophenol, bis(2-ethylhexyl)phthalate and di-n-octylphthalate in Z6028RE and Z6031RE
   c. indeno(1,2,3-cd)pyrene and benzo(g,h,i)perylene in Z6541,Z6542,Z6543,Z6544 Z6040,Z6043,Z6044,Z6042, Z6039,Z6041,Z6540, and Z6539
   d. 2,4,-dinitrophenol in Z6222 and Z6481
   e. benzo(g,h,i)perlyene in Z6232,Z6235,Z5677,and Z6230
   f. benzoic acid, hexachlorocyclopentadiene, 2,4-dinitrophenol, bis(2-ethylhexyl)phthalate and di-n-octylphthalate in Z6230RE
   g. hexachlorocyclopentadiene, 2,4-dinitrophenol, benzo(g,h,i)perylene in Z6220, Z6479, and Z6481RE
   h. hexachlorocyclopentadiene and di-n-octylphthalate in Z7708,Z7709,Z7710,Z7712 and Z7714
   i. 1,2-dichlorobenzene and bis(2-chloroethoxy)methane in B2620,B2617,B2618,B2623 and B2619
   j. di-n-octylphthalate in B2622 and B2621

Pesticide/PCBs

1. The solids content of MW4(8-10) was just below the action limit of 50%, at 48.9%. Due to possible nonhomogeneity from low solids content, the reported results for this sample should be considered estimated.
2 Following USEPA Region II guidelines for evaluating identification of pesticides, most reported detections for this project involved %D values greater than 90%D (often greater than 1000%D), and are rejected as sample constituents. Those will not be enumerated herein. The following list outlines those pesticides *not* rejected due to %D, *or due to presence in the associated blank, or due to background/baseline intergration.* **Only those identifications to be retained as reported pesticides will be listed below. All others should be edited to reflect nondetection at either the analyte CRDL or at the originally reported value, whichever is greater:**

Sample ID	Analyte	Additional Qualifier, if applicable
MW1 (lst)	Aroclor 1242	
MW2 (lst)	Endosulfan II	J
	4,4'-DDT	J
MW4 (lst)	Endosulfan II	NJ
	Methoxychlor	NJ
MW-2 (2nd)	a-BHC	NJ
MW-3 (2nd)	4,4'DDE	J
MW-4 (2nd)	Heptachlor epoxide	
	Endosulfan I	J
	Endosulfan II	

Sample ID	Analyte	Additional Qualifier, if applicable
MW-5 (2nd)	Heptachlor Epoxide	
	Endosulfan II	J
	4,4'-DDT	
BlindDupe (2nd)	Lindane	
MW2(6-8)	4,4'-DDE	J
	Endosulfan sulfate (from -DL)	
SS1(0-2)	Endrin	NJ
	4,4'-DDT	
	g-chlordane	NJ
	4,4'-DDE (from -DL)	J
	Endrin ketone (from -DL)	
SS1(0-24)	a-chlordane	J
SS2(0-2)	Lindane	J
	Endosulfan II	NJ
	4,4-DDD	J
	Methoxychlor	NJ
SS2(0-24)	4,4'-DDD	NJ
	Endosulfan sulfate	J
	Endrin ketone (from -DL)	J
MW4(8-10)	4,4'-DDT	NJ
	Methoxychlor	J
SS3(0-2)	4,4'-DDD	NJ
	4,4'-DDT (from -DL)	
	Methoxychlor	NJ
	Endrin ketone	J
SS3(0-24)	4,4'-DDE	
	4,4'-DDD	
	4,4'-DDT (from -DL)	
	Endrin ketone	J
	Endosulfan II	NJ
SS4(0-2)	Aldrin	NJ
	Endosulfan II	J
	Endrin ketone	NJ
	g-chlordane	
SS4(0-24)	4,4'-DDE	NJ
	Endosulfan II	NJ
	4.,4'-DDT	NJ
	Endrin ketone	
	a-chlordane	NJ
	g-chlordane	

Sample ID	Analyte	Additional Qualifier, if applicable
SS5(0-2)	4,4'-DDE	J
	Endosulfan II	NJ
	4,4'-DDT	
	Methoxychlor	
	Endrin ketone	
	a-chlordane	NJ
SS6(0-2)	4,4'-DDE	J
	4,4'-DDD	J
MW5(8-10)	Endosulfan II	NJ
	g-chlordane	
Equipblk	a-BHC	NJ
SB1(6-8)	Dieldrin	J
BlindDup Z6478	4,4'-DDT	J
Potwater	Lindane	J
	Endosulfan I	J

3. Surrogate recoveries for the following samples were low, indicating consideration for all reported results as estimated:
   MW2(6-8), B2619, MW-2 (lst round), MW-3(lst round), MW-4 (lst round), MW-5 (lst round)
4. Surrogate recoveries of MW5(8-10) was elevated, indicating consideration for reported results of **detected** analytes as estimated:
5. Heptachlor epoxide in B2622 (second round MW-4) should not be flagged as "B".

Metals/CN

1. The solids content of MW4(8-10) was just below the action limit of 50%, at 48.9%. Due to possible nonhomogeneity from low solids content, the reported results for this sample should be considered estimated.
2. The cyanide fractions of the first round of groundwaters were not preserved until lab receipt the day following collection. These cyanide values should be considered estimated due to possible loss of analyte.
3. Due to copresence in the associated equipment blank/drill water, the following sample detections are at such a level as to be considered contamination and are therefore rejected ("R" flag):
   Zinc in MW3(22-24)
4. Field duplicate correlation outliers indicate that reported results for those analytes for all samples of the same matrix be considered estimated ("J" flag):

Matrix	Analtye
Aqueous-lst round	Copper
TCL Soil	Calcium and cyanide*

   * pertain to samples submitted for full TAL metals. The cyanide correlation for the indicator samples was acceptable.

5. Matrix spike recovery values show that the following sample values be considered estimated ("J" flag) (applies to all samples of a given matrix except TCLP leachates):

Matrix	Analyte
Aqueous -lst round	Antimony and mercury
TCL Soil	Antimony, lead, nickel, manganese, and thallium

6. Laboratory duplicate correlation outliers show that the following sample values be considered estimated ("J" flag) (applies to all samples in given SDG):

Matrix	Analyte
TCL Soil	Calcium

7. Serial dilution outliers result in the following analytes qualified as "J":
   a. Iron and zinc in all soil samples
   b. Chromium and Manganese in all the first round of groundwater samples.
   c. Zinc in all the second round of groundwater samples.

TCLP

1. The holding time for the volatile analysis of the leachate of Z6526 was exceeded (performed at 13 days from leaching). The results should therefore be considered estimated.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

Judy Harry

Att.

DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the national qualifiers assigned to results in the data review process. If the Regions choose to use additional qualifiers, a complete explanation of those qualifiers should accompany the data review.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Data Validation Services

Cobble Creek Road   P. O. Box 208
North Creek, NY   12853
Phone and Fax (518) 251-4429

Facsimile Transmission

TO: Chawn O'Dell

COMPANY: OBG

FAX NUMBER: 315 463 7554

FROM: Judy Harry

DATE: 9-23-96

No. of pages (including cover): 1

COMMENTS:

RE: Nimo Fulton Site Project

Review is underway for the abovementioned data packages

Please request that the laboratory forward to me the volatile Instrument Detection Limit summaries (IDLs) which are applicable to the groundwater analyses for this project (method 91-1 with 5 mL purge, on the proper instrument). Those present in the data package are for a different methodology (8260 with 25 mL purge) and cannot be applied to these samples. This is especially important for this project because the laboratory has reported extremely low detection limits (for some compounds) relative to the method and the standards processed.

Thank you.

Data Validation Services

Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone and Fax (518) 251-4429

October 22, 1996

Monica Santucci
O'Brien & Gere Laboratories
5000 Brittonfield Parkway
Syracuse, NY 13221

RE: OBG-- Niagara Mohawk Fulton Site (South 1st St.) Project

Dear Monica:

Review of the abovementioned data packages is in progress. As we discussed, there are some issues for which clarification and/or correction is needed prior to completion of the review.

1. As we discussed, the "report forms" submitted for volatile Tentatively Identified Compounds (TICs) do not accurately reflect dilution factors in the values reported for those samples for which dilution was performed.
   Please review all reported TIC results for the diluted volatile samples and re-report with the corrected TIC values. Also please edit these "forms" to remove the "CO2-solvent peak" as a reported result (per protocol requirements).

2. Please provide a calculation for the semivolatile results for naphthalene in aqueous sample MW-4 (Z7711). Although the documentation provided by the laboratory does not show final extract volume, the protocol required volume of 1 mL (supported by surrogate recovery calculations) was utilized in my following calculation, which does not match the reported result:

(I.S conc.) (D.F) (final volume)

$$\frac{\frac{9933061}{1629859}}{\frac{1612724}{1736955} \times \frac{40\ ng}{50\ ng}} \times \frac{40\ ng}{2\ \mu L} \times 5 \times \frac{1000\ \mu L}{1\ L} \times \frac{1\ \mu g}{1000\ ng} = 860\ \mu g/L$$

((Lab reported 2000 ug/

3. If there is truly an error in the reported compound value above, please address any corrective action the lab will take to ensure other sample reported results are also not in error. This is critical for this project because full validation is not being performed; only a summary level review was to occur (with no verification of reported results from raw data).

4. No "E" flags are observed on the semivolatile reported results for compounds which exceed the calibration range (80 ppb) of the standards. Please resubmit report forms for any sample compounds which fall into this category. This is necessary in order to reference which compound values are to be either replaced by dilution values, or to be considered estimated (in those cases such as MW-4 where dilution was not properly performed.

5. Please produce the required surrogate summary forms (Forms 2A and 2B) for the volatile and semivolatile samples in this project.

6. The volatile report forms for medium level soil extraction indicate that a sample weight of 5g is used. The prep logs do not indicate sample weight. Protocol requires a 4g weight. Please clarify.

7. Please clarify the notations for the volatile BTEX soil analyses performed on 7/19/96 on G (i.e. Z6535, etc). These were evidently performed as 25 mL purge volumes rather than the 5 mL required for medium level analyses. The instrument log and data files show "25 X", and the reported results indicate a dilution factor of 25. Yet the normal methanol volume of 100 uL was used (into the 25 mL). It is observed that the surrogate values on the quant report do support the five-fold variance in purge, and therefore a 5X dilution factor. Does this "25X" in the sample data therefore also refer to the fact that the instrument is calibrated five times lower (hence fivefold lower detection limits than the five mL purge)?

8. The preparation logs for the TCLP leaching do not show sample weight used. Please provide a statement as to that quantity.

9. Please comment on the fact that the response factor for phenol is only about one-half that for deuterated phenol. These compounds should have almost identical relative responses.

Please provide response at your earliest convenience. Please also foward copies of all communications to Debra Wright at OBG Engineers. Thank you.

Very truly yours,

Judy Harry

Judy Harry

cc: Debra Wright

Data Validation Services

Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone and Fax (518) 251-4429

Facsimile Transmission

TO: Monica Santucci

COMPANY: OBG

FAX NUMBER: 315 463 7554

FROM: Judy Harry

DATE: 10-22-96 late pm

No. of pages (including cover): 1

COMMENTS:

RE: My request of earlier regarding Nino - Fulton

I have observed (since my earlier fax) that multiple dilution runs exist for certain of the BNA samples. Those raw data explain the observed variance in the naphthalene reported value for MW-4. The required report forms for each analysis (initial & dilution) were not provided — evidently a single combined report has been made. Please therefore provide an explanation/assurance ~~that~~ as to which compound values are used from each run, (as a generalization for all samples). Thanks Judy

Data Validation Services

Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone and Fax (518) 251-4429

Facsimile Transmission/Resubmission Request

TO: Monika Santucci

COMPANY: OBG

FAX NUMBER: 315 463 7554

FROM: Judy Harry

DATE: 10-28-96

No. of pages (including cover): 1

COMMENTS: RE: OBG Niagara Mohawk -Fulton Site

The following observations have been made regarding the Tentatively Identified Compounds (TICs) reported for this project. Please resubmit corrected "Forms 1" for the TICs discussed below:

A. Volatile TICs
1. Values are not corrected for dilution factors (previously requested).
2. Values are not correct in cases where the quant report "multiplier" has been manually corrected (i.e. Z6023 and others).
3. TICs are not flagged with the associated "B" flags
4. Soil values are not corrected for moisture content.
5. VOA and BNA Target analytes (i.e. toluene and naphthlalene) should not be reported as TICs of the alternate analysis (per protocol).

B. BNA TICs:
1. Soil values do not reflect the matrix (i.e. difference in 1L versus 30g sample volume).
2. Soil values are not corrected for moisture content.
3. TICs are not flagged with the associated "B" flags
4. VOA and BNA Target analytes (i.e. toluene and naphthlalene) should not be reported as TICs of the alternate analysis (per protocol).
5. Aldol compounds should be flagged as "A".

Data Validation Services

Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone and Fax (518) 251-4429

Facsimile Transmission/Resubmission Request

TO: Monika Santucci

COMPANY: OBG

FAX NUMBER: 315 463 7554

FROM: Judy Harry

DATE: 11-22-96

No. of pages (including cover): 1

COMMENTS: RE: OBG Niagara Mohawk -Fulton Site

In keeping with the project QAPP requirements and the 91-1 and 91-2 requirements, I will be recommending that the reported CRDLs for the samples processed under those protocols be edited to be consistent with those requirements. This produces detection limits that are at the level of the lowest concentration standard, and are therefore detection and linearity are ensured and defensible. Detected values below those limits will be qualified as J. I will be commenting on the sensitivity of the instruments and your 0.7 ppb benzene standard.

The conversion to adjusted CRDLs will be recommended as, i.e. "10 ug/L x Dilution Factor", or divide by percent solids, etc. With the required ASP Cat. B. deliverables, all information necessary to do those conversions is present on the Forms 1. However, your report "Form 1"s do not show dilution factor, solids content, accurate weights, etc. Therefore I request that you provide a listing to the project engineers that has either the protocol required CRDLs, or a conversion factor for this adjustment (including dilution factor and solids information) for each sample. You may wish to discuss this with Chawn or Debra.

Please call me if you want to talk about this issue. Thanks.

cc: Chawn O'Dell

O'BRIEN & GERE
LABORATORIES, INC.

September 26, 1996

Ms. Judy Harry
Data Validation Services
Cobble Creek Road
P.O. Box 208
North Creek, NY 12853

Re: Niagara Mohawk-Fulton Site Project
Volatile Organics-IDL

File: 1118.081.517

Dear Judy:

The purpose of this letter is to respond to your request for Volatile Organic Instrument Detection Limit Summaries (IDLs) which apply to the groundwater analysis for the above referenced program. You stated that the IDL summary provided in the data package which is based on a 25 mL purge volume is not applicable to these samples and you would require IDL summaries based on a 5 mL purge volume. It is not currently the policy of OBG Labs to analyze 5 mL IDLs for the GC/MS Volatile Organics analysis. Our 5 mL IDL is determined by multiplying the 25 mL IDL (which was provided in the data package) by five. Since the purge efficiency for a 25 mL purge is lower than the purge efficiency for a 5 mL purge, our IDLs are biased slightly high. Also, please note that IDLs and MDLs are the same for the volatile organics since there is no prep procedure performed on the sample prior to purging.

If you have any questions concerning the above explanation, please do not hesitate to contact me.

Very truly yours,
O'BRIEN & GERE LABORATORIES, INC.

Monika Santucci

Monika Santucci
Supervisor

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cc: Deborah Wright-O'Brien & Gere Engineers, Inc.
Chawn O'Dell-O'Brien & Gere Engineers, Inc.
Mark Vanderwarker-O'Brien & Gere Laboratories, Inc.
Coleen Burke-O'Brien & Gere Laboratories, Inc.

O'BRIEN & GERE
LABORATORIES, INC.

October 11, 1996

Ms. Judy Harry
Data Validation Services
Cobble Creek Road
P.O. Box 208
North Creek, NY 12853

Re: Niagara Mohawk-Fulton Site Project
Volatile Organics-Benzene Standard

File: 1118.081.517

Dear Judy:

The purpose of this letter is to submit to you the Quant Report, Total Ion Chromatogram and Extracted Ion Currant Profile (EICP) of a 0.7 ppb benzene standard as requested. This standard was analyzed using a 5 ml purge volume as required for 91-1 methods. The result of 0.84 ppb should support our report limiting of 0.7 ppb as requested by the client for the Niagara Mohawk Ground Water program. This low reporting limit was requested by the client to meet New York State Ground Water Standards.

If you have any questions or need additional information, please do not hesitate to contact me.

Very truly yours,
O'BRIEN & GERE LABORATORIES, INC.

Monika Santucci

Monika Santucci
Supervisor

C:\PROGRAM\NIMO\BENZENE.LET

cc: Deborah Wright-O'Brien & Gere Engineers, Inc.
Mark Vanderwarker-O'Brien & Gere Laboratories, Inc.
Coleen Burke-O'Brien & Gere Laboratories, Inc.

Data Validation Services
120 Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429
Facsimile 518-251-4428

October 27, 1999

Deborah Wright
O'Brien & Gere Engineers
5000 Brittonfield Parkway
Syracuse, NY 13221

RE: **Data Usability Summary Report** for NMPC-Fulton Site Data Package
OBG Labs data packages for samples collected August 1999

Dear Ms. Wright:

Review has been completed for the data packages generated by O'Brien and Gere Laboratories, pertaining to samples collected 8/04/99 and 8/05/99 at the Niagara Mohawk Rome Fulton Site. Nine aqueous field samples were analysed for BTEX and PAH. Matrix spikes/duplicates, and a trip blank were also processed. Methodologies utilized are those of the 1995 NYSDEC ASP/SW846.

The data packages submitted contained full deliverables for validation, but this usability report is generated from review of the summary form information, with review of sample raw data, and some review of associated QC raw data. Full validation has not been performed; however, the reported summary tables have been reviewed for application of validation qualifiers, as affects the usability of the sample data. The following items were reviewed:

* Laboratory Narrative Discussion
* Custody Documentation
* Holding Times
* Surrogate and Internal Standard Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlations
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Instrumental Tunes
* Calibration Standards
* Instrument IDLs
* Method Compliance

Those items listed above which show deficiency are discussed within the text of this narrative All other items were determined to be acceptable.

In summary, BTEX sample results are were generated with acceptable quality of processing, and are usable as reported. The PAH detected results were initially reported with incorrect quantitative values; resubmitted report forms are attached. The PAH data for two samples are also considered biased slightly low due to extended holding time.

Copies of the laboratory case narrative, laboratory NYSDEC Sample Analytical Requirement Summary Forms, resubmission communications, and revised report forms are attached to this text, and should be reviewed in conjunction with this report. All included in this submission are client tables which have been edited to reflect the validation qualifiers.

The following text discusses quality issues of concern.

AQUEOUS SAMPLES

General

Accuracy and precision determinations were performed on MW-8, and were acceptable for both fractions.

A blind field duplicate of MW-5 showed good correlation for both fractions.

Per NYSDEC ASP Category B deliverables requirements, the case narrative should have included the "verbatim" statement.

BTEX Analyses by EPA 8260

Sample processing was performed in compliance with protocol requirements.. No validation qualifications were indicated. Sample results are usable as reported.

The summary Forms 4 and 5 should not have denoted a heated purge for these analyses.

PAH Analyses by EPA 8270

Please see the revised report forms for all samples, which have been edited to lower all detected values by a factor of two.

Samples MW-3 and MW-8 were reextracted one day beyond the allowable technical holding time. Results for these two samples are considered estimated ("J") qualifier. Based upon the characteristics of the target analytes, the level of bias is not expected to be great.

Certain of the samples exhibited elevated concentrations of analytes which required dilution analyses. In some cases, multiple analyses were reported. Reported results for those analytes reported with the "E" flag should be derived from the dilution analysis. Unless noted specifically within this text, all other values can be derived from the initial analysis.

Some of the samples requiring dilution were reported using only the dilution analysis. Therefore, the lower level concentrations of compounds detected in the undiluted analysis were not reported, due to elevated detection limits resulting from the dilution. This information is available in the raw data if it is of concern.

Sample processing (other than holding time and calculation) was compliant.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

Judy Harry

Att.

Data Validation Services
120 Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429
Facsimile 518-251-4428

September 30, 2004

Scott Tucker
O'Brien & Gere Engineers
5000 Brittonfield Parkway
Syracuse, NY 13221

RE: **Data Usability Summary Report for NMPC-South First St. Fulton, NY Data Package**
OBG Laboratory SDG Nos. 8186,8187,8208,8280,8294 and 8375,8384,8390

Dear Ms. Wright:

Review has been completed for the data packages generated by O'Brien & Gere Laboratories that pertain to samples collected 6/14/04 through 7/12/04 at the Niagara Mohawk Rome South First St. Fulton, NY site. Thirty-eight soil samples and sixteen aqueous samples (including field duplicates) were analyzed for BTEX by method EPA 8260B and PAH by method 8270C. Twelve additional soil samples were analyzed for PAHs. Equipment/trip blanks and matrix spikes/duplicates were also processed. Analytical methodologies used are those of the 1995 NYSDEC ASP/USEPA SW846.

The data packages submitted contained full deliverables for validation, but this usability report is generated from review of the QC summary form information, with review of sample raw data, and limited review of associated QC raw data. Full validation has not been performed. However, the reported summary tables have been reviewed for application of validation qualifiers, per the USEPA Region 2 validation SOPs and the USEPA National Functional Guidelines for Data Review, as affects the usability of the sample data. The following items were reviewed:

* Laboratory Narrative Discussion
* Custody Documentation
* Holding Times
* Surrogate and Internal Standard Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlation
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Instrumental Tunes
* Calibration Standards
* Instrument IDLs

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR level review.

In summary, most sample results are usable as reported. However, nondetected PAH analytes are not usable in two samples. The specifics are noted below.

Copies of the laboratory case narratives and laboratory NYSDEC Sample Analytical Requirement Summary Forms are attached to this text, and should be reviewed in conjunction with this report. Also included with this submission are client results tables with validation qualifiers and edits applied in red ink. These tables will be referenced in this report.

The following text discusses quality issues of concern.

General

Blind field duplicate evaluations were performed on aqueous sample MW-12D and soil samples MW-12(0-4), SB-38(4-8), SB-43(0-4), and SS-24A. Correlations were acceptable, with the exception of those for the semivolatiles in MW-12(0-4). Results for detected analytes in that field duplicate are between four and nine times higher than that parent sample. Results for detected PAHs in the sample MW-12(0-4) and DUP-3 are qualified estimated ("J").

BTEX Analyses by EPA 8260B

The three trip blanks submitted with the aqueous samples were dated more than two weeks prior to sample collection. Therefore, holding times for analysis of those blanks were missed, and those results are qualified as estimated, with a possible low bias.

Results for detected compounds in MW-4 and MW-5 are qualified as estimated due to elevated recovery of one surrogate standard (122% for both, above 114% limit). It is noted that the surrogate also produced similarly elevated recoveries in three associated method blanks, indicating that the outliers are not due to matrix.

Equipment, trip, and method blanks show no contamination. Sample holding times were met. Instrumental tunes were compliant. Calibration standards met protocol and validation requirements.

Internal standard d4-1,4-dichlorobenzene responded below the 50% limit in one sample, but there are no target analytes associated with this standard. Sample results are unaffected.

Matrix spikes were performed on aqueous sample MW-12S and low level soil samples SB-39(0-4), SB-46(0-4), and SB-46(4-8). Accuracy and precision were acceptable. There were no medium level soil matrix spikes analyzed.

Nine soil samples (identifications are specified in the laboratory case narrative) were analyzed at dilution due to non-target sample components. Therefore, higher reporting limits were reported.

PAH Analyses by EPA 8270C

Samples MW-5 and SB-37(14-16) failed to recover surrogate standard d5-nitrobenzene upon initial extraction. SB-37(14-16) was reextracted successfully, but well beyond the allowable holding time (43 days from VTSR, beyond the allowable 10 days). Sample MW-5 was not reextracted. Results for nondetected analytes in both samples are rejected ("R") and not usable. The detected values for both samples are qualified as estimated ("J"), with a possible low bias. The soil reextraction results should be used preferentially over the initial. The reason for that surrogate failure is not evident chromatgraphically.

Results for SB-37(18-20) are qualified as estimated ("J" and "UJ") due to low recoveries for two surrogate standards.

Results for analytes initially reported with the "E" flag are to be derived from dilution analyses. They include the following:

Sample ID	Analyte	Result, ppb
MW-5	Naphthalene	760
MW-12(10-12)	Phenanthrene	8000

Matrix spikes of aqueous sample MW-12S and soil samples SB-39(0-4) and MW-12 (14-16) show acceptable accuracy and precision for all eleven analytes evaluated. The spikes for SB-46(0-4) could not be evaluated due to high sample concentrations and the subsequent required dilution.

Internal standards, instrument tunes, and calibration standards meet protocol/validation requirements.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

Data Validation Services

120 Cobble Creek Road P. O. Box 208

North Creek, N. Y. 12853

Phone 518-251-4429

Facsimile 518-251-4428

February 18, 2005

Scott Tucker
O'Brien & Gere Engineers
5000 Brittonfield Parkway
Syracuse, NY 13221

RE: Data Usability Summary Report for NMPC-South First St. Fulton, NY Data Package
OBG Laboratory SDG Nos. 8894, 8925, 8957, 9060/9091, 1240/1254/1264/1303, 1823, and 5554

Dear Mr. Tucker:

Review has been completed for the data packages generated by O'Brien & Gere Laboratories that pertain to samples collected 5/08/01 through 6/01/01, 2/11/02 through 4/16/02, and 6/06/03 at the Niagara Mohawk Rome South First St. Fulton, NY site. One hundred and ten soil samples (including field duplicates) were analyzed for PAHs. Fifty-one of these were also analyzed for BTEX, and nine of those were processed for TAL metals. Seven aqueous samples were processed for BTEX and PAHs. Equipment/trip blanks and matrix spikes/duplicates were also processed. Analytical methodologies used are those of the 1995 NYSDEC ASP/USEPA SW846 8260B, 8270C, 6010B, and 7471.

The data packages submitted contained full deliverables for validation, but this usability report is generated from review of the QC summary form information, with review of sample raw data, and limited review of associated QC raw data. Full validation has not been performed. However, the reported summary tables have been reviewed for application of validation qualifiers, per the USEPA Region 2 validation SOPs and the USEPA National Functional Guidelines for Data Review, as affects the usability of the sample data. The following items were reviewed:

* Laboratory Narrative Discussion
* Custody Documentation
* Holding Times
* Surrogate and Internal Standard Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlation
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Instrumental Tunes
* Calibration Standards
* Instrument IDLs

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR level review.

In summary, samples were processed in accordance with protocol/QAPP requirements, and sample results are usable as reported or usable with minor qualification as estimated.

Copies of the laboratory case narratives and laboratory NYSDEC Sample Analytical Requirement Summary Forms are attached to this text, and should be reviewed in conjunction with this report. Also included with this submission are sample report forms with validation qualifiers and edits applied in red ink. These tables will be referenced in this report.

The following text discusses quality issues of concern.

General

Blind field duplicate evaluations were performed on aqueous sample MW-4 and on soil samples SB-18(18-20), SB-19-(12-14), SS-14, SB-22(18-20), SB-30(12-14), and SB-34(2-4). Correlations were acceptable, with the exception of those for the semivolatiles in SS-14. Results for detected analytes in that field duplicate are about twenty times higher than that parent sample. Results for detected PAHs in the sample SS-4 and its associated blind duplicate are qualified estimated ("J").

BTEX Analyses by EPA 8260B

Equipment and trip blanks show no contamination. Method blanks reported in SDG 8925 show low concentrations of xylene, and one of the blanks (5/15/01) also shows a low level of toluene. Associated sample results should have been flagged as "B" by the laboratory. Low level detections in those samples that are within fivefold concentration of the blanks have been edited to nondetection at the CRDL.

Internal standard d4-1,4-dichlorobenzene responded below the 50% limit in three samples, but there are no target analytes associated with this standard. Sample results are unaffected.

Matrix spikes were performed on aqueous sample MW-8 and low level soil samples SB-14(16-18), SS-17, and BK-1. Accuracy and precision were acceptable.

The result for xylene in SB-15(6-8) is qualified as estimated, as the response is below the established linear range for those combined compounds.

Sample holding times were met. Instrumental tunes were compliant. Calibration standards met protocol and validation requirements. Several soil samples were analyzed only at dilution, resulting in higher reporting limits. In some cases, matrix interferences are not apparent on the dilution chromatograms.

PAH Analyses by EPA 8270C

Internal standard d12-perylene responded below the 50% limit in the following samples, and the six associated compounds are therefore qualified as estimated. Initial analyses are preferable unless noted otherwise: SB-15(2-4) and SB-12(8-10), SS-10, SS-11, SS-14 (use reanalysis), Internal standards d12-chrysene and d12-perylene responded below the 50% limit in the undiluted analysis of SS Blind Duplicate. The dilution analysis was acceptable, and results from that are to be used from the dilution for the six compounds associated with d12-perylene. Results for this sample are already qualified as estimated due to field duplicate correlations.

Results for analytes initially reported with the "E" flag are to be derived from dilution analyses.

Matrix spikes of aqueous sample MW-8 and soil samples SB-14(16-18), SB-18(6-8), SS-17, SB-23(10-12), SB-29(10-12), BK-1, SS-24, and SB-34(14-16) show acceptable accuracy and precision for the sixteen PAHs evaluated.

Calibration standards meet validation guidelines, with the following exceptions of elevated responses, detected results for which are qualified as estimated in the indicated samples:

- o Indeno(1,2,3-cd)anthracene and dibenz(a,h)anthracene (21%D and 22%D) (affected detected results are already qualified as estimated due to values below CRDL)
- o Dibenz(a,h)anthracene and benzo(g,h,i)perylene (22%D to 23%D) detected values reported in SDG 1823

Detected results for benzo(b)fluoranthene and benzo(k)fluoranthene in samples reported in SDG 1241 are qualified as estimated due to lack of resolution of the isomers.

Holding times were met, and surrogate recoveries are within required limits. Instrument tunes meet protocol/validation requirements.

TAL Metals by 6010B

Matrix spikes and duplicate evaluations were performed on SS-17. The following element exhibited matrix spike recoveries outside the validation action ranges, indicating either a matrix effect on recovery of analytes from the samples, or a nonhomogenous matrix. Project sample results are qualified as estimated ("J" or "UJ"):

Element	%Recoveries
antimony	39 and 39
arsenic	52 and 66
manganese	142 and 72
selenium	82 and 68 (PDS 69%)

ICP serial dilution evaluation was performed on SS-17, and showed outlying correlations for beryllium (13%D), iron (11%D), and sodium (20%D). Results for these three elements are therefore qualified as estimated in the project samples.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

Judy Harry

DATA QUALIFIER DEFINITIONS

INORGANIC

The following definitions provide brief explanations of the national qualifiers assigned to results in the data review process. If the Regions choose to use additional qualifiers, a complete explanation of those qualifiers should accompany the data review.

U	**-**	**The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.**
J	**-**	**The associated value is an estimated quantity.**
R	**-**	**The data are unusable. (Note: Analyte may or may not be present.)**
UJ	**-**	**The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.**

Data Validation Services

120 Cobble Creek Road P. O. Box 208

North Creek, N. Y. 12853

Phone 518-251-4429

Facsimile 518-251-4428

February 22, 2006

Scott Tucker
O'Brien & Gere Engineers
5000 Brittonfield Parkway
Syracuse, NY 13221

RE: Data Usability Summary Report for NMPC-South First St. Fulton, NY Data Package
Life Sciences Laboratory SDG Nos. 510084, 511023/511034, and 512206

Dear Mr. Tucker:

Review has been completed for the data packages generated by O'Brien & Gere Laboratories that pertain to samples collected 1014/05 through 12/29/05 at the Niagara Mohawk Rome South First St. Fulton, NY site. Twenty-two aqueous and seven soil samples (including a total of three field duplicates) were analyzed for BTEX and PAHs. The aqueous samples were also analyzed for cyanide. Six additional soil samples (including a field duplicate) were processed for PAHs. Equipment/trip blanks and matrix spikes/duplicates were also processed. Analytical methodologies used are those of the 1995 NYSDEC ASP/USEPA SW846 8260B, 8270C, and 9012.

The data packages submitted contained full deliverables for validation, but this usability report is generated from review of the QC summary form information, with review of sample raw data, and limited review of associated QC raw data. Full validation has not been performed. However, the reported summary tables have been reviewed for application of validation qualifiers, per the USEPA Region 2 validation SOPs and the USEPA National Functional Guidelines for Data Review, as affects the usability of the sample data. The following items were reviewed:

* Laboratory Narrative Discussion
* Custody Documentation
* Holding Times
* Surrogate and Internal Standard Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlation
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Instrumental Tunes
* Calibration Standards
* Instrument IDLs

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR level review.

In summary, samples were primarily processed in accordance with protocol/QAPP requirements, and most sample results are usable as reported or usable with minor qualification as estimated. However, results for non-detected PAH analytes in three aqueous samples are not usable due to surrogate failure. Because those samples were not re-processed by the laboratory, it is not known whether recollection of the samples could result in usable data.

Copies of the laboratory case narratives and laboratory NYSDEC Sample Analytical Requirement Summary Forms are attached to this text, and should be reviewed in conjunction with this report. Also included with this submission are sample report forms with validation qualifiers and edits applied in red ink. These tables will be referenced in this report.

The following text discusses quality issues of concern.

General

Blind field duplicate evaluations were performed on aqueous samples MW-4-110205-(8FT) and MW-3-110305-(8.5 FT), and on soil samples SS-29-122905 and SB-48-101405(2-4). Correlations were acceptable, with the exception of those for the PAHs in SB-48-101495(2-4). Results for detected analytes in that field duplicate are about ten times higher than those in its parent sample. Results for detected PAHs in the sample SB-48-101495(2-4) and its associated blind duplicate are qualified estimated ("J").

The report forms for the equipment and trip blanks incorrectly report soil units of "ug/kg."

BTEX Analyses by EPA 8260B

Due to presence in the associated trip blank, the result for toluene in MW-6-110205 is considered external contamination and edited to be non-detection. Equipment and method blanks show no contamination.

Internal standard d4-1,4-dichlorobenzene responded below the 50% limit in two samples, but there are no target analytes associated with this standard. Sample results are unaffected.

Matrix spikes were performed on soil sample SB-48-101405(0-2) and aqueous samples MW-2-110305 and MW-11-110205. Accuracy and precision were within laboratory and validation guidelines.

Sample holding times were met. Instrumental tunes were compliant. Calibration standards met protocol and validation requirements.

PAH Analyses by EPA 8270C

Samples MW-4-110205 (8 FT), MW-4-110205(12FT), and DUPE-1-110205 produced no recovery of d5-nitrobenzene. The samples were not re-extracted, so it is unknown whether the cause of the failures was due to sample matrix or to laboratory processing. The results for analytes not detected in those three samples are therefore rejected ("R"), and detected values are qualified as estimated, with a probable low bias.

Internal standard d12-perylene responded below the 50% limit in the undiluted analyses of the following samples, and the six associated compoumds are therefore qualified as estimated if derived from the undiluted analyses: SB-48-101405(0-2), SS-29-122905, SS-30-122905, SS-31-122905, SS-32-122905, and DUP-1-122905.

Sample SS-32-122905 and DUP-1-122905 also show low responses for internal standard d12-chrysene, and the three associated compounds are also qualified as estimated in those two samples.

Results for analytes initially reported with the "E" flag are to be derived from dilution analyses.

Matrix spikes of aqueous sample MW-11-110205 and soil sample SB-48-101405(0-2) were acceptable, with the exception of the recoveries of indeno(1,2,3-cd)pyrene in the soil. Results for that analyte in parent sample SB-48-101405(0-2) are already qualified as estimated due to internal standard responses.

The matrix spikes (MS/MSD) of SS-28-122905 show inconsistencies in recoveries and were noted during analysis as differing in color and viscosity. Although the chromatograms of the MS and the parent sample look similar, the MS is at much higher concentrations of response, and was analyzed at a tenfold dilution. The chromatogram of the MSD does not resemble those of the parent and MS. All results for the parent sample are qualified as estimated due to potential non-homogenous matrix.

Calibration standards meet validation guidelines. Equipment and method blanks show no contamination. Holding times were met, and instrument tunes meet protocol/validation requirements.

Wet Chemistry Analyses-Cyanide

Review was conducted for method compliance, transcription, calculations, standard and blank acceptability, accuracy and precision,etc., as applicable to each procedure. All were found acceptable unless noted specifically within this text.

Matrix spikes of MW-11-110205 (5FT) and MW-2-110305 were acceptable.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Hsarry

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		VOA GC/MS Method#	BNA GC/MS Method#	VOA GC Method#	PEST PCBs Method#	METALS	OTHER
DUP-1-101405	0510084-001	8260B	8270C				
SB-47-101405 (0-2')	0510084-002	8260B	8270C				
SB-47-101405 (2-4')	0510084-003	8260B	8270C				
SB-47-101405 (4-6')	0510084-004	8260B	8270C				
SB-48-101405 (0-2')	0510084-005	8260B	8270C				
SB-48-101405 (0-2')	0510084-005MS	8260B	8270C				
SB-48-101405 (0-2')	0510084-005MSD	8260B	8270C				
SB-48-101405 (2-4')	0510084-006	8260B	8270C				
SB-48-101405 (4-6')	0510084-007	8260B	8270C				
EB-1-10140105	0510084-009	8260B	8270C				
TB-1-101405	0510084-010	8260B					

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND

ANALYTICAL SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		VOA GC/MS Method#	BNA GC/MS Method#	VOA GC Method#	PEST PCBs Method#	METALS	OTHER
MW-7-11105-(7FT)	0511023-001	8260B	8270G				SW9012A
MW-7-11105-(11FT)	0511023-002	8260B	8270G				SW9012A
MW-8-11105	0511023-003	8260B	8270C				SW9012A
MW-10-11105-(11FT)	0511023-004	8260B	8270C				SW9012A
MW-4-110205-(8FT)	0511023-005	8260B	8270C				SW9012A
MW-4-110205-(12FT)	0511023-006	8260B	8270C				SW9012A
MW-5-110205	0511023-007	8260B	8270C				SW9012A
DUPE-1-110205	0511023-008	8260B	8270C				SW9012A
MW-6-110205	0511023-009	8260B	8270C				SW9012A
MW-7D-110205	0511023-010	8260B	8270C				SW9012A
MW-8D-110205	0511023-011	8260B	8270C				SW9012A
MW-9D-110205	0511023-012	8260B	8270C				SW9012A
MW-11-110205-(5FT)	0511023-013	8260B	8270C				SW9012A
MW-11-110205-(5FT)	0511023-013MS/MSD	8260B	8270C				
MW-11-110205-(10FT)	0511023-014	8260B	8270C				SW9012A
MW-12D-110205	0511023-015	8260B	8270C				SW9012A
TB-110205	0511023-016	8260B					
MW-1-110305	0511038-001	8260B	8270C				SW9012A
MW-2-110305	0511038-002	8260B	8270C				SW9012A
MW-2-110305	0511038-002MS/MSD	8260B	8270C				
MW-3-110305 (8.5FT)	0511038-003	8260B	8270C				SW9012A
MW-3-110305 (12FT)	0511038-004	8260B	8270C				SW9012A
MW-9S-110305	0511038-005	8260B	8270C				SW9012A
MW-12S-110305 (8.5FT)	0511038-006	8260B	8270C				SW9012A
MW-12S-110305 (12FT)	0511038-007	8260B	8270C				SW9012A
DUP-2-110305	0511038-008	8260B	8270C				SW9012A
TB-2-110305	0511038-009	8260B					

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND

ANALYTICAL SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		VOA GC/MS Method#	BNA GC/MS Method#	VOA GC Method#	PEST PCBs Method#	METALS	OTHER
SS-28-122905	0512206-001A		8270C				
SS-28-122905	0512206-001AMS/MSD		8270C				
SS-29-122905	0512206-002A		8270C				
SS-30-122905	0512206-003A		8270C				
SS-31-122905	0512206-004A		8270C				
SS-32-122905	0512206-005A		8270C				
DUP-1-122905	0512206-006A		8270C				

NARRATIVE

INTRODUCTION/ANALYTICAL RESULTS

This report summarizes the laboratory results for O'Brien & Gere Engineers, Inc. samples from the Niagara Mohawk Power Corporation –South First Street – Fulton, NY. New York State Department of Environmental Conservation forms are included in the Laboratory Report Package.

CONDITION UPON RECEIPT/CHAIN OF CUSTODY

The coolers were received intact. When the coolers were received by the laboratory, the sample custodian(s) opened and inspected the shipments for damage and custody inconsistencies. Chain of custodies documenting receipt are presented in the chain of custody section. Each sample was assigned a unique laboratory number and a custody file created. The samples were placed in a secured walk-in cooler and signed in and out by the chemists performing the tests. The sign out record, or lab chronicle, is presented in the chain of custody section.

No discrepancies were noted upon receipt. The cooler temperature was 2.4°C.

METHODOLOGY

The following methods were used to perform the analyses:

PARAMETER	METHOD	REFERENCE
Volatile Organics	8260B	1
Semivolatile Organics	8270C	1
Percent Total Solids	2540-G	2

1) New York State Department of Environmental Conservation Analytical Services Protocol, October 1995.

2) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992

QUALITY CONTROL

QA/QC results are summarized in the Laboratory Report Package.

RAW DATA

The raw data is organized according to the New York State Department of Environmental Conservation Analytical Services Protocol Category "B" order of data requirements.

QA/QC: [signature]　　Date: 12-8-05

Total # of pages in this report: 513

GC/MS Volatile Organics Case Narrative

Client:	OBG
Project/Order:	NIMO -South First St - Fulton, NY
Work Order #:	0510084
Methodology:	8260B

Analyzed/Reviewed by (Initials/Date): [illegible] 11-22-05

Supervisor/Reviewed by (Initials/Date): [illegible] 11-22-05

QA/QC Review (Initials/Date): [illegible] 11-30-05

File Name: G:\Narratives\MSVoa\0510084msvnar.doc

GC/MS Volatile Organics
The GC/MS Volatile instruments used a Restek Rtx-VMS, 40 m x 0.18 mm ID capillary column and a Vocarb 3000 trap.

Holding Times and Sample Preservation
All samples were prepared and analyzed within the method and/or QAPP specified holding time requirements.

Laboratory Control Sample
All spike recoveries met method and/or project specific QC criteria.

MS/MSD/MSB
All spike recovery and RPD data met method and/or project specific QC criteria.

Surrogate Standards
All surrogate standard recoveries met method and/or project specific QC criteria.

Internal Standards
Internal standard 1,4-Dichlorobenzene-d4 exceeded the lower control limit for samples 0510084-002A [SB-47 (0-2')] and 0510084-003A [SB-47 (2-4')]. No compounds of interest are associated with this internal standard, therefore no corrective action is required.

Calibrations
All initial calibrations and calibration verifications met method and/or project specific QC criteria.

Preparation Blanks
All preparation blanks met method and/or project specific QC criteria.

GC/MS Semi-Volatile Organics Case Narrative

Client ID:	OBG-MS
Proj./Ord.:	NIMO-South First St-Fulton, NY
W.O. #:	0510084
Methodology:	8270C

Analyzed/Reviewed by (Initials/Date): MEF 10-1-05

Supervisor/Reviewed by (Initials/Date): Cn 11-21-05

QA/QC Review (Initials/Date): 11-30-05

File Name: C:\Documents MS5\Templates\0510084svnar.doc

GC/MS Semi-Volatile Organics
The GC/MS Semi-volatile instruments used a Zebron ZB-5, 30 m x 0.25 mm ID capillary column.

Holding Times and Sample Preservation
All samples were prepared and analyzed within the method and/or QAPP specified holding time requirements.

Laboratory Control Sample
All spike recoveries met method and/or project specific QC criteria.

MS/MSD/MSB
The following compound(s) did not meet matrix spike/matrix spike duplicate percent recovery and/or RPD criteria:

Sample Description	Sample #	Compound	% REC	RPD	Corrective Action
SB-48-101405(0-2')	0510084-005B	several	X		1

1 The recovery for this compound in the associated LCS and/or MSB was within acceptance limits. The concentration of the analyte in the sample was much greater than the concentration of the analyte spiked, which may bias recoveries. No corrective action was taken.

Surrogate Standards
All surrogate standard recoveries met method and/or project specific QC criteria.

Internal Standards
The internal standard area for the following sample(s) did not meet abundance criteria:

Sample Description	Sample #	Internal Standard	Corrective Action
SB-48-101405(0-2')	0510084-005B	Perylene-d12	1
SB-48-101405(0-2')MS	0510084-005BMS	Perylene-d12	1
SB-48-101405(0-2')MSD	0510084-005BMSD	Perylene-d12	1

Client ID: OBG-MS
Proj./Ord.: NIMO-South First St-Fulton, NY
W.O.#: 0510084
Methodology: 8270C

1 The recovery was confirmed by similar sample, MS, and MSD results. No corrective action was taken.

Calibrations
All initial calibrations and calibration verifications met method and/or project specific QC criteria.

Preparation Blanks
All preparation blanks met method and/or project specific QC criteria.

Soil vapor laboratory report

Performance Analytical Inc.
Air Quality Laboratory

LABORATORY REPORT

Client:	O'BRIEN & GERE ENGINEERS, INC.	Date of Report:	07/10/98
Address:	5000 Brittonfield Parkway	Date Received:	06/23/98
	Syracuse, NY 13221	PAI Project No:	P9801041
Contact:	Mr. Tim Eddy	Purchase Order:	Verbal
Client Project ID:	Niagara Mohawk Power Corporation	New York ELAP ID:	#11221

Four (4) Tedlar Bag Samples labeled:
"SV-1" "SV-2" "SV-3" "Blind Duplicate"

Five (5) PUF/XAD-2 Samples labeled:
"SV-1" "SV-2" "SV-3" "Blind Duplicate" "Trip Blank"

The samples were received at the laboratory under chain of custody on June 23, 1998. The samples were received intact. The dates of analyses are indicated on the attached data sheets.

BTEX Analysis

The Tedlar bags were analyzed for Benzene, Toluene, Ethylbenzene and total Xylenes according to modified CARB Method 410 using a gas chromatograph equipped with a photoionization detector.

Polynuclear Aromatic Hydrocarbons Analysis

The PUF/XAD-2 cartridges were analyzed for polynuclear aromatic hydrocarbons (PAHs) using combined gas chromatography/mass spectrometry (GC/MS) according to the methodology outlined in EPA Method TO-13 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, EPA 600/4-84-041, U.S. Environmental Protection Agency, Research Triangle Park, NC, April, 1984. The analyses were performed using a Hewlett-Packard Model 5890 Series II gas chromatograph/ Model 5971 mass selective detector equipped with a Model 7673A robot arm autoinjector. A 5% Phenyl/95% Dimethylpolysiloxane capillary column (RT_x-5, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation.

The results of analyses are given on the attached data sheets.

Data Release Authorization:	Reviewed and Approved:
Nelyn Quitoviera	Michael Tuday
Analytical Chemist	Laboratory Director

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Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : SV-1
PAI Sample ID : P9801041-001A

Test Code :	Modified CARB Method 410	Date Sampled :	6/22/98
Analyst :	J. Dan Taliaferro	Date Received :	6/23/98
Instrument :	HP5890/PID #2	Date Analyzed :	6/23/98
Matrix :	Tedlar Bag	Volume(s) Analyzed :	1.00 ml

D.F. = 1.00

CAS #	COMPOUND	RESULT mg/m^3	REPORTING LIMIT mg/m^3	RESULT ppm	REPORTING LIMIT ppm
71-43-2	Benzene	ND	0.16	ND	0.050
108-88-3	Toluene	ND	0.19	ND	0.050
100-41-4	Ethylbenzene	ND	0.22	ND	0.050
1330-20-7	m- & p-Xylenes	ND	0.22	ND	0.050
95-47-6	o-Xylene	ND	0.22	ND	0.050

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RG

Date : 7/8/98

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Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS
PAGE 1 OF 1

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : SV-2
PAI Sample ID : P9801041-002A

Test Code : Modified CARB Method 410
Analyst : J. Dan Taliaferro
Instrument : HP5890/PID #2
Matrix : Tedlar Bag

Date Sampled : 6/22/98
Date Received : 6/23/98
Date Analyzed : 6/23/98
Volume(s) Analyzed : 1.00 ml

D.F. = 1.00

CAS #	COMPOUND	RESULT mg/m^3	REPORTING LIMIT mg/m^3	RESULT ppm	REPORTING LIMIT ppm
71-43-2	Benzene	ND	0.16	ND	0.050
108-88-3	Toluene	ND	0.19	ND	0.050
100-41-4	Ethylbenzene	ND	0.22	ND	0.050
1330-20-7	m- & p-Xylenes	ND	0.22	ND	0.050
95-47-6	o-Xylene	ND	0.22	ND	0.050

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RG
Date : 7/9/98

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Performance Analytical Inc.
Air Quality Laborarory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : SV-3
PAI Sample ID : P9801041-003A

Test Code : Modified CARB Method 410
Analyst : J. Dan Taliaferro
Instrument : HP5890/PID #2
Matrix : Tedlar Bag

Date Sampled : 6/22/98
Date Received : 6/23/98
Date Analyzed : 6/23/98
Volume(s) Analyzed : 1.00 ml

D.F. = 1.00

CAS #	COMPOUND	RESULT mg/m³	REPORTING LIMIT mg/m³	RESULT ppm	REPORTING LIMIT ppm
71-43-2	Benzene	ND	0.16	ND	0.050
108-88-3	Toluene	ND	0.19	ND	0.050
100-41-4	Ethylbenzene	ND	0.22	ND	0.050
1330-20-7	m- & p-Xylenes	ND	0.22	ND	0.050
95-47-6	o-Xylene	ND	0.22	ND	0.050

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RC

Date : 7/8/98

Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : Blind Duplicate
PAI Sample ID : P9801041-004A

Test Code : Modified CARB Method 410
Analyst : J. Dan Taliaferro
Instrument : HP5890/PID #2
Matrix : Tedlar Bag

Date Sampled : 6/22/98
Date Received : 6/23/98
Date Analyzed : 6/23/98
Volume(s) Analyzed : 1.00 ml

D.F. = 1.00

CAS #	COMPOUND	RESULT mg/m³	REPORTING LIMIT mg/m³	RESULT ppm	REPORTING LIMIT ppm
71-43-2	Benzene	ND	0.16	ND	0.050
108-88-3	Toluene	ND	0.19	ND	0.050
100-41-4	Ethylbenzene	ND	0.22	ND	0.050
1330-20-7	m- & p-Xylenes	ND	0.22	ND	0.050
95-47-6	o-Xylene	ND	0.22	ND	0.050

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RG

Date : 7/8/98

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Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : Blind Duplicate
PAI Sample ID : P9801041-004A (Laboratory Duplicate)

Test Code :	Modified GARB Method 410	Date Sampled :	6/22/98
Analyst :	J. Dan Taliaferro	Date Received :	6/23/98
Instrument :	HP5890/PID #2	Date Analyzed :	6/23/98
Matrix :	Tedlar Bag	Volume(s) Analyzed :	1.00 ml

D.F. = 1.00

CAS #	COMPOUND	RESULT mg/m³	REPORTING LIMIT mg/m³	RESULT ppm	REPORTING LIMIT ppm
71-43-2	Benzene	ND	0.16	ND	0.050
108-88-3	Toluene	ND	0.19	ND	0.050
100-41-4	Ethylbenzene	ND	0.22	ND	0.050
1330-20-7	m- & p-Xylenes	ND	0.22	ND	0.050
95-47-6	o-Xylene	ND	0.22	ND	0.050

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RC

Date : 7/8/98

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Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : N/A
PAI Sample ID : PAI Method Blank

Test Code : Modified CARB Method 410
Analyst : J. Dan Taliaferro
Instrument : HP5890/PID #2
Matrix : Tedlar Bag

Date Sampled : N/A
Date Received : N/A
Date Analyzed : 6/23/98
Volume(s) Analyzed : 1.00 ml

D.F. = 1.00

CAS #	COMPOUND	RESULT mg/m³	REPORTING LIMIT mg/m³	RESULT ppm	REPORTING LIMIT ppm
71-43-2	Benzene	ND	0.16	ND	0.050
108-88-3	Toluene	ND	0.19	ND	0.050
100-41-4	Ethylbenzene	ND	0.22	ND	0.050
1330-20-7	m- & p-Xylenes	ND	0.22	ND	0.050
95-47-6	o-Xylene	ND	0.22	ND	0.050

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RC

Date : 7/8/98

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Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : SV-1
PAI Sample ID : P9801041-001B

Test Code :	Modified EPA TO-13	Date Sampled :	6/22/98
Analyst :	Nelyn Quitoviera	Date Received :	6/23/98
Instrument :	HP5890II/MSD	Date Extracted :	6/23/98
Matrix :	PUF/XAD-2	Date Analyzed :	6/24/98

D.F. = 1.00

CAS #	COMPOUND	RESULT µg/Sample	REPORTING LIMIT µg/Sample
91-20-3	Naphthalene	ND	0.25
208-96-8	Acenaphthalene	ND	0.25
83-32-9	Acenaphthene	ND	0.25
86-73-7	Fluorene	ND	0.25
85-01-8	Phenanthrene	ND	0.25
120-12-7	Anthracene	ND	0.25
206-44-0	Fluoranthene	ND	0.25
129-00-0	Pyrene	ND	0.25
56-55-3	Benzo(a)anthracene	ND	0.25
218-01-9	Chrysene	ND	0.25
205-99-2	Benzo(b)Fluoranthene	ND	0.25
207-08-9	Benzo(k)Fluoranthene	ND	0.25
50-32-8	Benzo(a)Pyrene	ND	0.25
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.25
53-70-3	Dibenzo(a,h)anthracene	ND	0.25
191-24-2	Benzo(g,h,i)perylene	ND	0.25

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RG

Date : 7/8/98

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Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : SV-2
PAI Sample ID : P9801041-002B

Test Code :	Modified EPA TO-13	Date Sampled :	6/22/98
Analyst :	Nelyn Quitoviera	Date Received :	6/23/98
Instrument :	HP5890II/MSD	Date Extracted :	6/25/98
Matrix :	PUF/XAD-2	Date Analyzed :	6/26/98

D.F. = 1.00

CAS #	COMPOUND	RESULT µg/Sample	REPORTING LIMIT µg/Sample
91-20-3	Naphthalene	ND	0.25
208-96-8	Acenaphthalene	ND	0.25
83-32-9	Acenaphthene	ND	0.25
86-73-7	Fluorene	ND	0.25
85-01-8	Phenanthrene	ND	0.25
120-12-7	Anthracene	ND	0.25
206-44-0	Fluoranthene	ND	0.25
129-00-0	Pyrene	ND	0.25
56-55-3	Benzo(a)anthracene	ND	0.25
218-01-9	Chrysene	ND	0.25
205-99-2	Benzo(b)Fluoranthene	ND	0.25
207-08-9	Benzo(k)Fluoranthene	ND	0.25
50-32-8	Benzo(a)Pyrene	ND	0.25
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.25
53-70-3	Dibenzo(a,h)anthracene	ND	0.25
191-24-2	Benzo(g,h,i)perylene	ND	0.25

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RCr

Date : 7/9/98

Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : SV-3
PAI Sample ID : P9801041-003B

Test Code : Modified EPA TO-13
Analyst : Nelyn Quitoviera
Instrument : HP5890II/MSD
Matrix : PUF/XAD-2

Date Sampled : 6/22/98
Date Received : 6/23/98
Date Extracted : 6/25/98
Date Analyzed : 6/26/98

D.F. = 1.00

CAS #	COMPOUND	RESULT µg/Sample	REPORTING LIMIT µg/Sample
91-20-3	Naphthalene	ND	0.25
208-96-8	Acenaphthalene	ND	0.25
83-32-9	Acenaphthene	ND	0.25
86-73-7	Fluorene	ND	0.25
85-01-8	Phenanthrene	ND	0.25
120-12-7	Anthracene	ND	0.25
206-44-0	Fluoranthene	ND	0.25
129-00-0	Pyrene	ND	0.25
56-55-3	Benzo(a)anthracene	ND	0.25
218-01-9	Chrysene	ND	0.25
205-99-2	Benzo(b)Fluoranthene	ND	0.25
207-08-9	Benzo(k)Fluoranthene	ND	0.25
50-32-8	Benzo(a)Pyrene	ND	0.25
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.25
53-70-3	Dibenzo(a,h)anthracene	ND	0.25
191-24-2	Benzo(g,h,i)perylene	ND	0.25

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RG

Date : 7/8/98

Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : Blind Duplicate
PAI Sample ID : P9801041-004B

Test Code : Modified EPA TO-13
Analyst : Nelyn Quitoviera
Instrument : HP5890II/MSD
Matrix : PUF/XAD-2

Date Sampled : 6/22/98
Date Received : 6/23/98
Date Extracted : 6/25/98
Date Analyzed : 6/26/98

D.F. = 1.00

CAS #	COMPOUND	RESULT µg/Sample	REPORTING LIMIT µg/Sample
91-20-3	Naphthalene	ND	0.25
208-96-8	Acenaphthalene	ND	0.25
83-32-9	Acenaphthene	ND	0.25
86-73-7	Fluorene	ND	0.25
85-01-8	Phenanthrene	ND	0.25
120-12-7	Anthracene	ND	0.25
206-44-0	Fluoranthene	ND	0.25
129-00-0	Pyrene	ND	0.25
56-55-3	Benzo(a)anthracene	ND	0.25
218-01-9	Chrysene	ND	0.25
205-99-2	Benzo(b)Fluoranthene	ND	0.25
207-08-9	Benzo(k)Flnoranthene	ND	0.25
50-32-8	Benzo(a)Pyrene	ND	0.25
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.25
53-70-3	Dibenzo(a,h)anthracene	ND	0.25
191-24-2	Benzo(g,h,i)perylene	ND	0.25

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RG

Date : 7/8/98

20954 Osborne Street, Canoga Park, CA 91304 • Phone 818 709-1139 • Fax 818 709-2915

Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : Trip Blank
PAI Sample ID : P9801041-005

Test Code :	Modified EPA TO-13	Date Sampled :	6/22/98
Analyst :	Nelyn Quitoviera	Date Received :	6/23/98
Instrument :	HP5890II/MSD	Date Extracted :	6/25/98
Matrix :	PUF/XAD-2	Date Analyzed :	6/26/98

D.F. = 1.00

CAS #	COMPOUND	RESULT µg/Sample	REPORTING LIMIT µg/Sample
91-20-3	Naphthalene	ND	0.25
208-96-8	Acenaphthalene	ND	0.25
83-32-9	Acenaphthene	ND	0.25
86-73-7	Fluorene	ND	0.25
85-01-8	Phenanthrene	ND	0.25
120-12-7	Anthracene	ND	0.25
206-44-0	Fluoranthene	ND	0.25
129-00-0	Pyrene	ND	0.25
56-55-3	Benzo(a)anthracene	ND	0.25
218-01-9	Chrysene	ND	0.25
205-99-2	Benzo(b)Fluoranthene	ND	0.25
207-08-9	Benzo(k)Fluoranthene	ND	0.25
50-32-8	Benzo(a)Pyrene	ND	0.25
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.25
53-70-3	Dibenzo(a,h)anthracene	ND	0.25
191-24-2	Benzo(g,h,i)perylene	ND	0.25

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RG
Date : 7/8/98

Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : N/A
PAI Sample ID : PAI Method Blank

Test Code : Modified EPA TO-13
Analyst : Nelyn Quitoviera
Instrument : HP5890II/MSD
Matrix : PUF/XAD-2

Date Sampled : N/A
Date Received : N/A
Date Extracted : 6/23/98
Date Analyzed : 6/24/98

D.F. = 1.00

CAS #	COMPOUND	RESULT µg/Sample	REPORTING LIMIT µg/Sample
91-20-3	Naphthalene	ND	0.25
208-96-8	Acenaphthalene	ND	0.25
83-32-9	Acenaphthene	ND	0.25
86-73-7	Fluorene	ND	0.25
85-01-8	Phenanthrene	ND	0.25
120-12-7	Anthracene	ND	0.25
206-44-0	Fluoranthene	ND	0.25
129-00-0	Pyrene	ND	0.25
56-55-3	Benzo(a)anthracene	ND	0.25
218-01-9	Chrysene	ND	0.25
205-99-2	Benzo(b)Fluoranthene	ND	0.25
207-08-9	Benzo(k)Fluoranthene	ND	0.25
50-32-8	Benzo(a)Pyrene	ND	0.25
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.25
53-70-3	Dibenzo(a,h)anthracene	ND	0.25
191-24-2	Benzo(g,h,i)perylene	ND	0.25

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RG

Date : 7/8/98

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Performance Analytical Inc.
Air Quality Laboratory

RESULTS OF ANALYSIS

Client : O'Brien & Gere Engineers, Inc.

Client Sample ID : N/A
PAI Sample ID : PAI Method Blank

Test Code : Modified EPA TO-13
Analyst : Nelyn Quitoviera
Instrument : HP5890II/MSD
Matrix : PUF/XAD-2

Date Sampled : N/A
Date Received : N/A
Date Extracted : 6/25/98
Date Analyzed : 6/26/98

D.F. = 1.00

CAS #	COMPOUND	RESULT µg/Sample	REPORTING LIMIT µg/Sample
91-20-3	Naphthalene	ND	0.25
208-96-8	Acenaphthalene	ND	0.25
83-32-9	Acenaphthene	ND	0.25
86-73-7	Fluorene	ND	0.25
85-01-8	Phenanthrene	ND	0.25
120-12-7	Anthracene	ND	0.25
206-44-0	Fluoranthene	ND	0.25
129-00-0	Pyrene	ND	0.25
56-55-3	Benzo(a)anthracene	ND	0.25
218-01-9	Chrysene	ND	0.25
205-99-2	Benzo(b)Fluoranthene	ND	0.25
207-08-9	Benzo(k)Fluoranthene	ND	0.25
50-32-8	Benzo(a)Pyrene	ND	0.25
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.25
53-70-3	Dibenzo(a,h)anthracene	ND	0.25
191-24-2	Benzo(g,h,i)perylene	ND	0.25

TR = Detected Below Indicated Reporting Limit
ND = Not Detected

Verified by : RG

Date : 7/8/98

Performance Analytical Inc.
Air Quality Laboratory

20954 Osborne Stre...
Canoga Park, California 91304
Phone 818 709-1139
Fax 818 709-2915

Chain of Custody Record
Analytical Services Request

Client/Project Name	Address/Phone	ANALYSES	PAI Project No.
OBRIEN & GERE Engineers, Inc.	5000 BRITTONFIELD PKWY SYRACUSE, N.Y. 13221 (315) 437-6100		P9801041
Project Location: NIAGARA MOHAWK Power CORP. SOUTH FIRST ST. SITE Fulton, N.Y.	Client Project No. 1118.081		
Contact: TIM EDDY	Sampler (Signature): Chawn O'Dell	P.O. No.	

Sample Identification No.	Date	Time	Lab Sample No.	Type of Sample	BTEX	PAHs					Expected Turnaround Time	Remarks
SV-1	6/22/98	1000	1	GRAB	X	X					Routine	-001
SV-2 (MS/MSD)		1025	2	GRAB	X	X						-002 MATRIX SPIKE/MATRIX SPK Du
SV-3		1055	3	GRAB	X	X						-003
BLIND Duplicate		—	4	GRAB	X	X						-004
TRIPBLANK		—	5	GRAB		X						-005

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Chawn O'Dell	6/22/98	1700hrs.	[illegible signature]	6-23-98	11:30

Disposal Method

Disposed by: (Signature)	Date	Time

White Copy : Accompanies Samples
Yellow Copy : Sampler

Appendix H

Sediment coring logs & photos

Niagara Mohawk Corporation
Former MGP Site - Fulton, New York
Oswego River: Sediment Coring Log

Sampling Program	Sample ID Number	Date/Time	Weather Conditions
	BK1	05/24/01 0945	overcast & light rain

Water Depth	Core Type	
2.5'	Auger	

Penetration Depth	Length Recovered	GPS Coordinates
6"	~6"	Northing/Lat. = Easting/Long. =

Core Section Interval	Visual Description		Comments
0-6	Medium brown silt w/ some light brown silt and trace gravel. White fleck of unknown material observed.		photo 11
	Location: South (opposite) shore of river approx. 20 ft downstream of marker buoy 75 (green) and marker 76 (red). Sample collected approx 10 ft from shore w/ clump of maple trees at ~~upstream~~ end of lot for white house w/ deck & brown house downstream. Upstream house w/ mural on side		photo 12

Sampler Initials: WAA | KRH

Niagara Mohawk Corporation
Former MGP Site - Fulton, New York
Oswego River: Sediment Coring Log

Sampling Program	Sample ID Number	Date/Time	Weather Conditions
	BK2	05/24/01 1030	Overcast
Water Depth	**Core Type**		
3 ft	Auger		
Penetration Depth	**Length Recovered**	**GPS Coordinates**	
0.5'	~0.5'	Northing/Lat. = Easting/Long. =	

Core Section Interval	Visual Description	Comments
0-1"	Surface consists of gravel	
1-6"	medium brown silt w/ Some fine SAND, trace white flecks & twig.	photo 13
	Location Description: ~10 from south shore at white ranch house opposite gray house (north shore) marker tag in middle of photo	Photo 14

Sampler Initials: WAA / KRH

Niagara Mohawk Corporation
Former MGP Site - Fulton, New York
Oswego River: Sediment Coring Log

Sampling Program	Sample ID Number	Date/Time	Weather Conditions
	BK3	05/24/01 1110	overcast + light breeze
Water Depth	**Core Type**		
7	Auger		
Penetration Depth	**Length Recovered**	**GPS Coordinates**	
0.5'	~0.5	Northing/Lat. = Easting/Long. =	

Core Section Interval	Visual Description		Comments
Surf. 1-6"	Surface = brown silt w/ twigs firm gray clay with root material.		PHOTO 16
	Location Description: North shore in front of cream house w/ blue trim w/ lawn fronting river. Location sampled at left of photo (tagged)		PHOTO 15

Sampler Initials: WAA/KRN

Niagara Mohawk Corporation
Former MGP Site - Fulton, New York
Oswego River: Sediment Coring Log

Sampling Program	Sample ID Number	Date/Time	Weather Conditions
	BK4	05/24/01 1135	Overcast/ SOME CLEARING

Water Depth	Core Type	
1ft	AUGER	

Penetration Depth	Length Recovered	GPS Coordinates
0.5	0.5	Northing/Lat. = Easting/Long. =

Core Section Interval	Visual Description	Comments
Surf.	surface = gravel	
~1-4	brown medium SAND w/ some gravel	
4-6	brown clay	No photo
	LOCATION: North shore ~ 2ft from shore in line with middle of three poplar TREES. Location approximate to downstream property boundary of white house (CREAM colored house upstream, brown house downstream)	photo 17

Sampler Initials: WAA/KRH

Niagara Mohawk Corporation
Former MGP Site - Fulton, New York
Oswego River: Sediment Coring Log

Sampling Program	Sample ID Number	Date/Time	Weather Conditions
	SD2-10	05/24/01 1405	SUNNY

Water Depth	Core Type	
3ft	AUGER	

Penetration Depth	Length Recovered	GPS Coordinates
0.5 ft	~0.5 ft	Northing/Lat. = Easting/Long. =

Core Section Interval	Visual Description		Comments
0-6"	GRAVEL/ROCKS AND MEDIUM BROWN SAND		PHOTO 18
	rocks at 10ft from shore Sample relocated @ ~8ft from shore		

Sampler Initials: WAA/KRH

Niagara Mohawk Corporation
Former MGP Site - Fulton, New York
Oswego River: Sediment Coring Log

Sampling Program	Sample ID Number	Date/Time	Weather Conditions
	SD2 - 22	05/24/01 1430	SUNNY & BREEZY
Water Depth	**Core Type**		
7.5 ft	AUGER		
Penetration Depth	**Length Recovered**	**GPS Coordinates**	
0.5 ft	~ 0.5 ft ~ ~~0.5 ft~~ WAA ~ ~~0.2 ft~~ WAA	Northing/Lat. = Easting/Long. =	

Core Section Interval	Visual Description		Comments
0-5"	rocks and gravel w/ some dark brown SAND AND ORGANIC MATERIALS (Roots & twigs)		PHOTO 19
~~0~~ 5-6"	MEDIUM brown SAND		
	COMPOSITE OF THREE GRABS		

Sampler Initials: WAA/KRH

Niagara Mohawk Corporation
Former MGP Site - Fulton, New York
Oswego River: Sediment Coring Log

Sampling Program	Sample ID Number	Date/Time	Weather Conditions
	SD3.25	05/24/01 1500	SUN & BREEZE
Water Depth	**Core Type**		
7.0 ft	Auger		
Penetration Depth	**Length Recovered**	**GPS Coordinates**	
0.5 ft	~0.3-0.5 ft	Northing/Lat. = Easting/Long. =	
Core Section Interval	**Visual Description**		**Comments**
0.0-0.5 ft	MIXTURE OF GRAVEL AND BROWN SAND W, SOME Rocks, twigs, roots, shells TRACE sheen observed in sample bowl during collection of sample. COMPOSITE OF TWO GRABS		PHOTO # 20

Sampler Initials: WBB/KRH

Niagara Mohawk Corporation
Former MGP Site - Fulton, New York
Oswego River: Sediment Coring Log

Sampling Program	Sample ID Number	Date/Time	Weather Conditions
	SD4-0	05/24/01 1520	SUN & BREEZE
Water Depth	**Core Type**		
~1 ft	AUGER		
Penetration Depth	**Length Recovered**	**GPS Coordinates**	
0.5 ft	0.5 ft	Northing/Lat. = Easting/Long. =	

Core Section Interval	Visual Description		Comments
0 - 0.5'	BROWN SAND AND gravel with some organic matter (twigs/roots) BLIND DUPLICATE COLLECTED AS SEPARATE GRAB		Photo # 21

Sampler Initials: WAA / KRH

Niagara Mohawk Corporation
Former MGP Site - Fulton, New York
Oswego River: Sediment Coring Log

Sampling Program	Sample ID Number	Date/Time	Weather Conditions
	SD7-5 ~~SD7~~ ~~[illegible]~~	05/24/01 1545	Sun & Breeze
Water Depth	**Core Type**		
1.5 ft	Auger		
Penetration Depth	**Length Recovered**	**GPS Coordinates**	
0.5 ft	0.5 ft	Northing/Lat. = Easting/Long. =	

Core Section Interval	Visual Description		Comments
0-0.5'	Brown sand & gravel w/ some rocks shell fragments, twigs		Photo # 22

Sampler Initials: WAA/KRH

Niagara Mohawk Corporation
Former MGP Site - Fulton, New York
Oswego River: Sediment Coring Log

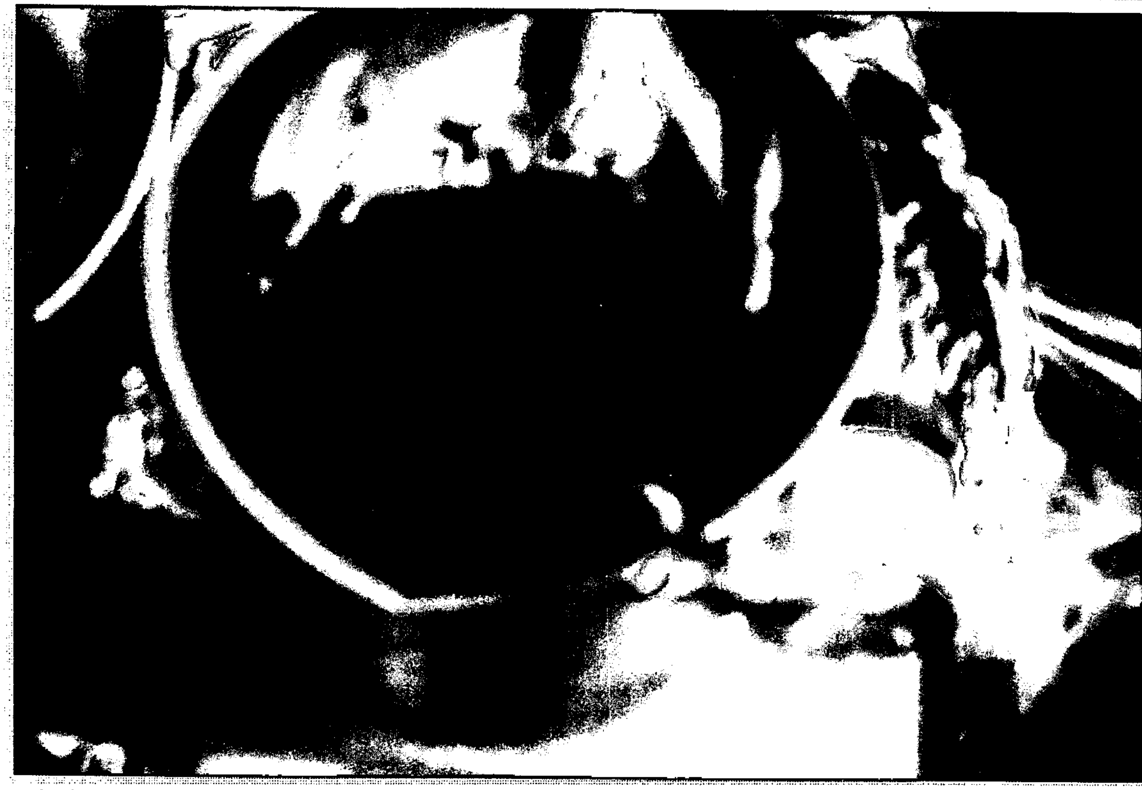
Sampling Program	Sample ID Number	Date/Time	Weather Conditions
	EQBL	05/24/01	SUN & BREEZE

Water Depth	Core Type	
—	—	

Penetration Depth	Length Recovered	GPS Coordinates
—	—	Northing/Lat. = Easting/Long. =

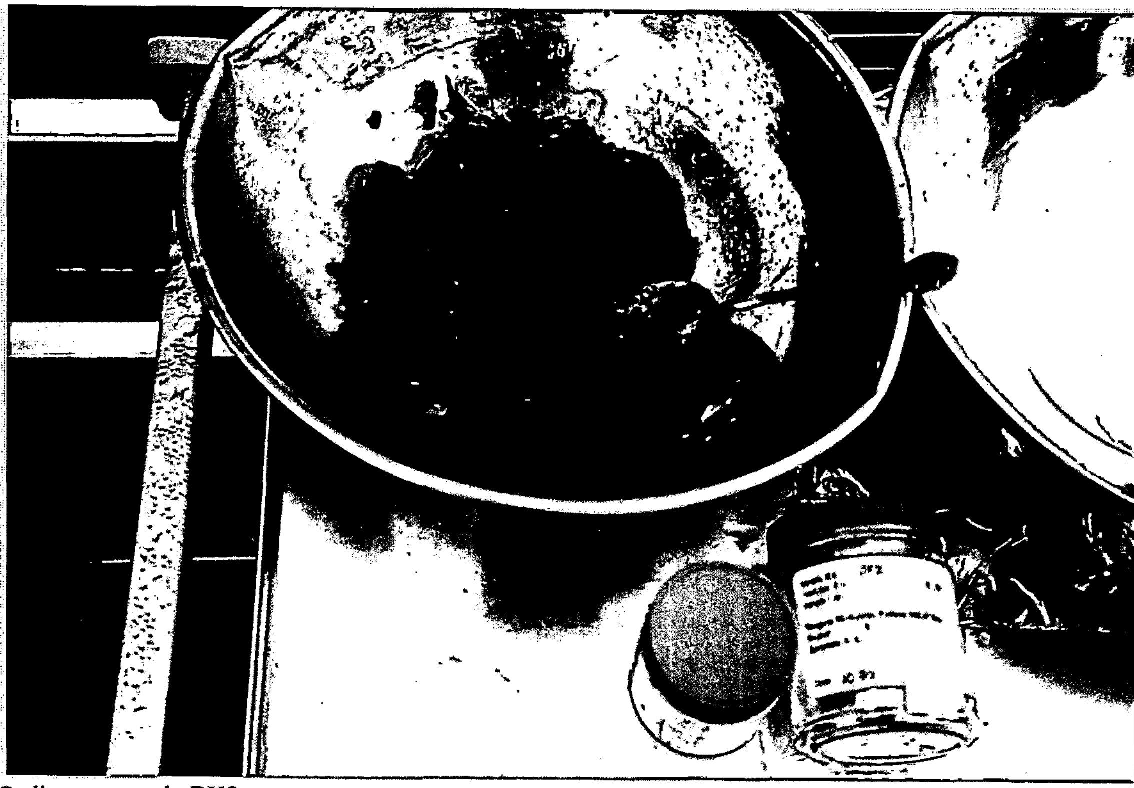
Core Section Interval	Visual Description		Comments
	RINSE Sample of two Stainless steel bowls, 2 spoons, & Auger.		

Sampler Initials: WMA/KRH

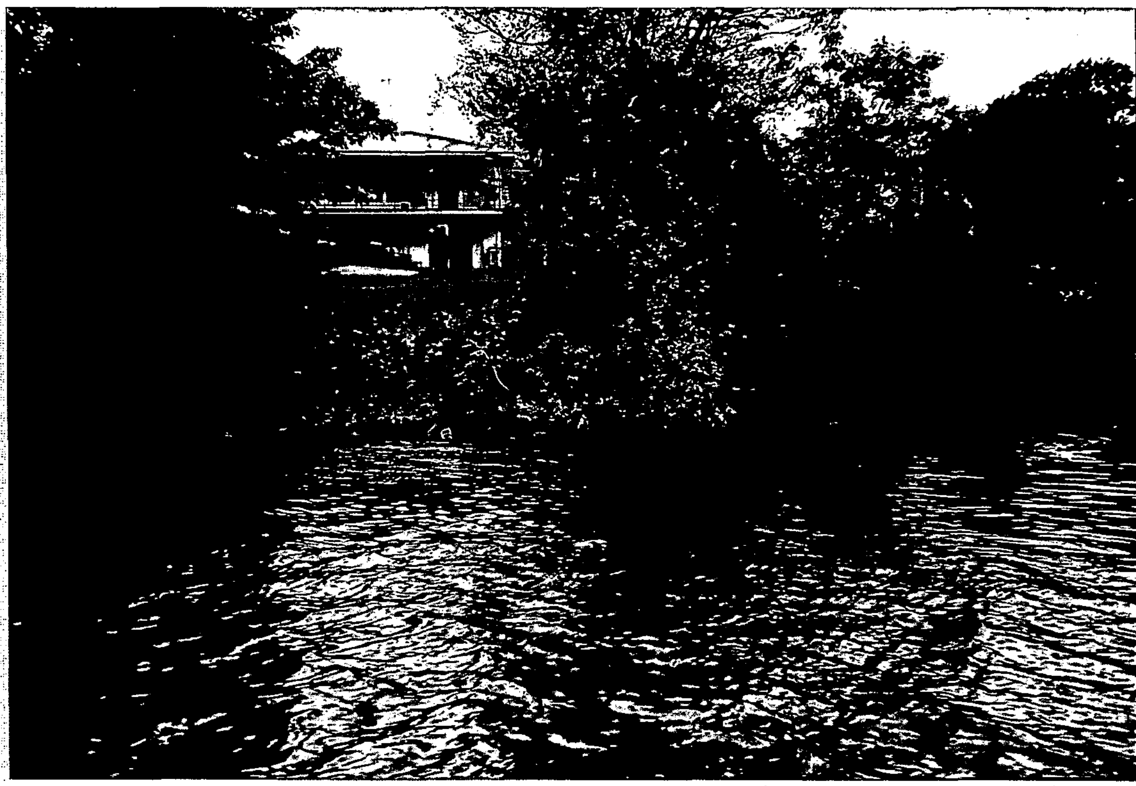


1. Sediment sample BK1.

2. Sediment sample BK1 collected approx. 10 ft from south shore near base of clump of Maple trees.



3. Sediment sample BK2.



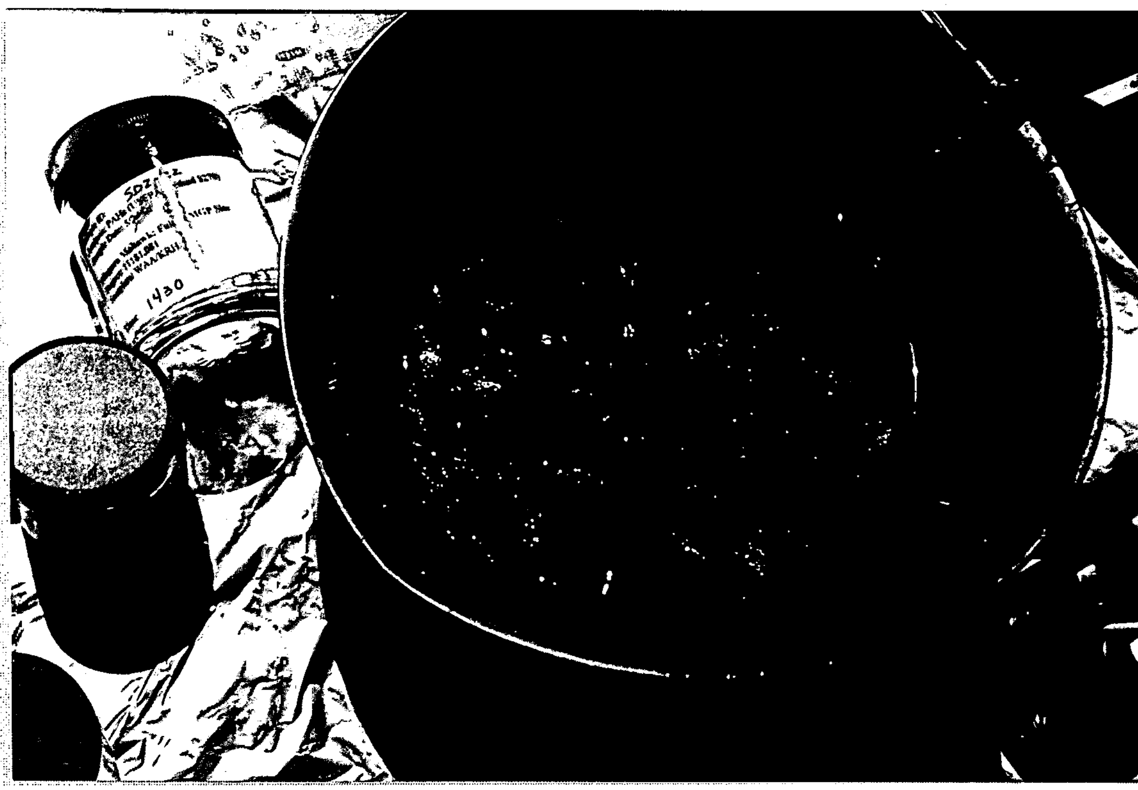
4. Sediment sample BK2 collected approximately 10 ft from south shore in near clearing at center of photo.

5. Sediment sample BK3.

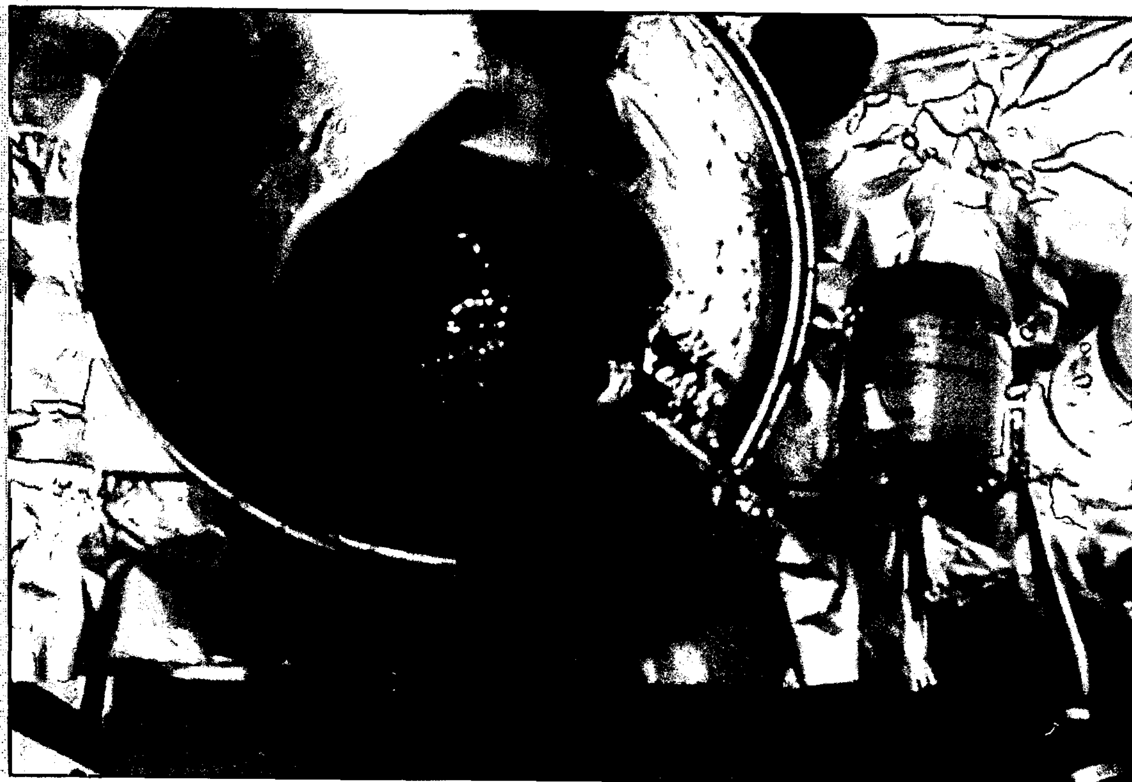
6. Sediment location BK 3 collected near flagging located at left of photo.

7. Sediment sample BK4 located approximately 2 ft from north shore perpendicular to middle Poplar Tree.

8. Sediment sample SD2-10.



9. Sediment sample SD2-22.



10. Sediment sample SD3-25.

11. Sediment sample SD4-0.

12. Sediment sample SD7-5.

13. Sediment auger with polycarbonate tubing used to collect sediment samples (file photograph).

Worldwide Geosciences, Inc. Report

WORLDWIDE
GEOSCIENCES, INC.

6100 Corporate Drive
Suite 320
Houston, Texas 77036
Phone: 713 / 988-9401
FAX: 713 / 988-8784

April 29, 2002

Mr. Chawn O'Dell
O'Brien & Gere Engineers, Inc.
5000 Brittonfield Parkway
Syracuse, NY 15057

Dear Mr. O'Dell:

Enclosed is our report on the soil sample submitted from your NIMO Fulton site. Please refer to the report summary for a condensed statement of our findings.

If there are any questions please do not hesitate to contact me. We appreciate being of service.

Sincerely yours,

Neil F. Petersen

Neil F. Petersen

WORLDWIDE
GEOSCIENCES, INC.

6100 Corporate Drive
Suite 320
Houston, Texas 77036
Phone: 713 / 988-9401
FAX: 713 / 988-8784

CHARACTERIZATION OF A SOIL SAMPLE
NMPC - SOUTH FIRST STREET
FULTON, NY SITE

PREPARED FOR
O'BRIEN & GERE ENGINEERS, INC.
APRIL, 2002

CHARACTERIZATION OF A SOIL SAMPLE
NMPC – SOUTH FIRST STREET – FULTON, NY SITE

SUMMARY

A soil sample, identified as SB-22 (12-14'), was analyzed by high resolution capillary gas chromatography to determine the type or types of parent products associated with this sample and to provide any indications of parent product age. The signature characteristics of the SB-22 (12-14') sample are indicative of coal tar as the product type.

INTRODUCTION

Three soil samples from the NMPC Fulton site were received at the offices of Worldwide Geosciences, Inc. on February 25, 2002 via Federal Express delivery. Sample SB-20 (14-16') was contained in a single, eight ounce, glass jar. Each of the remaining two samples was contained in duplicate, four ounce, glass jars. All three samples were packed in an insulated cooler with ice used as a preservative. Sample identifications as per the attached chain of custody form and their assigned laboratory numbers are as follows:

Sample ID	Lab No.
SB-22 (12-14')	20301002
SB-22 (18-20')	20301003
SB-20(14-16')	20301004

Worldwide Geosciences was requested to hold both the SB-22 (18-20') and the SB-20 (14-16') soil samples on a contingency basis and these samples were not analyzed.

Thirty grams of the SB-22 (12-14') soil sample were extracted with 90 milliliters of methylene chloride solvent. The extraction was carried out by sonication. After separating the solvent and the soil, the solvent was reduced in volume to two milliliters to increase the concentration level of the extracted hydrocarbons in the solvent. The solvent was spiked with androstane as an internal standard. The concentration level of the internal standard relative to the weight of soil extracted is 3.4 parts per million. The spiked solvent containing the extracted hydrocarbons was then analyzed by high resolution, capillary gas chromatography using a 30 meter DB1 column and a flame ionization detector. A Perkin-Elmer Autosystem was utilized. The analysis procedure is a modification of ASTM method D-3328. The modifications allow for the analysis of hydrocarbons in solvent and improve the resolution of the lighter hydrocarbons. Two procedural methods are routinely used for product in solvent characterization. One provides better resolution of the gasoline range hydrocarbons but has a more limited carbon number range. This is Method 3 as defined in the procedural description provided in Appendix II. The second method is routinely used to characterize product in solvents heavier than gasoline. The gasoline range hydrocarbons are compressed as a result of a more rapid increase in column temperature. This is Method 4 as described in Appendix II. The extract obtained on this sample was run under Method 3 conditions on March 1, 2002.

The only difference in operating conditions between Methods 1 and 2, which are used for actual product samples, and between Methods 3 and 4 is in the injection conditions. When products are run neat, or as received, a split injection method is used and if the hydrocarbons are in solvent phase a splitless injection system is used.

Display copies of the chromatograms, both labeled and unlabeled, are incorporated into the report as Appendix I. A full-scale display in which all the peaks have been kept onscale for accurate visualization of the relative proportions of the hydrocarbons present is provided. Also included in Appendix I is a table listing the abbreviations used to identify peaks on the chromatograms and their corresponding names.

RESULTS

In discussing the compositional characteristics of the sample analyzed and analog signatures, the various peaks present in the chromatograms will be referred to in terms of the hydrocarbons they represent. As a general aid to visualizing the types of hydrocarbons involved, Figure 1 is provided to illustrate the structural characteristics of the main classes of hydrocarbons.

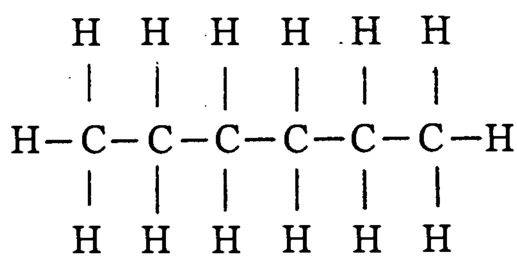
Figure 2 compares the chromatographic signature of the SB-22 (12-14') soil sample with the signature of a gasoline. The gasoline signature shown is that of American Petroleum Institute petroleum standard 6 (API PS6). As shown by the API PS6 signature, aromatics and branched chain or isoparaffins with nine carbon atoms or less are the predominant hydrocarbon types in gasoline. Both the overall hydrocarbon distribution of the SB-22 (12-14') soil sample, which extends significantly beyond the limits of gasoline, and the prominence of polynuclear aromatic peaks in the SB-22 (12-14') sample signature indicates the parent product associated with this sample is not gasoline.

The next higher group of standard petroleum products is collectively referred to as middle distillates. Kerosenes, diesels, and fuel oils are the most common middle distillate products. Standard (#2) grade fuel oil and diesel are similar products. Figure 3 provides a comparison of the chromatographic signatures of a kerosene product sample and a diesel/fuel oil product sample. The normal paraffins are the most prominent individual hydrocarbon type in middle distillate products. The normal paraffins are straight chain molecules in which all the carbon atoms are attached to one another in an end to end manner. The structure of normal hexane in Figure

FIGURE I
TYPES OF HYDROCARBONS

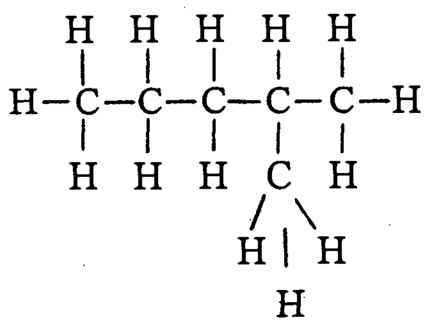
SATURATES

CARBON ATOMS CONNECTED BY SINGLE BONDS
PARAFFINS OR ALKANES
NORMAL PARAFFINS OR ALKANES
STRAIGHT CHAINS



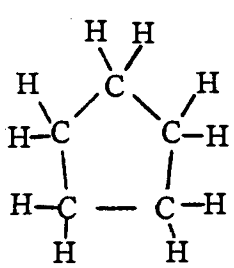
NORMAL HEXANE (NC6)

ISO-PARAFFINS OR ALKANES
BRANCHED CHAIN PARAFFINS

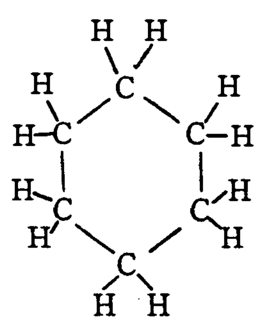


2METHYL PENTANE (2MP)

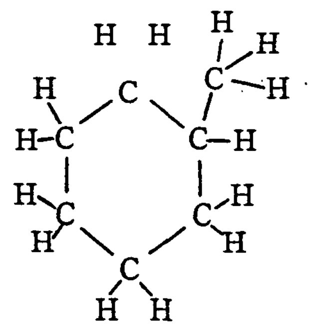
NAPTHENES OR CYCLOPARAFFINS OR CYCLOALKANES
RING OR CYCLIC STRUCTURE



CYCLOPENTANE
(CCP)



CYCLOHEXANE
(CH)



METHYLCYCLOHEXANE
(MCH)

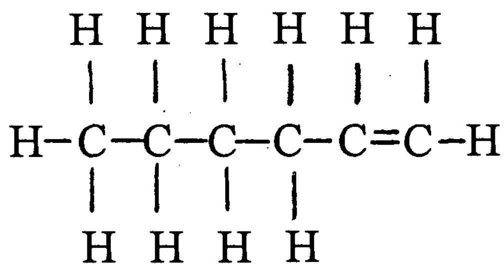
FIGURE 1 (CONT.)
TYPES OF HYDROCARBONS

UNSATURATES

HAVE ONE OR MORE CARBON DOUBLE BONDS

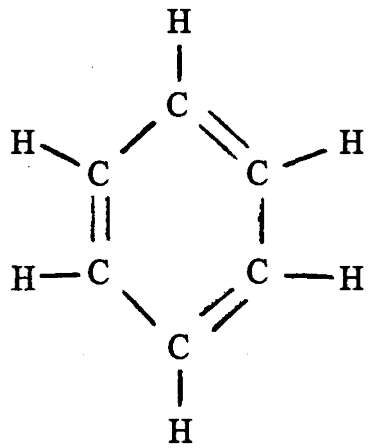
OLEFINS OR ALKENES

CAN BE STRAIGHT CHAIN, BRANCHED CHAIN, OR CYCLIC

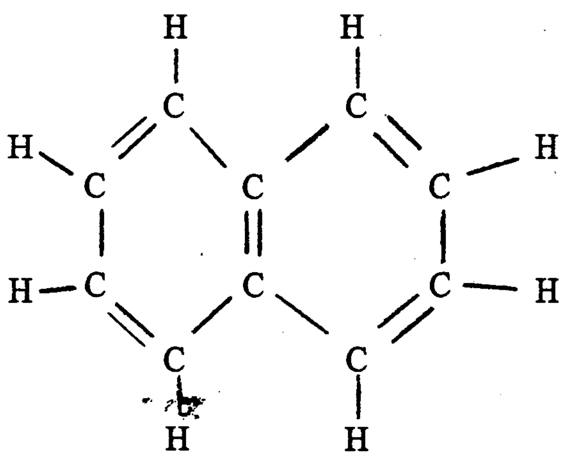


NORMAL HEXENE

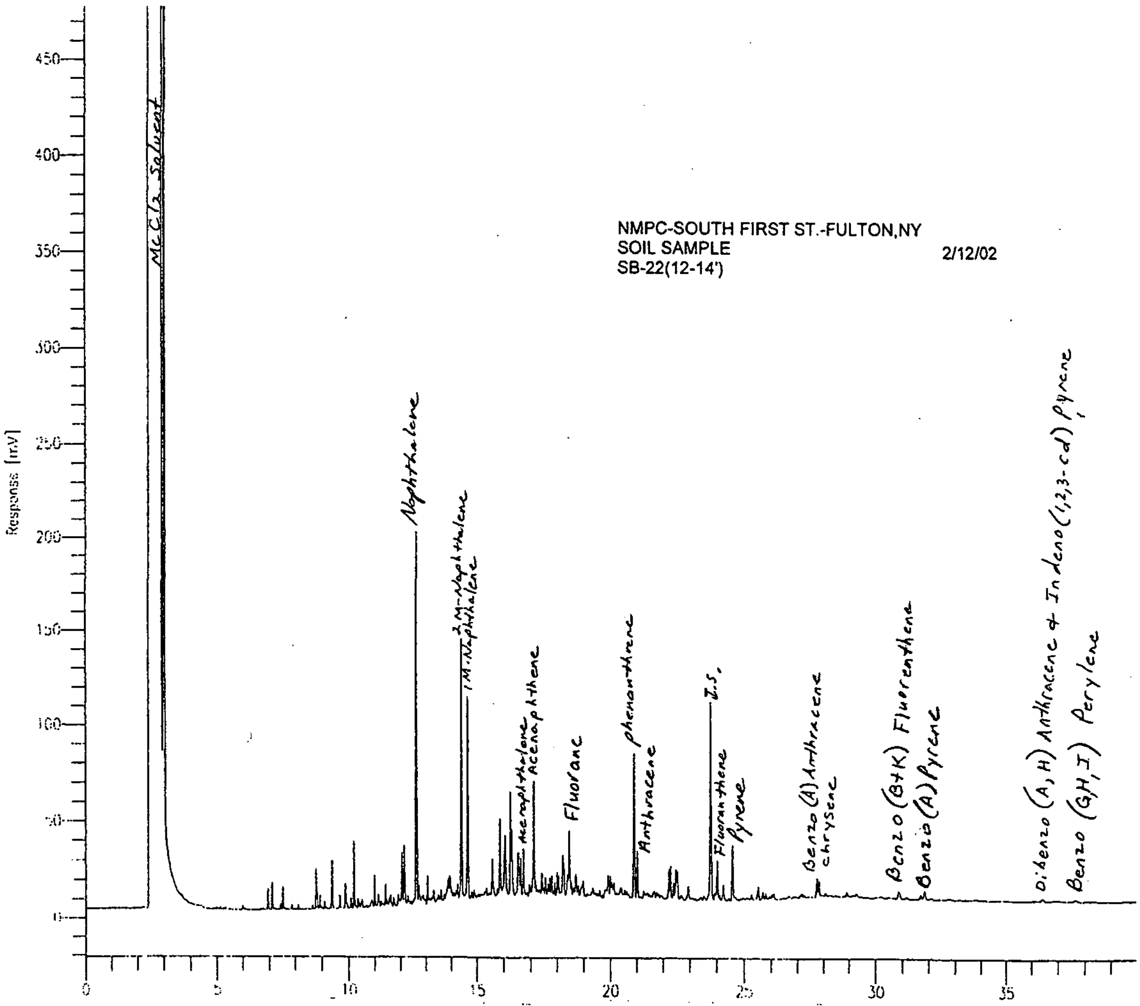
AROMATICS



BENZENE



NAPHTHALENE



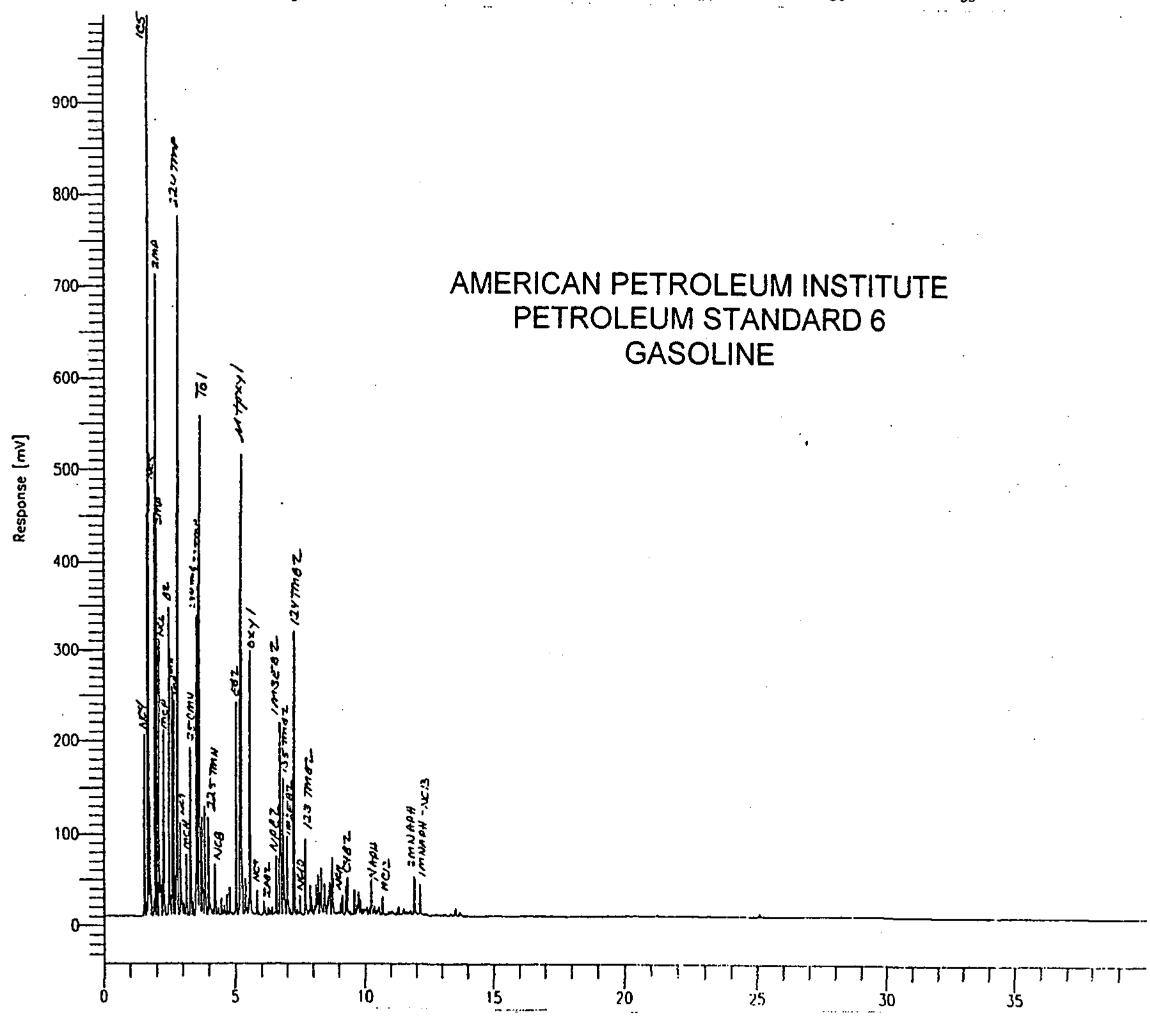


FIGURE 2: COMPARISON OF THE CHROMATOGRAPHIC SIGNATURES OF THE SB-22 (12-14') SOIL SAMPLE AND API PS6 GASOLINE

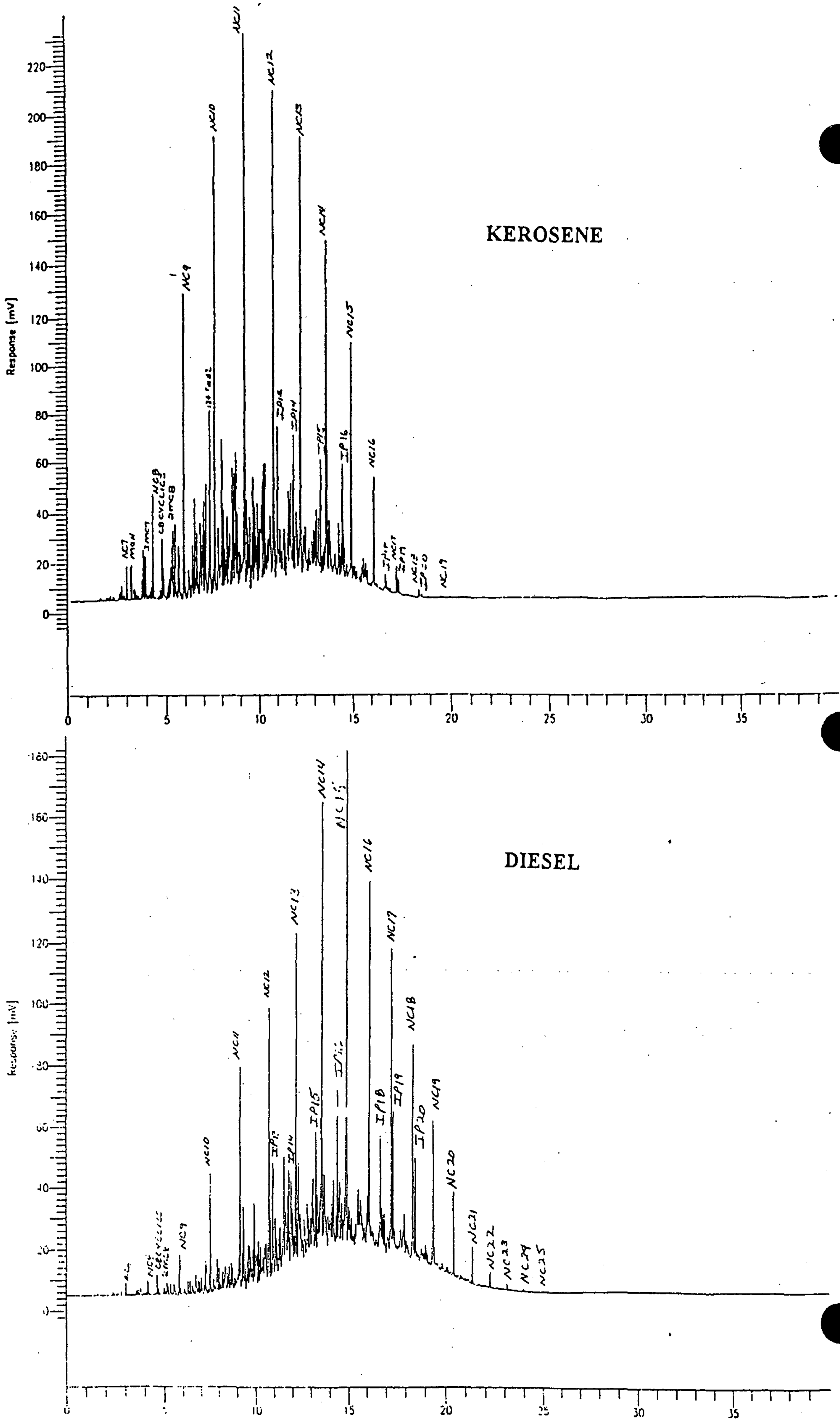


FIGURE 3: COMPARISON OF THE CHROMATOGRAPHIC SIGNATURES OF A KEROSENE SAMPLE AND A DIESEL PRODUCT SAMPLE

1 is an example of a normal paraffin. The normal paraffins are annotated on the chromatograms with a NP designation followed by the number of carbon atoms in the molecule. The overall carbon number range and normal paraffin distribution of diesels and fuel oils extends to higher carbon numbers than in kerosenes.

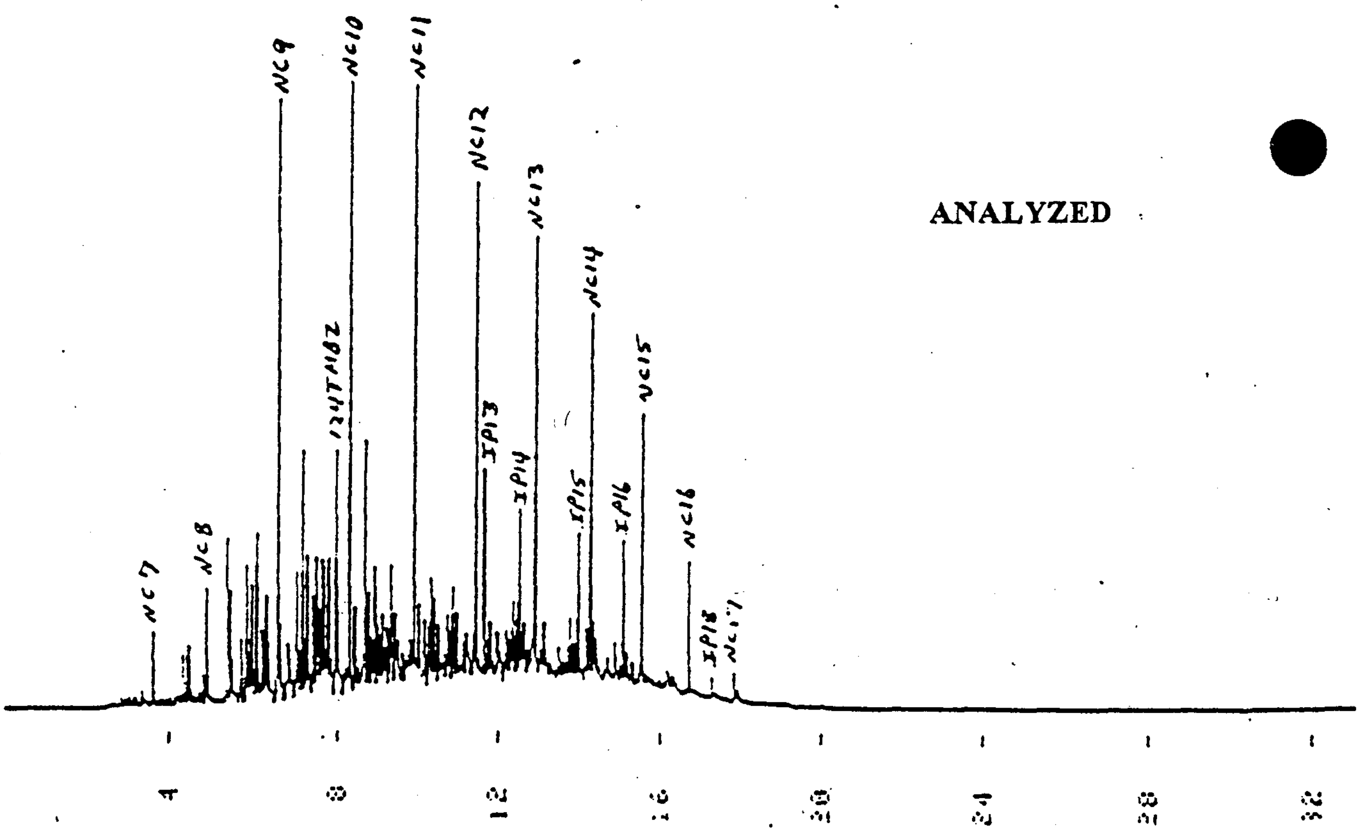
Diesels and fuel oils also can be differentiated from kerosene products on the basis of their isoprenoid proportions. The isoprenoids are the second most prominent individual hydrocarbon type in middle distillate products. The isoprenoids are a unique type of branched chain or isoparaffin in which a side methyl (CH3) group is attached to every fourth carbon atom of the main carbon chain. The structure of methylpentane in Figure 1 is an example of an isoparaffin with a single, side, methyl group. The isoprenoids are annotated on the chromatograms with an IP designation followed by the number of carbon atoms in the molecule. In kerosenes, the lower carbon number isoprenoids (IP13, IP14, IP15, and IP16) significantly exceed the higher carbon number isoprenoids (IP18, IP19, and IP20). In diesels and fuel oils, the higher carbon number isoprenoids are present at more comparable proportions to the lower carbon number isoprenoids, and in some instances may exceed the lower carbon number isoprenoids.

With increasing exposure time, the normal paraffins are preferentially reduced compared to the isoprenoid peaks and ultimately lost as a result of biodegradation. Figure 4 illustrates the effects of biodegradation on a kerosene product sample. In Figure 4, the chromatogram of a kerosene product sample is shown. The same signature is then shown artificially biodegraded by whiting out the normal paraffins. Figure 5 provides a similar comparison for a diesel/fuel oil product sample. As the vertically prominent normal paraffin peaks are lost, the underlying baseline rise or hump becomes an increasingly prominent feature of the chromatographic signature. The baseline rise or hump represents a complex mixture of individual hydrocarbons, which are not present in sufficient individual abundance to elute as discrete peaks. Biodegraded diesels and fuel oils can be distinguished from biodegraded kerosene products on the basis of the carbon number limits of baseline rise or hump and the proportions of the isoprenoids.

Figure 6 compares the chromatographic signature of the SB-22 (12-14') soil sample with the signature of a kerosene product sample. Figure 7 provides a similar comparison with a diesel/fuel oil product sample. The absence of a baseline rise, a sequence of normal paraffin peaks, and a sequence of isoprenoid peaks in the SB-22 (12-14') signature indicates this hydrocarbon assemblage is not related to either a kerosene or a diesel/fuel oil product, either fresh or biodegraded.

Heavy or residual grade, such as #6 grade, fuel oils have more extensive carbon number distributions than #2 grade fuel oil or diesel. Figure 8 compares the chromatographic signature of the SB-22 (12-14') soil sample with a residual grade fuel oil signature. Residual grade fuel oil signatures also are characterized by a baseline rise or hump underlying the

ANALYZED



ARTIFICIALLY DEGRADED (NORMALS WHITED OUT)

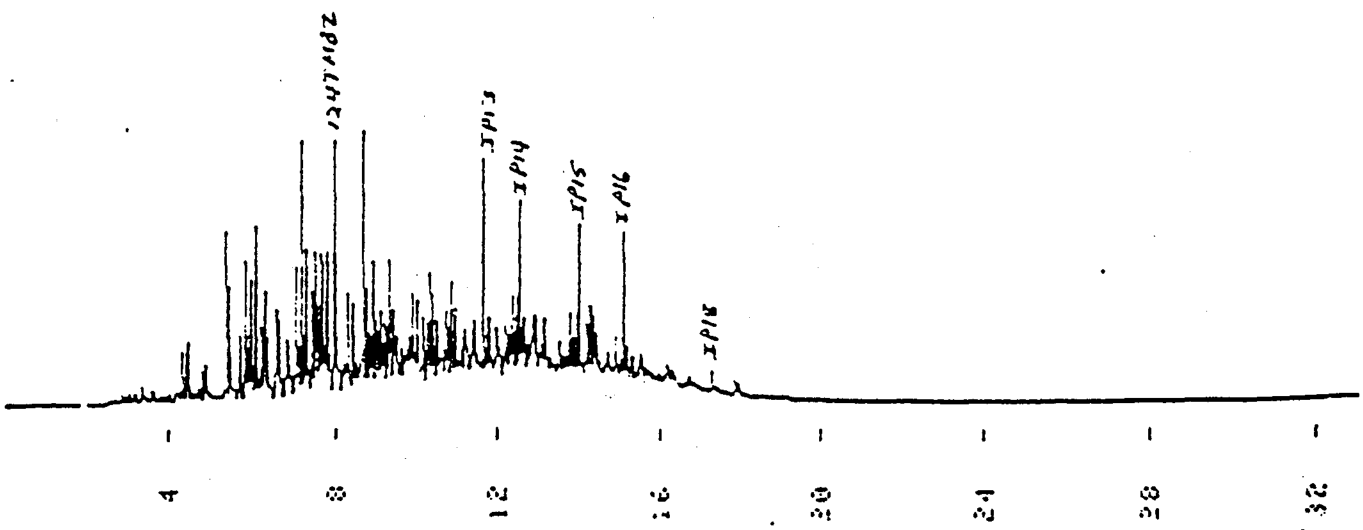


FIGURE 4: CHROMATOGRAPHIC SIGNATURE OF A KEROSENE PRODUCT AS ANALYZED AND ARTIFICIALLY DEGRADED (NORMALS WHITED OUT)

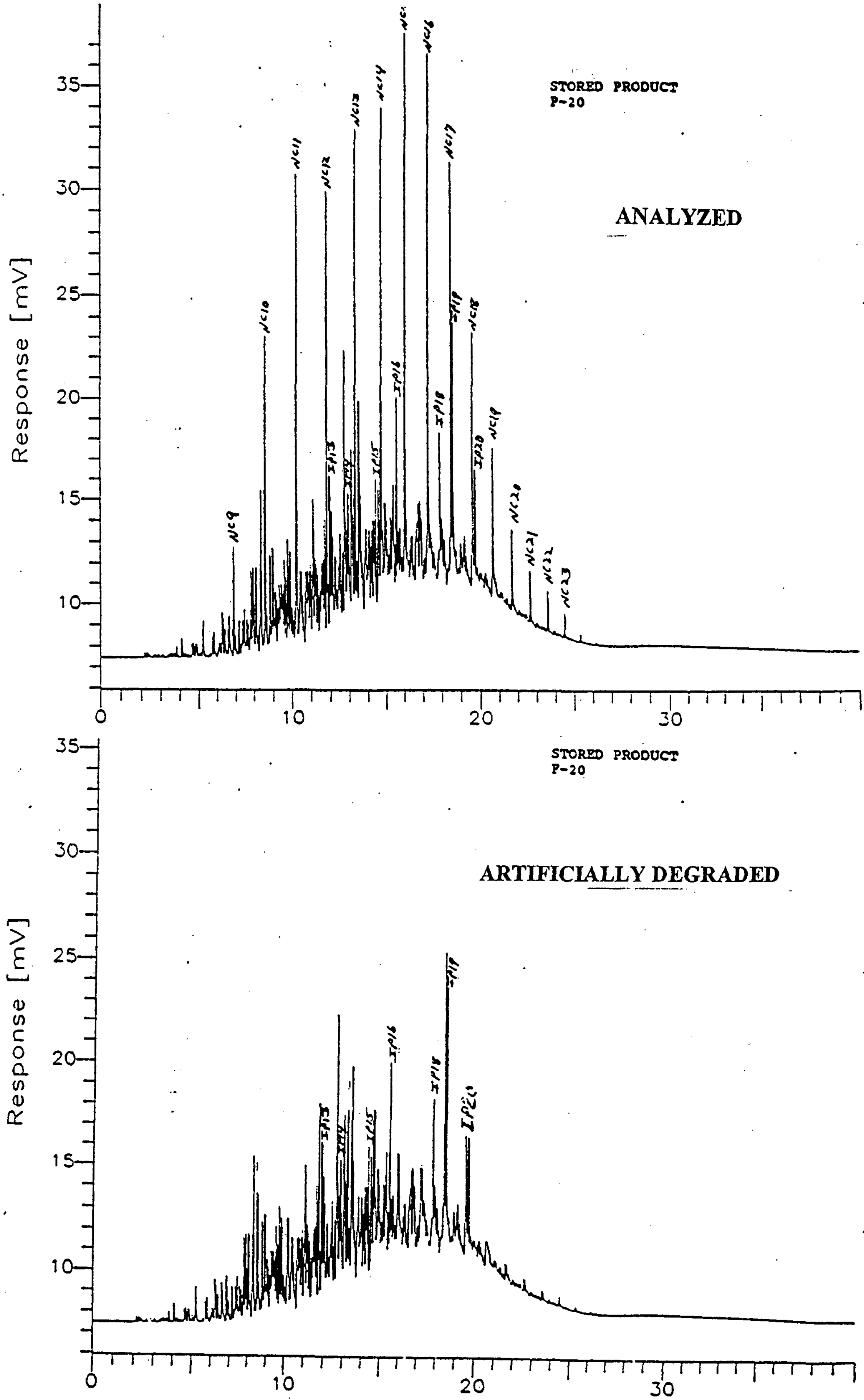
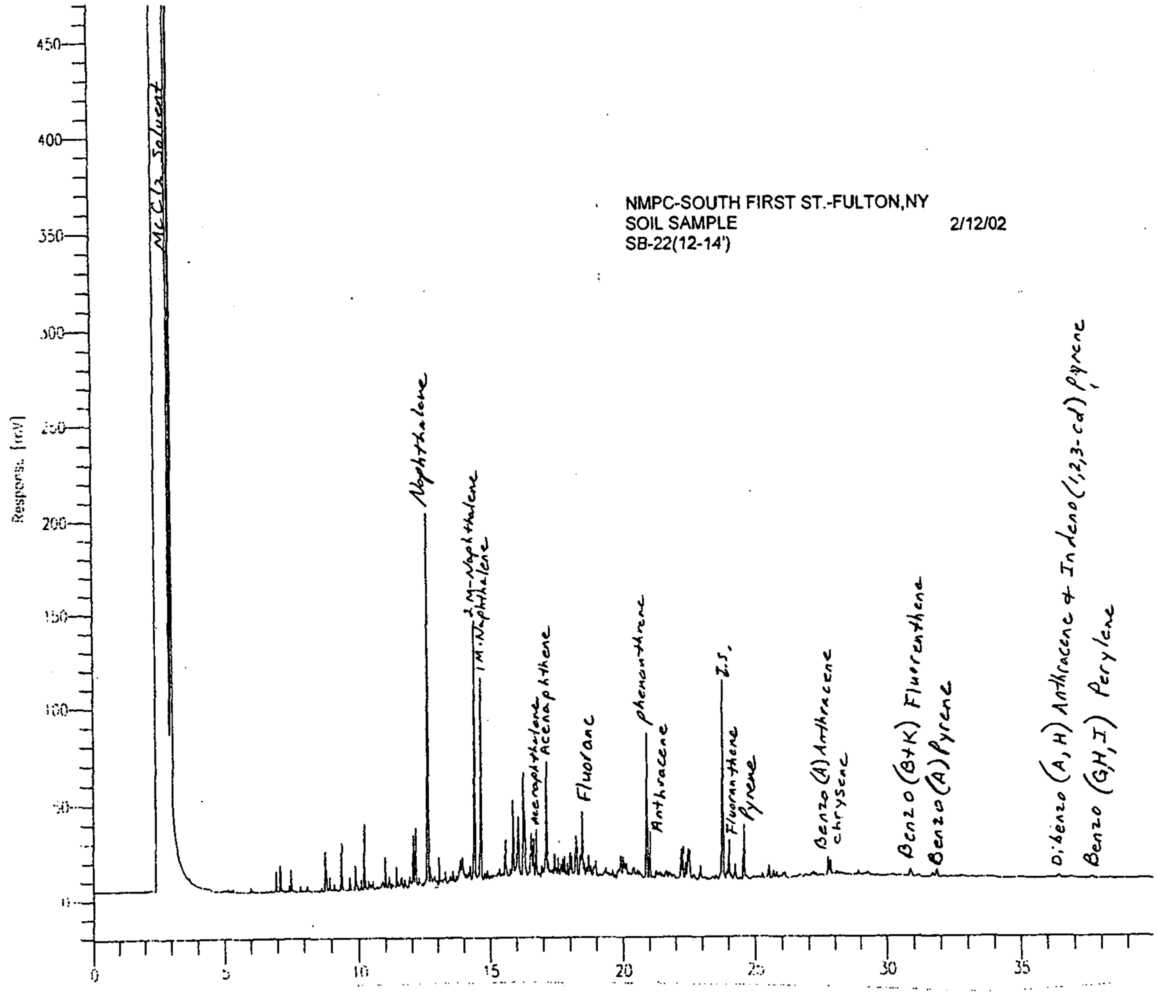


FIGURE 5: CHROMATOGRAPHIC SIGNATURE OF THE STORED DIESEL AS ANALYZED AND ARTIFICIALLY DEGRADED



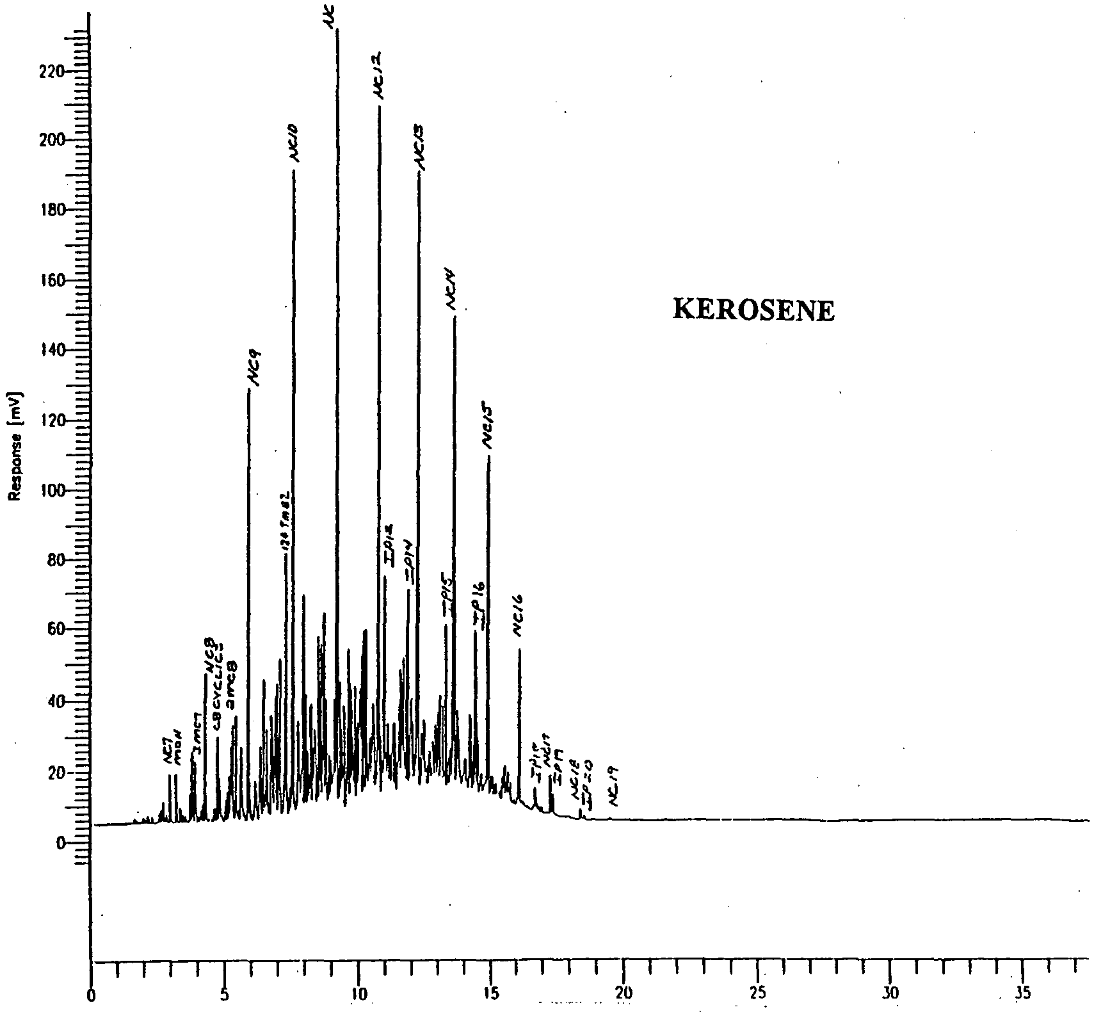


FIGURE 6: COMPARISON OF THE CHROMATOGRAPHIC SIGNATURES OF THE SB-22 (12-14') SOIL SAMPLE AND A KEROSENE PRODUCT SAMPLE

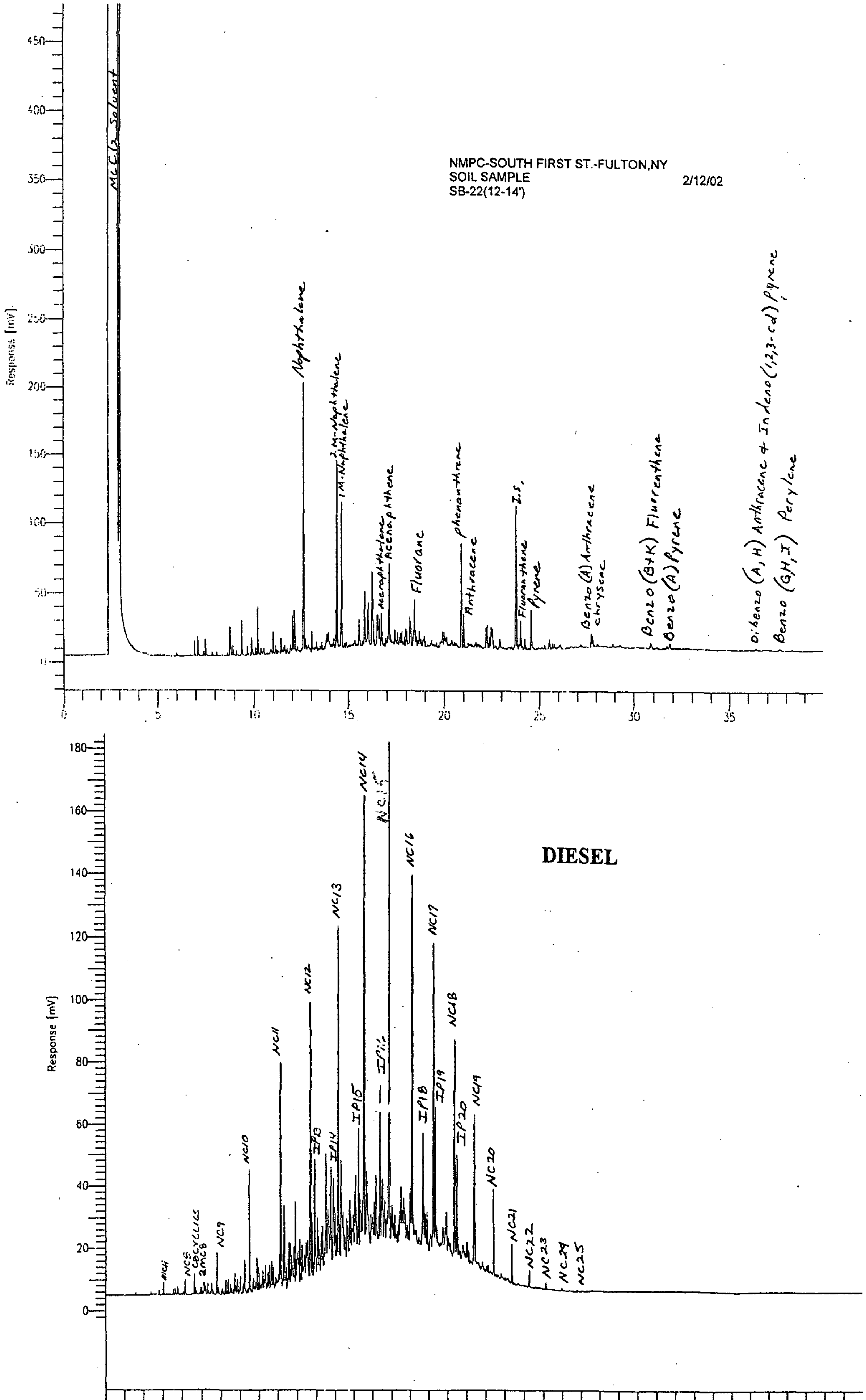
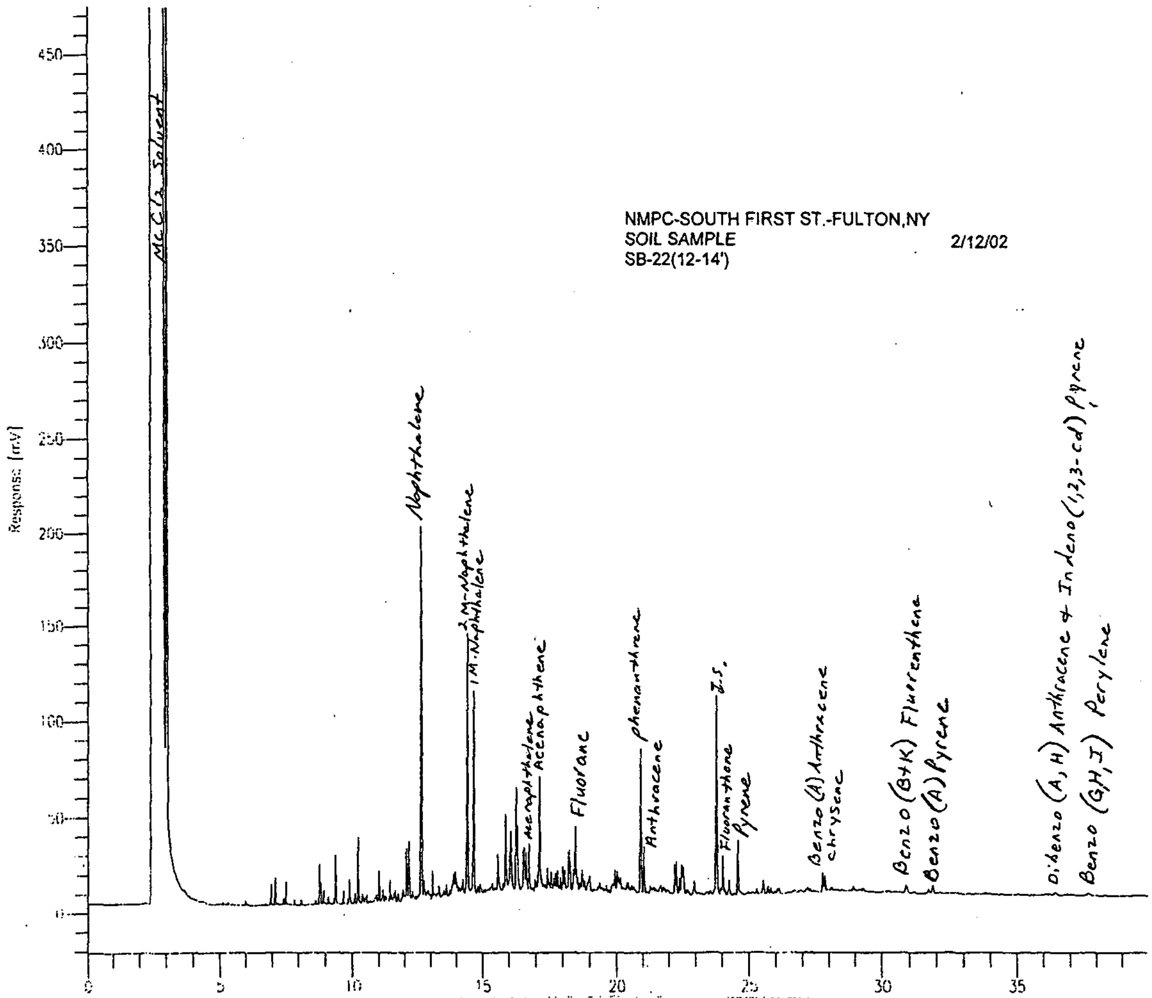


FIGURE 7: COMPARISON OF THE CHROMATOGRAPHIC SIGNATURES OF THE SB-22 (12-14') SOIL SAMPLE AND A DIESEL/FUEL OIL PRODUCT SAMPLE



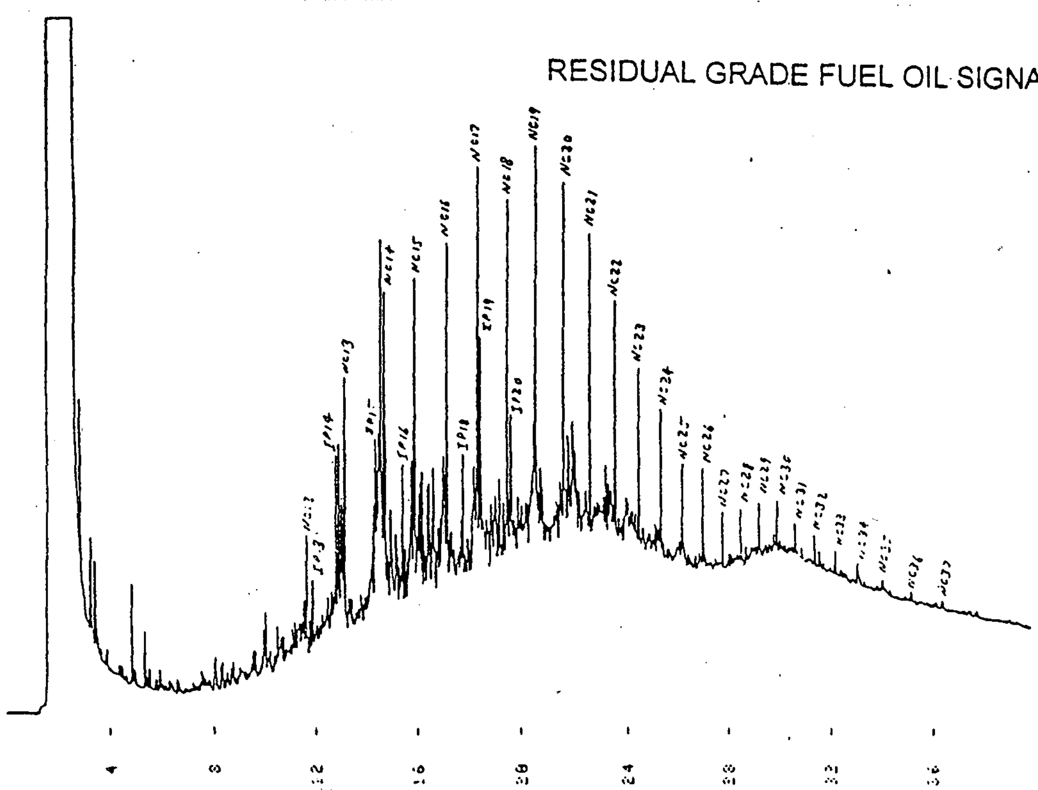


FIGURE 8: COMPARISON OF THE CHROMATOGRAPHIC SIGNATURES OF THE SB-22 (12-14') SOIL SAMPLE AND A RESIDUAL GRADE FUEL OIL

resolved peaks, and a peak sequence that consists predominantly of normal paraffins and isoprenoids. The absence of a baseline rise, a sequence of normal paraffin peaks, and a sequence of isoprenoid peaks in the SB-22 (12-14') signature indicates this hydrocarbon assemblage is not related to a residual grade fuel oil product, either fresh or biodegraded.

The dominant signature characteristic of lubricant type products is a pronounced baseline rise or hump. The dominant carbon number range of the baseline rise or hump is between twenty and forty carbon atoms. Figure 9 compares the chromatographic signature of the SB-22 (12-14') soil sample with a motor oil, which is used as a lubricant type product example. The absence of a baseline rise or hump in the C20 to C40 range, and the predominance of resolved peaks in the less than C20 range of the SB-22 (14-16') sample signature indicates the hydrocarbon assemblage associated with this sample is not lubricant related.

Figure 10 compares the chromatographic signature of the SB-22 (14-16') soil sample with the signature of a coal tar sample. The SB-22 (14-16') and the coal tar signature show similar dominances of individual polynuclear aromatic peaks and do not show a prominent baseline rise or hump. Neither the SB-22 (14-16') sample signature not the coal tar signature show sequences of normal paraffin or isoprenoid peaks either.

The signature characteristics of the SB-22 (14-16') soil sample are indicative of coal tar as the parent product.

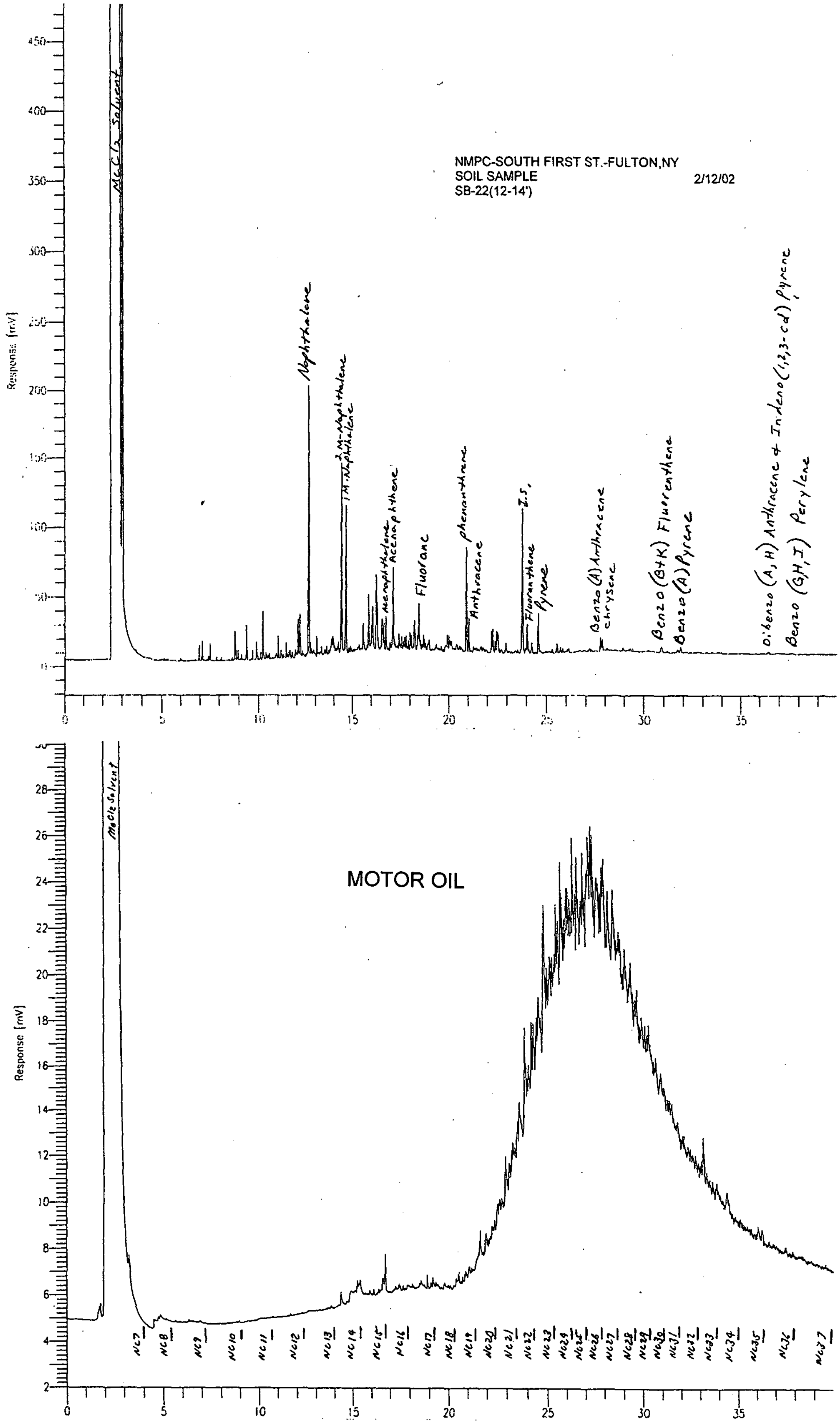


FIGURE 9: COMPARISON OF THE CHROMATOGRAPHIC SIGNATURES OF THE SB-22 (12-14') SOIL SAMPLE AND A MOTOR OIL

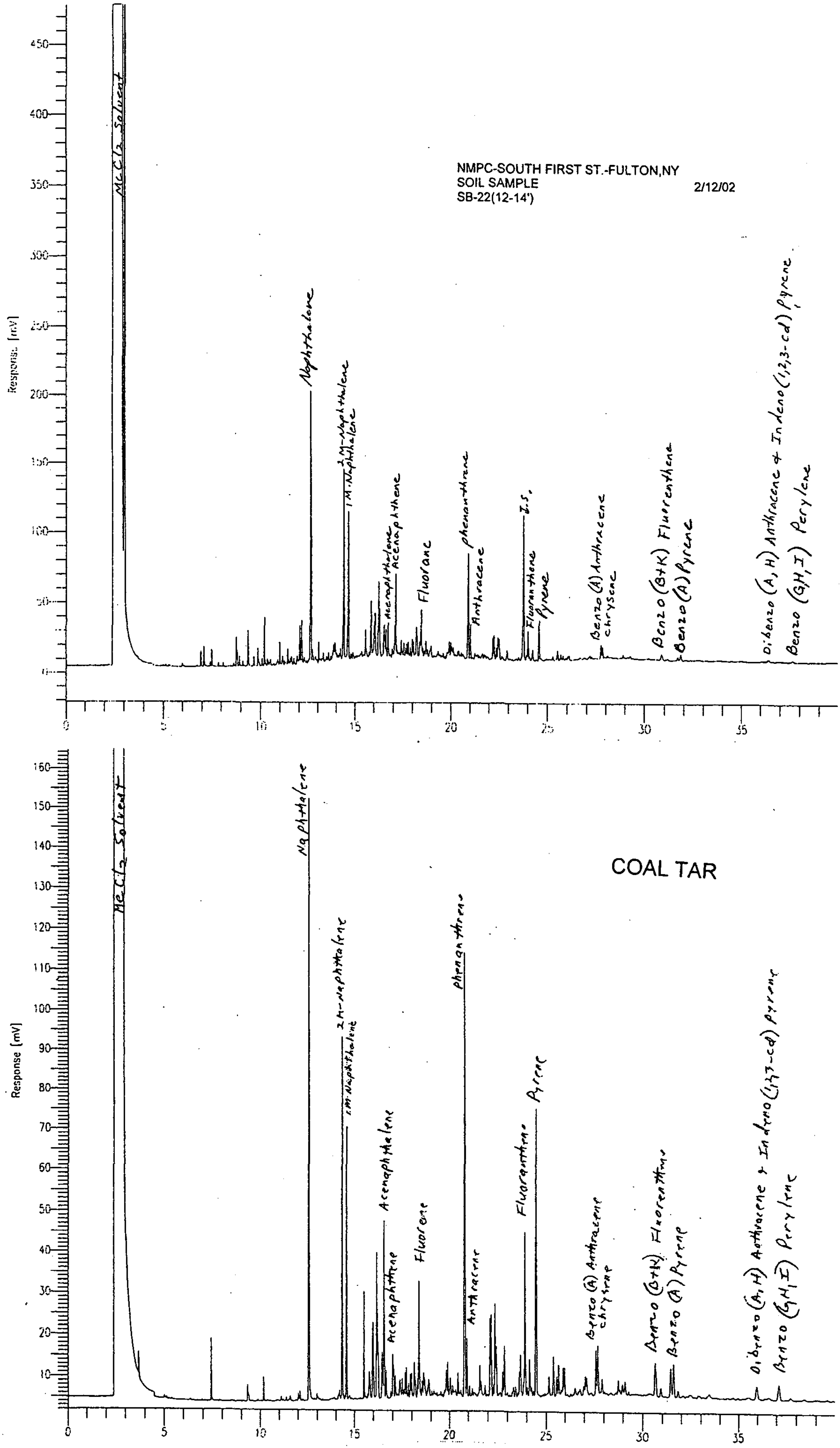


FIGURE 10: COMPARISON OF THE CHROMATOGRAPHIC SIGNATURES OF THE SB-22 (12-14') SOIL SAMPLE AND A COAL TAR

O'BRIEN & GERE ENGINEERS, INC.

Job No. 29192
Sheet No. 1 of 1

Office: Syracuse, NY
Address: 5000 Brittonfield Parkway
Phone: (315) 437-6100

CHAIN OF CUSTODY

CLIENT: Niagara Mohawk Power Corporation
LOCATION: South First Street, Fulton, NY

COLLECTED BY: Chawn O'Dell
(Signature) Chawn ODell

Sample	Date	Time	Sample Matrix (1)	Sample Type (2)	No. of Containers	Analysis Requested
SB-22(12-14Ft)	2/12/02	0850	Soil	composite	1	Fingerprint
SB-22(18-20Ft)	2/12/02	0915	Soil	composite	1	HOLD
SB-20(14-16Ft)	2/11/02	1130	Soil	composite	1	HOLD - for use as reference

(1) Matrix = water, wastewater, air, sludge, sediment, etc.

(2) Type = grab, composite

Relinquished by:	Date	Time	Received by	Date	Time
of:			of:		
Use this space if shipped via courier (e.g. Fed Ex.)			*attached delivery/courier receipt to Chain of Custody		
Relinquished by: Chawn ODell of: O'Brien & Gere Engineers, Inc.	Date 2/22/02	Time 1500	Courier Name: Federal Express tracking #: 828370375900	Date 2/22/02	Time 1500
Relinquished by: Fed Exp. of:	Date 2/25/02	Time 10:50	Received by: [illegible] of: WDCS	Date 2/25/02	Time 1050

Notes:

APPENDIX I

DISPLAY CHROMATOGRAMS

ABBREVIATIONS USED TO IDENTIFY PEAKS

ABBREVIATION	HYDROCARBON
C1	METHANE
C2	ETHANE
C3	PROPANE
IC4	ISOBUTANE
NC4	NORMAL BUTANE
ETH	ETHANOL
22C3	2 2 DIMETHYL PROPANE
IC5	ISOPENTANE
NC5	NORMAL PENTANE
MeCl2	METHYLENE CHLORIDE
22DMB	2 2 DIMETHYL BUTANE
23DMB	2 3 DIMETHYL BUTANE
2MP	2 METHYLPENTANE
3MP	3 METHYLPENTANE
NC6	NORMAL HEXANE
22DMP	2,2 DIMETHYLPENTANE
MCP	METHYLCYCLOPENTANE
24DMP	2,4 DIMETHYLPENTANE
BZ	BENZENE
CH	CYCLOHEXANE
2MH	2 METHYLHEXANE
23DMP	2,3 DIMETHYLPENTANE
3MH	3 METHYLHEXANE
T13DMCP	T13DIMETHYLCYCLOPENTANE
C13DMCP	C13DIMETHYLCYCLOPENTANE
224TMP	2,2,4 TRIMETHYLPENTANE (PRINCIPAL ISO-OCTANE)
NC7	NORMAL HEPTANE
234TMP	2,3,4 TRIMETHYLPENTANE (ISO-OCTANE)
233TMP	2,3,3 TRIMETHYLPENTANE (ISO-OCTANE)
MCH	METHYLCYCLOHEXANE
TOL	TOLUENE
23DMH	2,3,DIMETHYLHEXANE
2MC7	2METHYLHEPTANE
3MC7	3METHYLHEPTANE
224TMH	2,2,4 TRIMETHYLHEXANE
223TMH	2,2,3 TRIMETHYLHEXANE
NC8	NORMAL OCTANE
EBZ	ETHYL BENZENE
M+P XYL	META AND PARA XYLENES
2MC8	2METHYLOCTANE
3MC8	3METHYLOCTANE
O XYL	ORTHO XYLENE
NC9	NORMAL NONANE
IPBZ	ISOPROPYLBENZENE
NPBZ	NORMAL PROPYL BENZENE
1M3EBZ	1METHYL3ETHYLBENZENE
135TMBZ	1,3,5 TRIMETHYLBENZENE

ABBREVIATIONS USED TO IDENTIFY PEAKS (cont.)

ABBREVIATION	HYDROCARBON
1M2EBZ	1METHYL2ETHYLBENZENE
124TMBZ	1,2,4 TRIMETHYLBENZENE
NC10	NORMAL DECANE
123TMBZ	1,2,3 TRIMETHYLBENZENE (TERT BUTYL BENZENE CO-ELUTES AT THIS POSITION)
C4BZ	TETRAMETHYLBENZENE
NAPH	NAPHTHALENE
2M. NAPH	2METHYL NAPHTHALENE
1M. NAPH	1METHYL NAPHTHALENE

NC ( ) Normal paraffin with number of carbon atoms in molecule shown

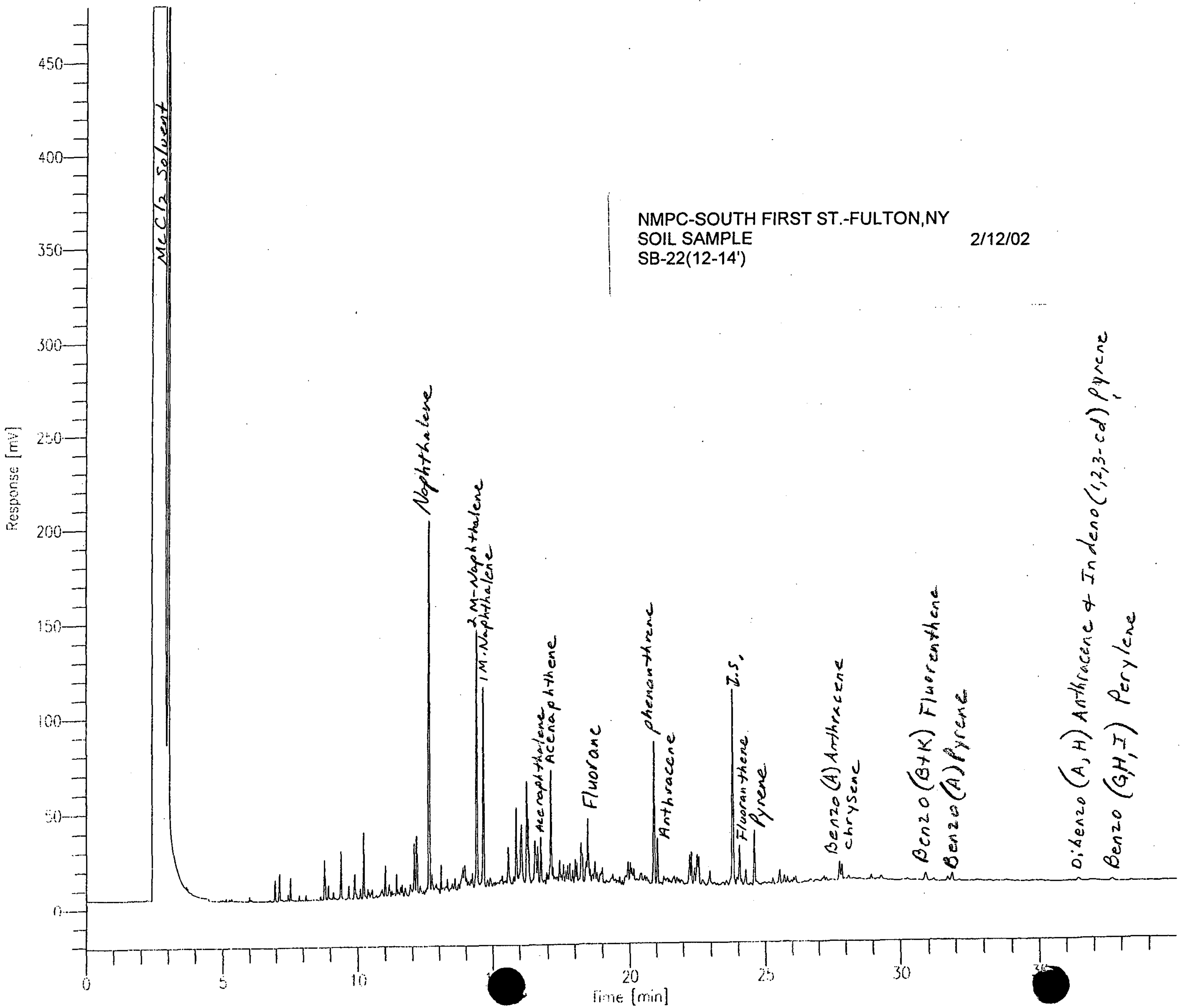
IP ( ) Isoprenoid iso-paraffin with number of C atoms in molecule shown

WWG I - 10 SL

Sample #: 20301002 Page 1 of 1
Date : 3/11/02 01:55 PM
Time of Injection: 3/1/02 07:16 PM
Low Point : -20.92 mV High Point : 479.08 mV
Plot Scale: 500.0 mV

Sample Name : J-2019 SB-22(12'-14')
FileName : .\45WW169.raw
Method : WWG1_10
Start Time : 0.00 min End Time : 40.00 min
Scale Factor: -1.0 Plot Offset: -21 mV

NMPC-SOUTH FIRST ST.-FULTON,NY
SOIL SAMPLE 2/12/02
SB-22(12-14')



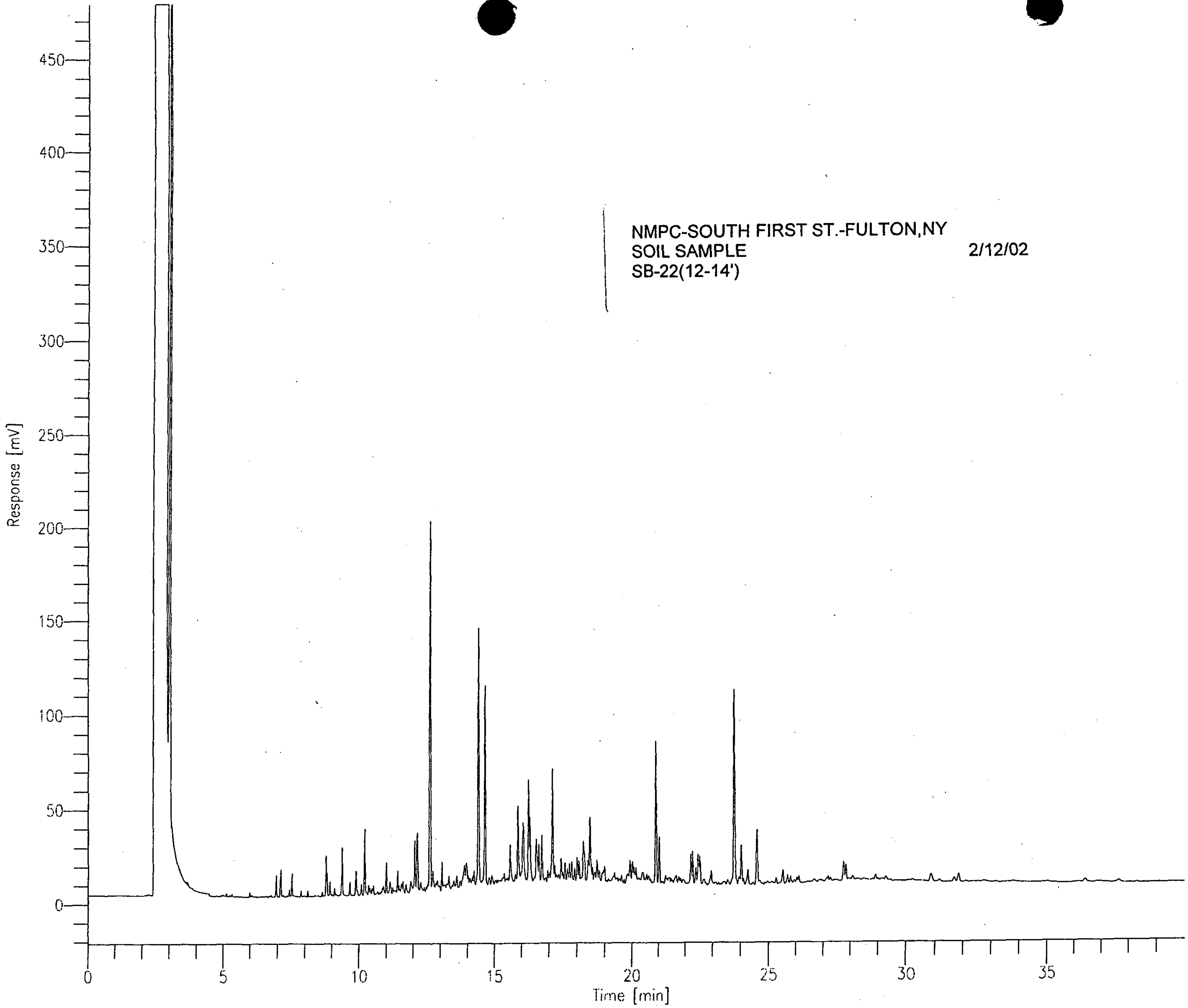
WWG I - 10 SL

Sample Name : J-2019 SB-22(14'-16')
FileName : .\45WW169.raw
Method : WWG1_10
Start Time : 0.00 min
Scale Factor: -1.0

End Time : 40.00 min
Plot Offset: -21 mV

Sample #: 20301002
Date : 3/11/02 01:55 PM
Time of Injection: 3/1/02 07:16 PM
Low Point : -20.92 mV
Plot Scale: 500.0 mV

High Point : 479.08 mV



APPENDIX II

OPERATING CONDITIONS

GC OPERATING CONDITIONS

Instrument: Perkin-Elmer Autosystem

Column: 30m*0.25mm ID*0.25u Methyl Silicon, Restek Rtx-1
(Cat# 10138, Fused Silica Column; Bonded,
Non-Polar, Silicone Based Polymer Liquid Phase)

Carrier Gas: Helium
Linear Velocity = 30 cm/sec
Column Pressure 16.9 psig.

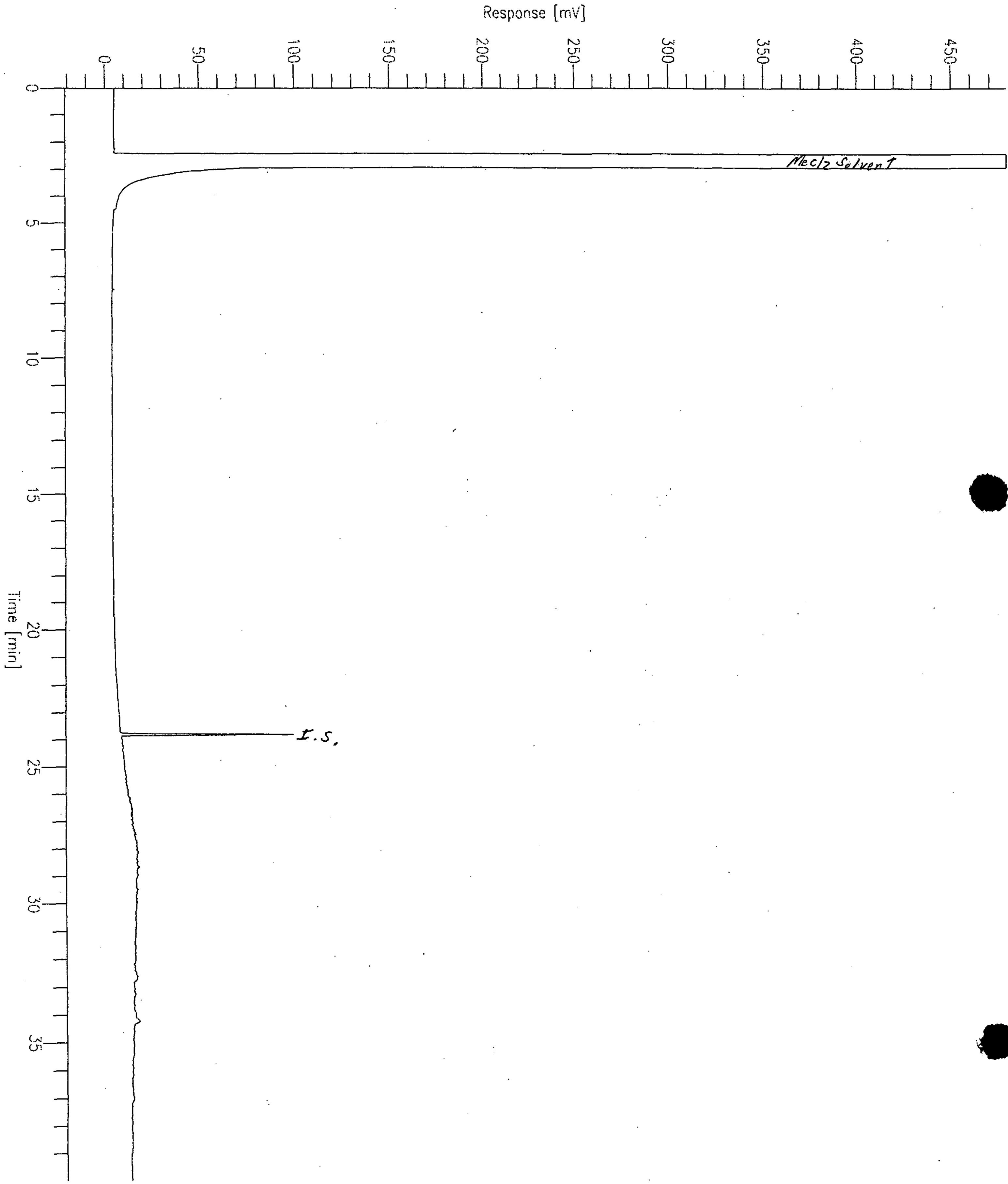
Injection Port: Split/Splitless Type
Temperature 300 deg C

Detector: Flame Ionization Type
Temperature 300 deg C
Range 1, Attn.4

	Method 1	**Method 2**	**Method 3**	**Method 4**
Injection Type	Split	Split	Splitless	Splitless
Acronym	5/s	10/s	5/sl	10/sl
Split Vent	On	On	Off	Off
Split Vent Time,min	---	---	0.5	0.5
Split Rate ml/min	100	100	100	100
Initial Temp, deg C	30	30	30	30
Initial Time, min	5	1	5	1
Ramp Rate, deg C/min	5	10	5	10
Final Temp, deg C	300	300	300	300
Final Time, min	0	15	0	15
Run Time, min	40	40	40	40

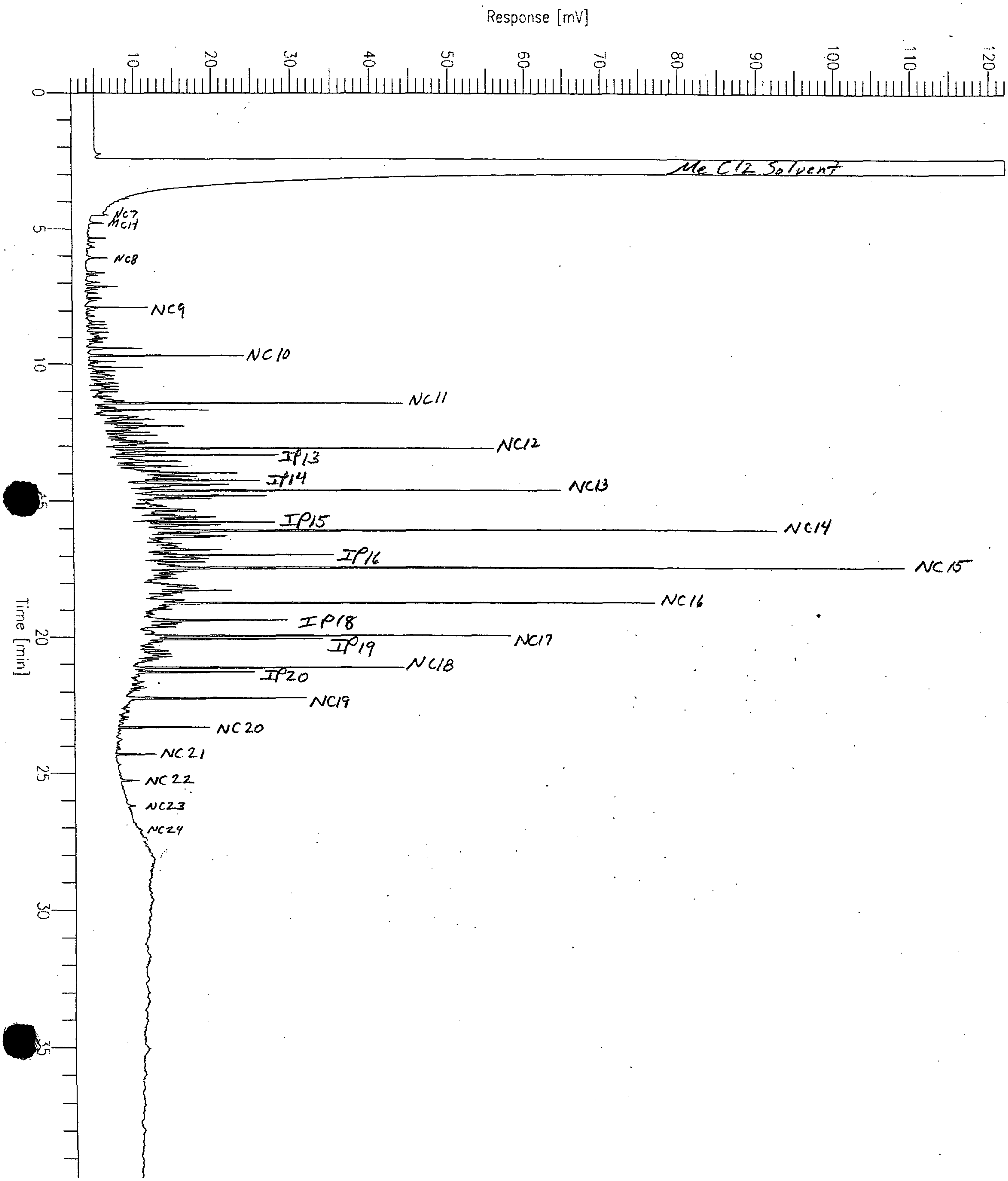
WWG I - 10 SL

Sample Name : METHOD BLANK
FileName : .\45WW167.raw
Method : WWG1__10
Start Time : 0.00 min
Scale Factor: -1.0
End Time : 40.00 min
Plot Offset: -21 mV
Sample #: BLANK
Date : 3/11/02 01:55 PM
Time of Injection: 3/1/02 05:31 PM
Low Point : -21.07 mV
Plot Scale: 500.0 mV
High Point : 478.93 mV



WORLD WIDE GEOSCIENCES - I

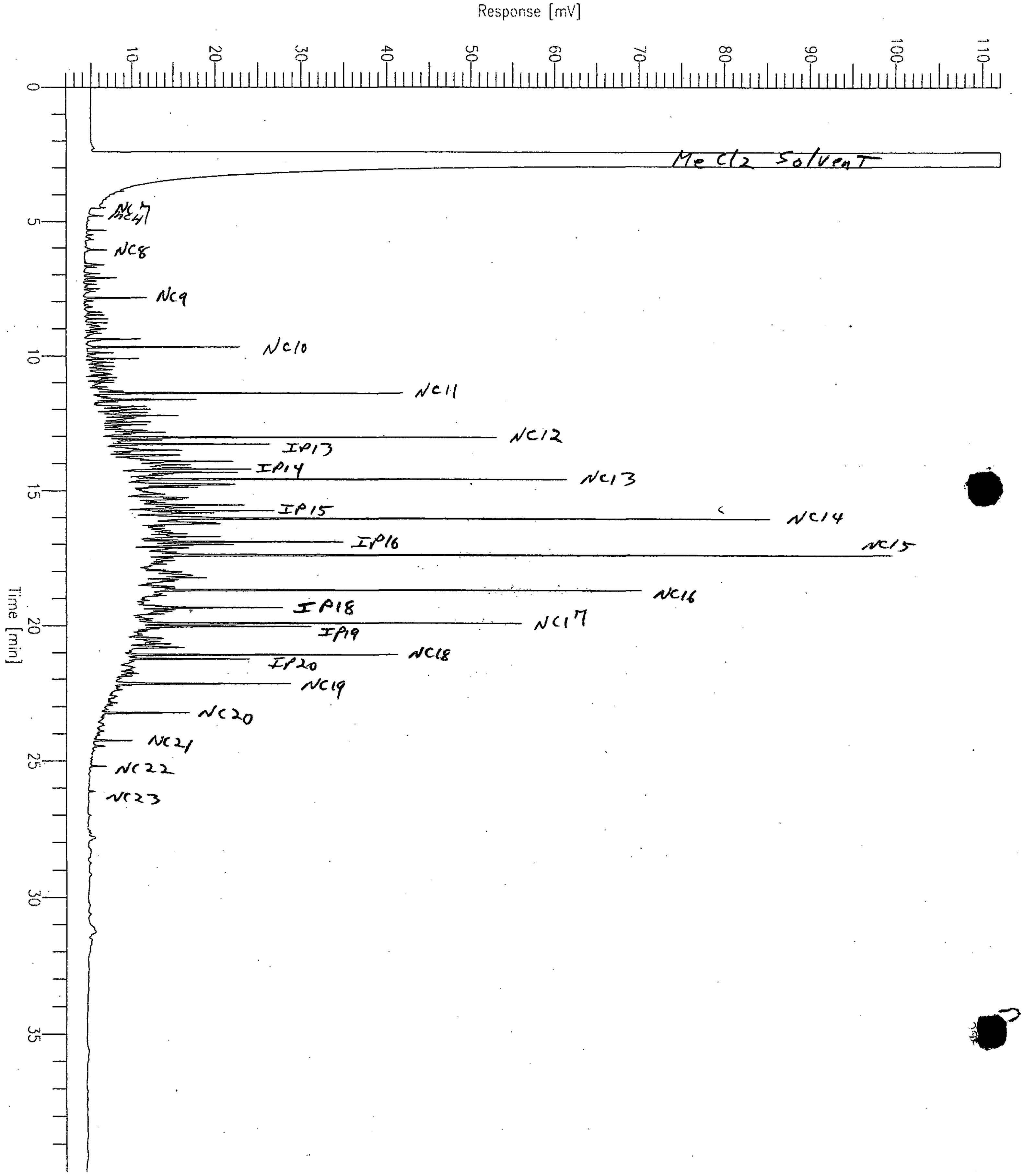
Sample Name : D2 DIESEL		Sample #: STANDARD	Page 1 of 1
FileName : C:\TC4\45WW\45WW168.RAW		Date : 3/11/02 02:10 PM	
Method : WWG.MTH		Time of Injection: 3/1/02 06:24 PM	
Start Time : 0.00 min	End Time : 40.00 min	Low Point : 2.00 mV	High Point : 122.00 mV
Scale Factor: 0.0	Plot Offset: 2 mV	Plot Scale: 120.0 mV	



WORLD WIDE GEOSCIENCES - I

Sample Name : D-2 DIESEL STANDARD
FileName : C:\TC4\45WW\45WW149.RAW
Method : WWG.MTH
Start Time : 0.00 min End Time : 40.00 min
Scale Factor: 0.0 Plot Offset: 2 mV

Sample #: STANDARD
Date : 3/4/02 09:49 AM
Time of Injection: 2/27/02 05:53 PM
Low Point : 2.00 mV High Point : 112.00 mV
Plot Scale: 110.0 mV



WORLD WIDE GEOSCIENCES - I

Sample Name : PAH STANDARD
FileName : C:\TC4\45WW\45WW148.RAW
Method : WWG.MTH
Start Time : 0.00 min End Time : 40.00 min
Scale Factor: 0.0 Plot Offset: 2 mV

Sample #: STANDARD Page 1 of 1
Date : 3/4/02 09:49 AM
Time of Injection: 2/27/02 05:02 PM
Low Point : 2.00 mV High Point : 172.00 mV
Plot Scale: 170.0 mV