

October 13, 2006

Mr. Bernard Franklin
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C
625 Broadway
Albany, NY 12233-7017

Re: Remedial Investigation Interim Data Summary
Ogdensburg (King Street) Non-Owned Former MGP Site
Ogdensburg, New York
Site # V00479-6

Dear Mr. Franklin:

This letter presents an interim data summary report of Remedial Investigation (RI) work completed to date at National Grid's non-owned former manufactured gas plant (MGP) site (the "site") located on King Street in Ogdensburg, New York. The RI activities were initiated by National Grid in January 2006 and continued through October 2006. Based on the results presented herein, National Grid recognizes that additional RI work will be required at this site. As such, we are providing this interim summary to the New York State Department of Environmental Conservation (NYSDEC) in advance of a proposed meeting between National Grid and NYSDEC. The purpose of this meeting would be to discuss potential data gaps and potential additional investigations to complete the RI. A brief summary of the RI data collected so far is provided below.

Completed RI Fieldwork

RI fieldwork was initiated in January 2006 with soil vapor intrusion (SVI) sampling on the residential properties located immediately east of the site; however, the bulk of the RI work was conducted in May and June 2006. The fieldwork was conducted in general accordance with the NYSDEC-approved RI Work Plan, dated September 29, 2005 (Work Plan). The sequence of RI activities is summarized below.

Date	PSA Activity Completed
January 24, 2006	Collected SVI samples VP-1 and VP-2 on the residential properties owned by Randy Huot and Gladys Durham, located immediately east of the site.
May 2006	Excavated two test pits (TP-5 and TP-6).
May 2006	Drilled nine soil borings (B-6, B-7, B-8a, B-8b, B-8c, B-8d, B-8e, B-9, B-10, and B-11) and collected subsurface soil samples for analytical testing.

Date	PSA Activity Completed
May 2006	Installed two overburden monitoring wells (MW-9 and MW-11), seven shallow bedrock monitoring wells (MW-4R, MW-5R, MW-6R, MW-7R, MW-8R, MW-10R, and MW-12R), and one overburden piezometer (PZ-1).
June 12, 13, and 14, 2006	Collected groundwater samples from new monitoring wells for analytical testing and measured water levels.
October 2, 2006	Measured water levels at all site wells.

The findings of the RI fieldwork are summarized below in terms of the media investigated. The RI investigation locations are shown on Figure 1.

Soil Vapor Intrusion Sampling

National Grid conducted SVI sampling at sampling points VP-1 and VP-2 on January 24, 2006. The results of the SVI sampling were presented in a June 13, 2006 letter to NYSDEC. As discussed in that letter, a total of 23 volatile organic compounds (VOCs) were detected in the two SVI samples. The detected VOCs and their respective concentrations are presented in Table 1. Of the detected compounds, only benzene and 1,3-butadiene were detected above their respective USEPA screening values. Benzene was detected at a concentration of 3.2 micrograms per cubic meter (ug/m^3) in VP-1 and 1,3-butadiene was detected at concentrations of 2.4 ug/m^3 in VP-1 and 2 ug/m^3 in VP-2. The USEPA screening values for benzene and 1,3-butadiene (assuming a 1×10^{-6} risk factor) are 3.1 ug/m^3 and 0.087 ug/m^3 , respectively. The other detected analytes were generally present at concentrations ranging from 1 to 3 orders of magnitude below USEPA screening values.

The data evaluation concluded that VOC's detected do not appear to be associated with the former MGP operations, therefore no further SVI evaluation is recommended at these properties.

Subsurface Soil and Bedrock

This section summarizes the findings of the soil and bedrock investigations completed during the RI. This summary also includes a review of the soil and bedrock non-aqueous phase liquid (NAPL) observations and soil analytical results.

The cross-sections provided in Figure 2 provide a visual depiction of the subsurface materials encountered during the RI. The overburden materials at the site generally consist of approximately 3 to 9 feet of fill overlying bedrock; however, the overburden thickness in the area of the large gas holder is approximately 17 feet, presumably because the bedrock was quarried to facilitate construction of the holder. The fill generally contains variable stained fine to coarse sand, silt, and clay with an assortment of debris (metal, glass, cinders, ash, concrete, coal, brick, slag, and wood). Foundations, likely associated with the former MGP, were also encountered in subsurface investigations conducted during the Site Characterization (SC) and RI.

Dolostone bedrock was encountered beneath the fill at a depth of approximately 3 to 9 feet below grade, depending on location. Based on observations of bedrock cores retrieved from the seven bedrock monitoring well locations, the upper approximately 15 to 20 feet of bedrock appears to be moderately fractured. The primary fracture orientation is horizontal (flat), but sub-vertical to vertical fracturing was also observed. The dolostone is slightly to moderately weathered along fracture surfaces, has a light to medium gray color, and contains intermittent thin (a few millimeters) shale interbeds.

Soil and bedrock encountered in the test pits and monitoring wells was visually characterized and the presence of potential MGP-related materials (NAPL, sheen, odor, staining) was noted at a number of locations. NAPL-containing soil or bedrock was observed at seven RI investigation locations: TP-5, MW-5R, MW-6R, MW-7R, MW-8R, MW-10R, and PZ-1. In general, a trace amount of NAPL was observed in bedrock on fracture surfaces in the upper approximately three feet of bedrock. Where encountered in soil, the NAPL was generally observed immediately above the bedrock surface. Refer to the test pit, soil boring, and monitoring well logs presented in Attachment A.

At least one soil sample was collected from each RI investigation location and analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semivolatile Organic Compounds (SVOCs), and total cyanide. The exception were samples collected from B-8b, B-8d, and TP-5 which were analyzed for only total cyanide. Soil samples were generally collected from what appeared to be the most heavily affected intervals. A summary of the subsurface soil data with a comparison to these NYSDEC Technical Administrative Guidance Memorandum (TAGM) 4046 Soil Cleanup Objectives (SCOs) is presented in Table 2. As shown in Table 2, concentrations of benzene, toluene, ethylbenzene, and xylene (BTEX) and/or polycyclic aromatic hydrocarbon (PAH) constituents were at levels exceeding the TAGM SCOs. These include samples collected on site from MW-5R, MW-6R, and TP-5, and an off-site sample collected from B-9.

Groundwater

This section presents a summary of the groundwater RI findings, including a discussion of groundwater flow direction and a summary of the groundwater quality at the site.

As previously mentioned, nine monitoring wells were installed during the RI to assess groundwater quality at the site. Seven of the wells (MW-4R, MW-5R, MW-6R, MW-7R, MW-8R, MW-10R, and MW-12R) were installed in the upper portion of the bedrock and the remaining two wells were installed in the overburden immediately above the bedrock. These wells were installed to monitor shallow groundwater quality. In accordance with the Work Plan, seven of the wells were installed as bedrock wells, in lieu of overburden wells, because a sufficient thickness of saturated overburden was not observed at these locations. Well construction information is presented in Table 3 and on the monitoring well logs that are included in Attachment A.

Groundwater levels were measured in site monitoring wells on June 12, 2006 and October 2, 2006. The water-level measurements and converted water elevations are provided in Table 4. The October 2, 2006 round of water levels was used to prepare the water table and shallow bedrock potentiometric elevation maps presented on Figures 3 and 4. Water levels observed in piezometer

PZ-1 appear to be slightly higher than levels measured in nearby wells. Water levels in the area of this piezometer could be influenced by the former holder. The material inside of the holder may not be hydraulically connected to the surrounding soils, suggesting that the holder walls are relatively impermeable to groundwater. For this reason, we did not use the water level at PZ-1 in developing the water table contour map.

The onsite overburden groundwater exists in a relatively thin saturated zone of unconsolidated material. The saturated thickness of the soils on and around the site is approximately 2 to 6 feet where measured; however, due to the apparent excavation of bedrock in the area of the former holder, the saturated thickness of soils inside the holder is approximately 11 feet. As shown on Figure 3, overburden groundwater moves northwest in the direction of the St. Lawrence River. Overburden groundwater is derived from infiltration of precipitation falling on site and from groundwater flow onto the site from the southeast. Some of this groundwater likely moves downward into the shallow bedrock, at least during seasonally wet periods. Downward and upward vertical gradients are observed in areas where overburden wells and bedrock wells are in close proximity, as follows: MW-2 and MW-5R: upward; MW-3 and MW-12R: downward; MW-11 and MW-6R: downward; and MW-9 and MW-8R/MW-10R: upward.

On-site shallow bedrock derives its water from the overlying overburden, from horizontal bedrock groundwater flow, and from deeper bedrock. Based on review of the shallow bedrock groundwater potentiometric elevations shown on Figure 4, it is difficult to determine the dominant shallow bedrock groundwater flow direction. This is a common occurrence in bedrock flow systems, and is caused by the variable degree of interconnected fractures in the bedrock and the inherent anisotropic nature of the rock. Based on the June 12 and October 2, 2006 rounds of measurements, it appears that the hydraulic head at monitoring wells MW-4R and MW-12R is noticeably lower than the other bedrock monitoring wells. One possible explanation for this is that the fractures screened by these two wells are not well connected to the fractures screened by the remaining bedrock wells. Another explanation could be that the water level in these wells had not yet equilibrated to atmospheric pressure after the well cap was removed prior to making the measurement (this also supports the first explanation). Based on the head measurements collected so far, it appears that shallow bedrock groundwater flow is to the south; however, given the complexity of the bedrock flow system, this may not be the case. Regardless of the locally tortuous bedrock flow path, it is expected that all groundwater from the site to eventually discharge to the St. Lawrence River.

Groundwater samples were collected from the new site wells on June 12, 13, and 14, 2006 using low-flow sampling techniques in accordance with the Work Plan. Samples were analyzed for TCL VOCs, TCL SVOCs, and total cyanide. The analytical results are compared to NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values (June 1998) in Table 5. For completeness, Table 5 also shows groundwater sampling results from overburden monitoring wells MW-1, MW-2, and MW-3 that were installed and sampled during the SC.

As shown on Table 5, groundwater sampled from all but one monitoring well (MW-4R) contains concentrations of BTEX, PAHs, and/or total cyanide at levels exceeding the Class GA Standards and/or Guidance Values. The highest concentrations of total BTEX occur at monitoring wells

MW-12R (3,098 micrograms per liter [ug/l]; mostly benzene), MW-3 (1,760 ug/l), MW-10R (1,290 ug/l), and MW-9 (1,180 ug/l). Total BTEX concentrations in groundwater at the remaining eight wells ranges from 231 to 583 ug/l. Note that the benzene concentration (3,000 ug/l) detected in MW-12R is noticeably high when compared to the other monoaromatic compounds (toluene, ethylbenzene, and xylene [TEX]). Typically, dissolved BTEX concentrations associated with coal tars have a benzene concentration at similar or lower concentrations than the other BTEX constituents. Benzene detected at the MW-12R location is approximately two orders of magnitude higher than the other detected BTEX constituents. As such, the former MGP may not be the source of benzene detected at MW-12R.

The concentrations of total PAHs were highest at monitoring wells MW-3 (17,800 ug/l), MW-1 (4,690 ug/l), MW-9 (1,325 ug/l), MW-2 (930 ug/l), and MW-7R (813 ug/l). Total PAH concentrations in groundwater at the remaining seven wells ranges from 2.7 to 81 ug/l.

Total cyanide concentrations were detected at levels exceeding the Class GA Standard (200 ug/l of free cyanide) at four monitoring wells: MW-1, MW-2, MW-9, and MW-11. Total cyanide was also detected in five other monitoring wells at concentrations ranging from 15.5 to 53.8 ug/l.

Closing

As shown above, the extent MGP-related impacts in soil, bedrock, and groundwater has not been fully defined by the recently completed RI activities. National Grid recognizes that additional investigations are warranted. As such, we propose to hold a meeting with NYSDEC to review the recent findings and discuss an additional scope of work to define the nature and extent of MGP-related constituents at/near the site. Please let me know if you have any questions regarding the data discussed herein.

Sincerely,



Steven P. Stucker
Environmental Department

SAP/plf
Attachments

cc: George Heitzman, P.E., New York State Department of Environmental Conservation
Joe Crua, New York State Department of Health
Ian Ushe, New York State Department of Health
Terry Young, P.E., National Grid
William Holzhauer, Esq., National Grid
Scott Powlin, Blasland, Bouck & Lee, Inc.

Tables

TABLE 1
SOIL VAPOR SAMPLE ANALYTICAL RESULTS ON LOT 13 - DETECTED COMPOUNDS
REMEDIAL INVESTIGATION

DRAFT

NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK

Sample ID: Date Collected:	Shallow Soil Vapor Screening Value	NYSDOH Sub-Slab Action Level	VP-1 01/24/06	VP-2 01/24/06
VOCs				
1,2,4-Trimethylbenzene	60		7.4 [6.9]	11
1,3,5-Trimethylbenzene	60		2.3 [2.4]	3.6
1,3-Butadiene	0.087		2.4 [2.4]	2
2,2,4-Trimethylpentane	--		260 [260]	0.93 U
4-Ethyltoluene	--		5.9 [5.4]	8.4
Acetone	3,500		33 [40]	12 U
Benzene	3.1		3.2 [2.9]	2
Chloromethane	24		2.1 U [2.1 U]	1.8
Cyclohexane	--		12 [12]	0.69 U
Dichlorodifluoromethane	2,000		5.9 J [5.9 J]	5.4 J
Ethylbenzene	22		4.8 [4.8]	5.6
Methyl Butyl Ketone	--		5.7 J [5.7 J]	2 UJ
Methyl Ethyl Ketone	10,000		8 [7.4]	1.5 U
Naphthalene	30		5.2 UJ [5.2 UJ]	3.3 J
n-Heptane	--		1.6 U [1.6 U]	2
n-Hexane	2,000		3.5 [3.5]	2.3
Styrene	10,000		1.7 U [1.7 U]	1.6
Tetrachloroethene	8.1	1,000	2.7 U [2.7 U]	2.5
Toluene	4,000		11 [11]	12
Trichlorofluoromethane	7,000		2.6 [2.4]	2.5
Xylene (m,p)	70,000		16 [17]	20
Xylene (o)	70,000		4.8 [5.2]	6.1
Xylene (total)	--		20 [21]	25

Notes:

1. All concentrations reported in micrograms per cubic meter (ug/m³).
2. Only detected constituents are presented.
3. Detected concentrations are bolded.
4. Shaded values represent exceedences of the generic screening and risk levels (Risk factor=10⁻⁶, HQ=1) Shallow Soil Vapor Screening Value from "Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils," OSWER, November 2002.
5. NYSDOH Sub-Slab Action Level from Soil Vapor/Indoor Air Matrix, "Guidance for Evaluating Soil Vapor in the State of New York," February 2005 Public Comment Draft.
6. [] = Duplicate Sample.
7. -- = Criteria not available.

Data Qualifiers:

J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.
U = The compound was not detected at the indicated concentration.

TABLE 2
SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS
REMEDIAL INVESTIGATION

DRAFT

NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK

Sample ID: Sample Depth (Feet): Date Collected:	Units	New York TAGM Rec. Soil Cleanup Objectives	B-6 2 - 2.9 05/09/06	B-7 4 - 4.6 05/09/06	B-8B 2 - 2.9 05/12/06	B-8C 2 - 2.6 05/12/06	B-8D 0.2 - 1.1 05/12/06	B-9 0 - 0.9 05/11/06	B-9 2 - 2.3 05/11/06	B-10 0 - 0.5 05/11/06	MW-4R 2 - 2.5 05/11/06	MW-5R 5 - 6.1 05/09/06	MW-5R 7 - 7.2 05/09/06	MW-6R 6 - 7.1 05/10/06	MW-6R 8 - 8.3 05/10/06	MW-7R 2 - 2.4 05/11/06
VOCs																
1,1,1-Trichloroethane	mg/kg	800	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,1,2,2-Tetrachloroethane	mg/kg	600	0.013 UJ	0.007 UJ	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,1,2-Trichloroethane	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,1-Dichloroethane	mg/kg	200	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,1-Dichloroethene	mg/kg	400	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,2,4-Trichlorobenzene	mg/kg	3,400	0.013 UJ	0.007 UJ	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,2-Dibromo-3-chloropropane	mg/kg	--	0.013 UJ	0.007 UJ	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,2-Dibromoethane	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,2-Dichlorobenzene	mg/kg	7,900	0.013 UJ	0.007 UJ	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,2-Dichloroethane	mg/kg	100	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,2-Dichloropropane	mg/kg	--	0.013 UJ	0.007 UJ	NA	0.0089 UJ	NA	0.011 UJ [0.011 UJ]	0.0063 UJ	0.0053 UJ	0.005 UJ	5.6 UJ	1.2 UJ	37 UJ	35 UJ	0.0082 UJ
1,3-Dichlorobenzene	mg/kg	1,600	0.013 UJ	0.007 UJ	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
1,4-Dichlorobenzene	mg/kg	8,500	0.013 UJ	0.007 UJ	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Acetone	mg/kg	200	1.2	0.43	NA	0.022 U	NA	0.027 U [0.026 U]	0.016 U	0.059	0.073	14 U	2.9 U	93 U	88 U	0.02 U
Benzene	mg/kg	60	0.013 U	0.00095 J	NA	0.0026 J	NA	0.038 [0.032]	0.0038 J	0.0012 J	0.023	200	30	1,300	1,000	0.0082 U
Bromodichloromethane	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Bromoform	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Bromomethane	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 UJ	1.2 UJ	37 UJ	35 UJ	0.0082 U
Carbon Disulfide	mg/kg	2,700	0.029	0.0072	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.016	5.6 U	3.1	37 U	35 U	0.0082 U
Carbon Tetrachloride	mg/kg	600	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Chlorobenzene	mg/kg	1,700	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Chloroethane	mg/kg	1,900	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Chloroform	mg/kg	300	0.013 UJ	0.007 UJ	NA	0.0089 UJ	NA	0.011 UJ [0.011 UJ]	0.0063 UJ	0.00069 J	0.005 UJ	5.6 UJ	1.2 UJ	37 UJ	35 UJ	0.0082 UJ
Chloromethane	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
cis-1,2-Dichloroethene	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
cis-1,3-Dichloropropene	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Cyclohexane	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 UJ	1.2 UJ	37 UJ	35 UJ	0.0082 U
Dibromochloromethane	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Dichlorodifluoromethane	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Ethylbenzene	mg/kg	5,500	0.013 U	0.007 U	NA	0.0089 U	NA	0.0074 J [0.0074 J]	0.0033 J	0.0053 U	0.0008 J	21	5.6	57	49	0.0082 U
Freon TF	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 UJ	1.2 UJ	37 UJ	35 UJ	0.0082 U
Isopropylbenzene	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.0033 J [0.0036 J]	0.0063 U	0.0053 U	0.005 U	1.1 J	1.7	37 U	35 U	0.0082 U
Methyl Acetate	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Methyl Butyl Ketone	mg/kg	--	0.032 U	0.018 U	NA	0.022 U	NA	0.027 U [0.026 U]	0.016 U	0.013 U	0.012 U	14 U	2.9 U	93 U	88 U	0.02 U
Methyl Ethyl Ketone	mg/kg	300	0.16	0.042	NA	0.022 U	NA	0.027 U [0.026 U]	0.016 U	0.0052 J	0.0066 J	14 U	2.9 U	93 U	88 U	0.02 U
Methyl Isobutyl Ketone	mg/kg	1,000	0.032 U	0.018 U	NA	0.022 U	NA	0.027 U [0.026 U]	0.016 U	0.013 U	0.012 U	14 U	2.9 U	93 U	88 U	0.02 U
Methylcyclohexane	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.097 [0.098]	0.01	0.0054	0.0047 J	5.6 UJ	0.29 J	37 UJ	35 UJ	0.0082 U
Methylene Chloride	mg/kg	100	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Methyl-tert-butyl ether	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U

See Notes on Page 7.

TABLE 2
SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS
REMEDIAL INVESTIGATION

DRAFT

NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK

Sample ID: Sample Depth (Feet): Date Collected:	Units	New York TAGM Rec. Soil Cleanup Objectives	B-6 2 - 2.9 05/09/06	B-7 4 - 4.6 05/09/06	B-8B 2 - 2.9 05/12/06	B-8C 2 - 2.6 05/12/06	B-8D 0.2 - 1.1 05/12/06	B-9 0 - 0.9 05/11/06	B-9 2 - 2.3 05/11/06	B-10 0 - 0.5 05/11/06	MW-4R 2 - 2.5 05/11/06	MW-5R 5 - 6.1 05/09/06	MW-5R 7 - 7.2 05/09/06	MW-6R 6 - 7.1 05/10/06	MW-6R 8 - 8.3 05/10/06	MW-7R 2 - 2.4 05/11/06
VOCs (Cont'd.)																
Styrene	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.0043 J]	0.0014 J	0.0053 U	0.005 U	55	15	37 U	58	0.0082 U
Tetrachloroethene	mg/kg	1,400	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Toluene	mg/kg	1,500	0.0058 J	0.0029 J	NA	0.0011 J	NA	0.028 [0.025]	0.0057 J	0.00077 J	0.016	150	40	980	820	0.0082 U
trans-1,2-Dichloroethene	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
trans-1,3-Dichloropropene	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Trichloroethene	mg/kg	700	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Trichlorofluoromethane	mg/kg	--	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Vinyl Chloride	mg/kg	200	0.013 U	0.007 U	NA	0.0089 U	NA	0.011 U [0.011 U]	0.0063 U	0.0053 U	0.005 U	5.6 U	1.2 U	37 U	35 U	0.0082 U
Xylene (total)	mg/kg	1,200	0.039 UJ	0.021 UJ	NA	0.027 U	NA	0.089 [0.082]	0.023	0.016 U	0.024	390	74	1,100	900	0.025 U
Total BTEX	mg/kg		0.0058	0.00385	NA	0.0037	NA	0.1624/0.1464	0.0358	0.00197	0.0638	761	149.6	3,437	2,769	ND
SVOCs																
1,1'-Biphenyl	mg/kg	--	0.24 J	2.4 U	NA	0.19 J	NA	38 J [21 J]	13 J	0.037 J	0.18 J	400	83 J	620	560	0.47 J
2,2'-oxybis(1-Chloropropane)	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
2,4,5-Trichlorophenol	mg/kg	100	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
2,4,6-Trichlorophenol	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
2,4-Dichlorophenol	mg/kg	400	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
2,4-Dimethylphenol	mg/kg	--	0.31 J	2.4 U	NA	0.3 J	NA	18 J [13 J]	120 U	0.4 U	1.1 U	110 J	110 U	680	700	0.23 J
2,4-Dinitrophenol	mg/kg	200	5.3 U	4.7 U	NA	4.4 UJ	NA	R [R]	240 U	0.8 UJ	2.2 UJ	R	230 UJ	260 UJ	230 UJ	2.7 UJ
2,4-Dinitrotoluene	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
2,6-Dinitrotoluene	mg/kg	1,000	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
2-Chloronaphthalene	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 UJ]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
2-Chlorophenol	mg/kg	800	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
2-Methylnaphthalene	mg/kg	36,400	1.5 J	2.4 U	NA	0.77 J	NA	170 J [74]	53 J	0.21 J	0.88 J	3,400 D	280	4,400 D	3,300 JD	1.9
2-Methylphenol	mg/kg	100	2.7 U	2.4 U	NA	2.2 U	NA	8.7 J [5.8 J]	120 U	0.4 U	1.1 U	5.6 J	110 U	480	450	0.13 J
2-Nitroaniline	mg/kg	430	5.3 U	4.7 U	NA	4.4 U	NA	240 U [120 U]	240 U	0.8 U	2.2 U	260 U	230 U	260 U	230 U	2.7 U
2-Nitrophenol	mg/kg	330	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
3,3'-Dichlorobenzidine	mg/kg	--	2.7 UJ	2.4 UJ	NA	2.2 UJ	NA	120 UJ [61 UJ]	120 UJ	0.4 UJ	1.1 UJ	130 UJ	110 UJ	130 UJ	110 UJ	1.3 UJ
3-Nitroaniline	mg/kg	500	5.3 U	4.7 U	NA	4.4 U	NA	240 U [120 U]	240 U	0.8 U	2.2 U	260 U	230 U	260 U	230 U	2.7 U
4,6-Dinitro-2-methylphenol	mg/kg	--	5.3 U	4.7 U	NA	4.4 U	NA	240 U [120 U]	240 U	0.8 U	2.2 U	260 UJ	230 U	260 U	230 U	2.7 U
4-Bromophenyl-phenylether	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 UJ]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
4-Chloro-3-methylphenol	mg/kg	240	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
4-Chloroaniline	mg/kg	220	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
4-Chlorophenyl-phenylether	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 UJ]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
4-Methylphenol	mg/kg	900	0.45 J	0.38 J	NA	0.46 J	NA	23 J [18 J]	240 U	0.8 U	2.2 U	23 J	230 U	1,400 JD	980 EJ	0.34 J
4-Nitroaniline	mg/kg	--	5.3 U	4.7 U	NA	4.4 U	NA	240 U [120 U]	240 U	0.8 U	2.2 U	260 U	230 U	260 U	230 U	2.7 U
4-Nitrophenol	mg/kg	100	5.3 U	4.7 U	NA	4.4 UJ	NA	240 U [120 U]	240 U	0.8 UJ	2.2 UJ	260 U	230 U	260 U	230 U	2.7 UJ
Acenaphthene	mg/kg	50,000	1.7 J	2.4 U	NA	0.46 J	NA	160 J [72 J]	86 J	0.049 J	0.49 J	290	69 J	520	470	0.84 J
Acenaphthylene	mg/kg	41,000	4.4	2.4 U	NA	4	NA	140 J [100 J]	22 J	0.21 J	1 J	2,300 JD	360	1,700 JD	1,800 JD	3
Acetophenone	mg/kg	--	2.7 U	2.4 U	NA	0.35 J	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	9.1 J	7.5 J	1.3 U
Anthracene	mg/kg	50,000	16	2.4 U	NA	5.6	NA	430 [240 J]	160	0.41	4.3 J	2,600 D	420	3,400 JD	2,600 JD	6.8

See Notes on Page 7.

TABLE 2
SUBSURFACE SOIL SAMPLE ANALYTICAL RESULTS
REMEDIAL INVESTIGATION

DRAFT

NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK

Sample ID: Sample Depth (Feet): Date Collected:	Units	New York TAGM Rec. Soil Cleanup Objectives	B-6 2 - 2.9 05/09/06	B-7 4 - 4.6 05/09/06	B-8B 2 - 2.9 05/12/06	B-8C 2 - 2.6 05/12/06	B-8D 0.2 - 1.1 05/12/06	B-9 0 - 0.9 05/11/06	B-9 2 - 2.3 05/11/06	B-10 0 - 0.5 05/11/06	MW-4R 2 - 2.5 05/11/06	MW-5R 5 - 6.1 05/09/06	MW-5R 7 - 7.2 05/09/06	MW-6R 6 - 7.1 05/10/06	MW-6R 8 - 8.3 05/10/06	MW-7R 2 - 2.4 05/11/06
SVOCs (Cont'd.)																
Atrazine	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 UJ [61 UJ]	120 UJ	0.4 U	1.1 U	130 UJ	110 UJ	130 UJ	110 UJ	1.3 U
Benzaldehyde	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Benzo(a)anthracene	mg/kg	224	20	0.42 J	NA	34	NA	590 J [390 J]	200	1.3	9	1,800 JD	240	2,500 JD	1,700 JD	16
Benzo(a)pyrene	mg/kg	61	27	0.52 J	NA	25	NA	470 J [310 J]	160	1.5	9.9	900	190	2,300 JD	1,500 JD	15
Benzo(b)fluoranthene	mg/kg	1,100	32	0.46 J	NA	54 EJ	NA	430 J [320 J]	120	1.4	8.9 J	940	130	1,800 EJ	1,000 JD	15
Benzo(g,h,i)perylene	mg/kg	50,000	7.6	0.24 J	NA	15	NA	190 J [110 J]	65 J	0.78	3.9	310 J	64 J	560 J	480 J	5.5
Benzo(k)fluoranthene	mg/kg	1,100	17	0.55 J	NA	19	NA	360 J [200 J]	150 J	1.5	7.6 J	440 J	180 J	630 J	740 J	14
Bis(2-chloroethoxy) methane	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Bis(2-chloroethyl) ether	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Bis(2-ethylhexyl) phthalate	mg/kg	50,000	2.7 UJ	2.4 UJ	NA	2.2 UJ	NA	120 U [61 U]	120 U	0.52 UJ	1.3 UJ	130 UJ	110 U	130 U	110 U	1.9 UJ
Butylbenzyl phthalate	mg/kg	50,000	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Caprolactam	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Carbazole	mg/kg	--	12 J	2.4 UJ	NA	1.3 J	NA	220 J [140]	83 J	0.18 J	1.9	740	180	1,700 JD	1,300 JD	2.4
Chrysene	mg/kg	400	17	0.35 J	NA	32	NA	540 J [370 J]	190	1.2	7.7	1,000	210	2,100 JD	1,500 JD	13
Dibenzo(a,h)anthracene	mg/kg	14	4.6	2.4 U	NA	6.2	NA	90 J [53 J]	32 J	0.25 J	2.1	140 J	29 J	230 J	200 J	2.5
Dibenzofuran	mg/kg	6,200	2.9	2.4 U	NA	0.88 J	NA	230 J [130 J]	80 J	0.18 J	1.4	2,000 JD	280	2,900 JD	2,100 JD	3
Diethylphthalate	mg/kg	7,100	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Dimethylphthalate	mg/kg	2,000	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Di-n-butyl phthalate	mg/kg	8,100	0.37 J	2.4 U	NA	0.33 J	NA	6.9 J [3.2 J]	7.2 J	0.046 J	0.17 J	8.1 J	5.3 J	6.6 J	6.2 J	0.22 J
Di-n-octyl phthalate	mg/kg	50,000	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 UJ]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Fluoranthene	mg/kg	50,000	66 D	0.8 J	NA	54 D	NA	1,500 D [1,100 D]	470	2.4	14	4,600 D	580	7,300 D	5,000 D	32 D
Fluorene	mg/kg	50,000	7.4	2.4 U	NA	1.3 J	NA	290 J [140 J]	110 J	0.17 J	1.6	2,400 JD	300	3,000 JD	2,200 JD	3.4
Hexachlorobenzene	mg/kg	410	2.7 U	2.4 U	NA	2.2 U	NA	120 UJ [R]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Hexachlorobutadiene	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Hexachlorocyclopentadiene	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	R [R]	120 U	0.4 U	1.1 U	R	110 UJ	130 UJ	110 UJ	1.3 U
Hexachloroethane	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Indeno(1,2,3-cd)pyrene	mg/kg	3,200	11	0.26 J	NA	19	NA	230 J [140 J]	79 J	0.98	5.3	410 J	82 J	720 J	620 J	7.2
Isophorone	mg/kg	4,400	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Naphthalene	mg/kg	13,000	1.5 J	2.4 U	NA	1.6 J	NA	240 J [140 J]	86 J	0.37 J	3.2	14,000 D	1,700 D	25,000 D	18,000 D	6.4
Nitrobenzene	mg/kg	200	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
N-Nitroso-di-N-propylamine	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
N-Nitrosodiphenylamine	mg/kg	--	2.7 U	2.4 U	NA	2.2 U	NA	120 U [61 U]	120 U	0.4 U	1.1 U	130 U	110 U	130 U	110 U	1.3 U
Pentachlorophenol	mg/kg	1,000	5.3 U	4.7 U	NA	4.4 U	NA	240 U [120 U]	240 U	0.8 U	2.2 U	260 U	230 U	260 U	230 U	2.7 U
Phenanthrene	mg/kg	50,000	49 D	0.38 J	NA	12	NA	1,800 D [1,200 D]	570	1.4	13	7,500 D	1,300 D	11,000 D	7,500 D	25 D
Phenol	mg/kg	30	2.7 U	2.4 U	NA	2.2 U	NA	10 J [9.4 J]	120 U	0.4 U	1.1 U	130 U	110 U	740	670	0.21 J
Pyrene	mg/kg	50,000	30	0.6 J	NA	48 EJ	NA	1,200 D [830 JD]	360	1.9	11	3,400 D	450	5,300 D	3,700 D	23 D
Total PAHs	mg/kg		313.7	4.58	NA	331.93	NA	8,830/5,789	2,913	16.029	103.87	46,430	6,584	72,460	52,310	176.54
Miscellaneous																
Cyanide	mg/kg	--	0.28 UJ	0.25 UJ	3.4 J	251 J	491 J	6.6 J [13.5 J]	15.1 J	0.84 J	3.1 J	22.8 J	2.9 J	168 J	53.4 J	9.7 J

See Notes on Page 7.

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OGDENSBURG, NEW YORK

Sample ID: Sample Depth (Feet): Date Collected:	Units	New York TAGM Rec. Soil Cleanup Objectives	MW-7R 6 - 6.5 05/11/06	MW-8R 2 - 2.9 05/17/06	MW-9 4 - 4.5 05/12/06	MW-9 6 - 6.4 05/12/06	MW-10R 0 - 1.5 05/17/06	MW-10R 4 - 5 05/17/06	MW-11 4 - 4.6 05/12/06	MW-12R 2 - 2.8 05/12/06	PZ-1 14 - 15.6 05/08/06	PZ-1 16 - 16.4 05/08/06	TP-5 1 - 3 05/22/06	TP-5 4.7 - 6.5 05/22/06	TP-6 0 - 2 05/22/06	TP-6 5 - 7 05/22/06
SVOCs (Cont'd.)																
Atrazine	mg/kg	--	59 UJ	0.41 UJ	2.1 U	7.5 UJ	3.7 UJ [5.4 UJ]	0.36 UJ	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 UJ	1.2 UJ	1.9 UJ
Benzaldehyde	mg/kg	--	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.065 J	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Benzo(a)anthracene	mg/kg	224	210	0.49 J	1.9 J	22	19 [31]	0.56	6.4	26	9.1	19	NA	600	4.7	37 D
Benzo(a)pyrene	mg/kg	61	170	0.71	2.2	12	21 [25]	0.75	9.2	26	8.5	19	NA	500	5.2	33 D
Benzo(b)fluoranthene	mg/kg	1,100	160	0.61 J	1.8 J	7.8 J	21 J [23]	0.55 J	6.2	26	8.4	20	NA	460	4.3	41 D
Benzo(g,h,i)perylene	mg/kg	50,000	68	0.3 J	1.1 J	4 J	9.7 J [18 J]	0.29 J	3	17	4.8	9	NA	210	3.7	22
Benzo(k)fluoranthene	mg/kg	1,100	120 J	0.77 J	2.7	12 J	18 J [21]	0.63 J	7.7	30	6.9	14	NA	350 J	4.9	26
Bis(2-chloroethoxy) methane	mg/kg	--	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Bis(2-chloroethyl) ether	mg/kg	--	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Bis(2-ethylhexyl) phthalate	mg/kg	50,000	59 U	0.7	2.7 UJ	7.5 U	3.7 U [0.65 J]	0.36 U	2.3 UJ	6.8 UJ	1.2 UJ	2.3 UJ	NA	120 U	1.2 U	1.9 U
Butylbenzyl phthalate	mg/kg	50,000	59 U	0.41 U	2.1 U	7.5 U	0.29 J [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Caprolactam	mg/kg	--	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Carbazole	mg/kg	--	120	0.037 J	2.9	8.1 J	1.1 J [1.6 J]	0.074 J	0.59 J	2 J	2.4 J	6 J	NA	450	0.18 J	2.8
Chrysene	mg/kg	400	190	0.51 J	1.8 J	18	18 J [29 J]	0.51	5.1	25	8.5	19	NA	490	4.6	37 D
Dibenzo(a,h)anthracene	mg/kg	14	32 J	0.15 J	0.41 J	1.7 J	5.2 [4.7 J]	0.22 J	1.5 J	6.3 J	1.3	3.2	NA	84 J	0.64 J	8.4
Dibenzofuran	mg/kg	6,200	220	0.41 U	1.1 J	21	1.2 J [1.4 J]	0.12 J	0.28 J	1.4 J	1.4	5.9	NA	730	0.087 J	1.5 J
Diethylphthalate	mg/kg	7,100	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Dimethylphthalate	mg/kg	2,000	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Di-n-butyl phthalate	mg/kg	8,100	3.3 J	0.41 U	0.32 J	0.78 J	3.7 U [5.4 U]	0.36 U	0.31 J	0.95 J	0.12 J	0.3 J	NA	120 U	1.2 U	1.9 U
Di-n-octyl phthalate	mg/kg	50,000	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Fluoranthene	mg/kg	50,000	550 EJ	0.61 J	3.6	44	33 [51]	0.63	4.6	49	36 D	57 D	NA	2,300 D	8	65 D
Fluorene	mg/kg	50,000	240	0.023 J	3	32	1.7 J [1.5 J]	0.14 J	0.46 J	1.9 J	1.5	7.3	NA	750	0.077 J	1.8 J
Hexachlorobenzene	mg/kg	410	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Hexachlorobutadiene	mg/kg	--	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Hexachlorocyclopentadiene	mg/kg	--	59 U	0.41 UJ	2.1 U	7.5 UJ	R [5.4 U]	0.36 UJ	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Hexachloroethane	mg/kg	--	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Indeno(1,2,3-cd)pyrene	mg/kg	3,200	90	0.36 J	1.4 J	4.8 J	12 J [21 J]	0.38	4	22	5.3	11	NA	250	4.1	30
Isophorone	mg/kg	4,400	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Naphthalene	mg/kg	13,000	920 EJ	0.41 U	0.55 J	7.1 J	0.93 J [1.3 J]	0.41	0.45 J	2.2 J	0.8 J	68 D	NA	9,300 D	0.15 J	0.95 J
Nitrobenzene	mg/kg	200	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
N-Nitroso-di-N-propylamine	mg/kg	--	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
N-Nitrosodiphenylamine	mg/kg	--	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	120 U	1.2 U	1.9 U
Pentachlorophenol	mg/kg	1,000	120 U	1.6 UJ	4.3 U	30 UJ	14 UJ [11 U]	1.4 UJ	4.6 U	14 U	2.4 U	4.5 U	NA	240 U	2.3 U	3.8 U
Phenanthrene	mg/kg	50,000	830 EJ	0.23 J	4.4	80	15 [21]	0.32 J	2.9	18	25 D	47 D	NA	3,600 D	2.2	24
Phenol	mg/kg	30	59 U	0.41 U	2.1 U	7.5 U	3.7 U [5.4 U]	0.36 U	2.3 U	6.8 U	1.2 U	2.3 U	NA	110 J	1.2 U	0.2 J
Pyrene	mg/kg	50,000	400	0.67 J	3.2	36	29 [47]	0.54	5	38	28 D	43 D	NA	1,700 D	7.7	53 D
Total PAHs	mg/kg		4,830	5,586	32.54	345.6	214.15/306.84	6.466	58.98	298.45	151.36	362.2	NA	24,074	52,217	395.92
Miscellaneous																
Cyanide	mg/kg	--	1.7 J	1.5	5.7 J	10.3 J	1.1 J [4.6 J]	0.76	5.8 J	44.6 J	7.2 J	6.3 J	101	28.9	1.8	62.7

See Notes on Page 7.

TABLE 3
2006 SOIL SAMPLE ANALYTICAL RESULTS

DRAFT

NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK

Notes:

1. All concentrations reported in milligrams per kilogram (mg/kg); equivalent to parts per million (ppm).

2. Detected concentrations are bolded.

NA = Not Analyzed.

Shaded results exceed the NYSDEC TAGM 4046 soil cleanup objective for this constituent.

Data Qualifiers:

D = Concentration is based on a diluted sample analysis.

E = The compound was quantitated above the calibration range.

J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value.

U = The compound was not detected at the indicated concentration.

R = The sample results are rejected.

TABLE 3
MONITORING WELL CONSTRUCTION DETAILS
REMEDIAL INVESTIGATION

NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK

Location ID	Date Completed	Well Diameter (in.)	Casing/ Screen Type	Screen Slot Size (in.)	Screen Length (ft.)	Sump Length (ft.)	Depth to Screened Interval (ft. bgs)		Total Well Depth ft. bgs
							Top	Bottom	
MW-1	12/11/03	2	PVC	0.02	2.0	NS	4.7	6.7	7.0
MW-2	12/11/03	2	PVC	0.02	3.0	NS	3.0	6.0	6.3
MW-3	12/11/03	2	PVC	0.02	2.0	NS	3.0	5.0	5.3
MW-4R	5/25/06	2	PVC	0.02	10.0	2.0	8.0	18.0	20.0
MW-5R	5/23/06	2	PVC	0.02	10.0	2.0	12.4	22.4	24.4
MW-6R	5/22/06	2	PVC	0.02	10.0	2.0	14.3	24.3	26.3
MW-7R	5/25/06	2	PVC	0.02	10.0	2.0	11.0	21.0	23.0
MW-8R	5/24/06	2	PVC	0.02	10.0	2.0	11.0	21.0	23.0
MW-9	5/15/06	2	PVC	0.02	10.0	NS	3.0	13.0	7.3
MW-10R	5/24/06	2	PVC	0.02	10.0	2.0	11.8	21.8	23.8
MW-11	5/15/06	2	PVC	0.02	4.0	NS	3.1	7.1	7.4
MW-12R	5/25/06	2	PVC	0.02	10.0	2.0	10.0	20.0	22.0

Notes:

MP = Measuring point.

NS = No sump installed at this location.

1. Depths given in feet below ground surface (ft. bgs).

TABLE 4
GROUNDWATER ELEVATIONS
REMEDIAL INVESTIGATION

DRAFT

NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK

Well ID	Ref. Point Elevation (ft AMSL)	Depth to Water (ft)		Groundwater Elevation (ft AMSL)	
		6/12/2006	10/2/2006	6/12/2006	10/2/2006
MW-1	262.50	NA	5.98	NA	256.52
MW-2	259.56	NA	3.69	NA	255.87
MW-3	261.32	NA	4.04	NA	257.28
MW-4R	263.15	10.89	12.18	252.26	250.97
MW-5R	259.19	1.23	2.84	257.96	256.35
MW-6R	258.83	12.08	2.77	246.75	256.06
MW-7R	258.76	0.55	1.89	258.21	256.87
MW-8R	256.97	artesian	0.93	NA	256.04
MW-9	256.78	4.71	4.64	252.07	252.14
MW-10R	257.23	artesian	1.57	NA	255.66
MW-11	258.89	2.21	2.12	256.68	256.77
MW-12R	260.49	7.60	8.82	252.89	251.67
PZ-1	263.54	6.50	6.55	257.04	256.99

Notes:

AMSL = above mean sea level.

Reference point for all wells is the top of inner casing, referenced to NAD 1988.

NA = Not available.

TABLE 5
GROUNDWATER SAMPLE ANALYTICAL RESULTS
REMEDIAL INVESTIGATION

DRAFT

NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK

Sample ID: Date Collected:	Units	NYSDEC Class GA2	MW-1 12/30/03	MW-2 12/30/03	MW-3 12/30/03	MW-4R 06/12/06	MW-5R 06/13/06	MW-6R 06/13/06	MW-7R 06/14/06	MW-8R 06/13/06	MW-9 06/12/06	MW-10R 06/13/06	MW-11 06/12/06	MW-12R 06/13/06
VOCs														
1,1,1-Trichloroethane	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	ug/L	1	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,1-Dichloroethane	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,1-Dichloroethene	ug/L	5	NA	NA	NA	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ [5 UJ]	5 UJ	5 UJ	5 UJ	5 UJ
1,2,4-Trichlorobenzene	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	ug/L	0.04	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,2-Dibromoethane	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	ug/L	3	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,2-Dichloroethane	ug/L	0.6	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,2-Dichloropropane	ug/L	1	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	ug/L	3	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	ug/L	3	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Acetone	ug/L	50	16	13 U [13 U]	630 U	13 U	13 U	13 U	13 U	13 U [21 J]	14 J	13 U	13 U	17 J
Benzene	ug/L	1	42	12 [4 J]	630	5 U	210 D	390 D	420 D	310 D [310 D]	420 D	1,200 D	5 U	3,000 D
Bromodichloromethane	ug/L	50	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Bromoform	ug/L	50	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Bromomethane	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Carbon Disulfide	ug/L	60	NA	NA	NA	5 UJ	5 UJ	3.9 J	5 U	3.9 J [4 J]	4 J	5 UJ	5 UJ	4.5 J
Carbon Tetrachloride	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Chlorobenzene	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Chloroethane	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Chloroform	ug/L	7	NA	NA	NA	1.6 J	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Chloromethane	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	ug/L	0.4	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Cyclohexane	ug/L	--	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	1.3 J	5 U	5 U	5 U
Dibromochloromethane	ug/L	50	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	ug/L	--	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Ethylbenzene	ug/L	5	23	10 [4 J]	250 U	5 U	8.5	14	14	7.9 [8]	170	53	5 U	42
Freon TF	ug/L	--	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Isopropylbenzene	ug/L	--	12	4 J [2 J]	250 U	5 U	5 U	5 U	1.4 J	1.4 J [1.5 J]	28	3.7 J	5 U	1.1 J
Methyl Acetate	ug/L	--	NA	NA	NA	5 UJ	5 UJ	5 UJ	5 U	5 UJ [5 UJ]	5 UJ	5 UJ	5 UJ	5 UJ
Methyl Butyl Ketone	ug/L	50	NA	NA	NA	13 U	13 U	13 U	13 U	13 U [13 U]	13 U	13 U	13 U	13 U
Methyl Ethyl Ketone	ug/L	50	NA	NA	NA	7.4 J	13 U	13 U	13 U	13 U [13 U]	13 U	13 U	13 U	13 U
Methyl Isobutyl Ketone	ug/L	--	NA	NA	NA	13 U	13 U	13 U	13 U	13 U [13 U]	13 U	13 U	13 U	13 U
Methylcyclohexane	ug/L	--	NA	NA	NA	5 U	5 U	5 U	5 U	NA	NA	3.2 J	5 U	5 U
Methylene Chloride	ug/L	5	NA	NA	NA	5 UJ	5 UJ	5 UJ	5 U	5 UJ [5 UJ]	5 UJ	5 UJ	5 UJ	5 UJ
Methyl-tert-butyl ether	ug/L	10	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Styrene	ug/L	5	NA	NA	NA	5 U	5 U	5 U	2.5 J	5 U [5 U]	22	5 U	5 U	5 U
Tetrachloroethene	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Toluene	ug/L	5	60	9 [3 J]	420	5 U	4.7 J	11	8	4.2 J [3.5 J]	190	6.1	5 U	10

See Notes on Page 3.

TABLE 5
GROUNDWATER SAMPLE ANALYTICAL RESULTS
REMEDIAL INVESTIGATION

DRAFT

NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK

Sample ID: Date Collected:	Units	NYSDEC Class GA2	MW-1 12/30/03	MW-2 12/30/03	MW-3 12/30/03	MW-4R 06/12/06	MW-5R 06/13/06	MW-6R 06/13/06	MW-7R 06/14/06	MW-8R 06/13/06	MW-9 06/12/06	MW-10R 06/13/06	MW-11 06/12/06	MW-12R 06/13/06
VOCs (Cont'd.)														
trans-1,2-Dichloroethene	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	ug/L	0.4	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Trichloroethene	ug/L	5	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Trichlorofluoromethane	ug/L	- -	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Vinyl Chloride	ug/L	2	NA	NA	NA	5 U	5 U	5 U	5 U	5 U [5 U]	5 U	5 U	5 U	5 U
Xylene (total)	ug/L	5	430	39 J [14 J]	710	5 U	8.1	15	27	4.2 J [4.7 J]	400	31	5 U	46
Total BTEX	ug/L		555	70 J [25 J]	1,760	ND	231.3	430	469	326.3/326.2	1,180	1,290.10	ND	3,098
SVOCs														
1,1'-Biphenyl	ug/L	- -	29	7 J [10 U]	110	11 U	4.1 J	10 U	14	10 U [10 U]	36	10 U	10 U	10 U
2,2'-oxybis(1-Chloropropane)	ug/L	5	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	ug/L	1	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	ug/L	1	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	ug/L	1	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	ug/L	1	21	10 U [10 U]	340	11 U	10 U	2.1 J	11 U	10 U [10 U]	70	7.6 J	10 U	1.8 J
2,4-Dinitrophenol	ug/L	1	NA	NA	NA	21 U	20 U	20 U	22 U	20 U [20 U]	20 U	20 U	20 U	20 U
2,4-Dinitrotoluene	ug/L	5	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	ug/L	5	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
2-Chloronaphthalene	ug/L	10	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
2-Chlorophenol	ug/L	1	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
2-Methylnaphthalene	ug/L	- -	340 D	12 [10 U]	530 D	11 U	10 U	10 U	79	10 U [10 U]	61	10 U	10 U	10 U
2-Methylphenol	ug/L	1	28	10 U [10 U]	290	11 U	10 U	10 U	11 U	10 U [10 U]	28	10 U	10 U	10 U
2-Nitroaniline	ug/L	5	NA	NA	NA	21 U	20 U	20 U	22 U	20 U [20 U]	20 U	20 U	20 U	20 U
2-Nitrophenol	ug/L	1	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	ug/L	5	NA	NA	NA	11 UJ	10 UJ	10 UJ	11 UJ	10 UJ [10 UJ]	10 UJ	10 UJ	10 UJ	10 UJ
3-Nitroaniline	ug/L	5	NA	NA	NA	21 U	20 U	20 U	22 U	20 U [20 U]	20 U	20 U	20 U	20 U
4,6-Dinitro-2-methylphenol	ug/L	1	NA	NA	NA	21 U	20 U	20 U	22 U	20 U [20 U]	20 U	20 U	20 U	20 U
4-Bromophenyl-phenylether	ug/L	- -	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	ug/L	1	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
4-Chloroaniline	ug/L	5	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	ug/L	- -	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
4-Methylphenol	ug/L	1	30	10 U [10 U]	190	21 U	20 U	20 U	22 U	20 U [20 U]	11 J	20 U	20 U	20 U
4-Nitroaniline	ug/L	5	NA	NA	NA	21 U	20 U	20 U	22 U	20 U [20 U]	20 U	20 U	20 U	20 U
4-Nitrophenol	ug/L	1	NA	NA	NA	21 U	20 U	20 U	22 U	20 U [20 U]	20 U	20 U	20 U	20 U
Acenaphthene	ug/L	20	28	15 [4 J]	97	11 U	8.9 J	10 U	10 J	5 J [5.5 J]	57	3.4 J	10 U	10 U
Acenaphthylene	ug/L	- -	79	33 J [6 J]	590 D	11 U	4.7 J	10 U	31	10 U [1.6 J]	94	1.7 J	10 U	10 U
Acetophenone	ug/L	- -	2 J	10 U [10 U]	9 J	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Anthracene	ug/L	50	8 J	31 J [3 J]	350	11 U	10 U	10 U	11 U	10 U [10 U]	13	10 U	10 U	10 U
Atrazine	ug/L	- -	NA	NA	NA	11 UJ	10 UJ	10 UJ	11 UJ	10 UJ [10 UJ]	10 UJ	10 UJ	10 UJ	10 UJ
Benzaldehyde	ug/L	- -	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Benzo(a)anthracene	ug/L	0.002	4 J	55 J [3 J]	950 D	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Benzo(a)pyrene	ug/L	- -	3 J	55 J [3 J]	900 D	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	ug/L	0.002	2 J	53 J [2 J]	950 D	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U

See Notes on Page 3.

TABLE 5
GROUNDWATER SAMPLE ANALYTICAL RESULTS
REMEDIAL INVESTIGATION

DRAFT

NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK

Sample ID: Date Collected:	Units	NYSDEC Class GA2	MW-1 12/30/03	MW-2 12/30/03	MW-3 12/30/03	MW-4R 06/12/06	MW-5R 06/13/06	MW-6R 06/13/06	MW-7R 06/14/06	MW-8R 06/13/06	MW-9 06/12/06	MW-10R 06/13/06	MW-11 06/12/06	MW-12R 06/13/06
SVOCs (Cont'd.)														
Benzo(g,h,i)perylene	ug/L	--	10 U	32 J [10 UJ]	320	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	ug/L	0.002	3 J	41 J [3 J]	920 D	11 UJ	10 UJ	10 UJ	11 UJ	10 UJ [10 UJ]	10 UJ	10 UJ	10 UJ	10 UJ
Bis(2-chloroethoxy) methane	ug/L	5	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Bis(2-chloroethyl) ether	ug/L	1	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Bis(2-ethylhexyl) phthalate	ug/L	5	10 U	10 U [10 U]	20 J	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Butylbenzyl phthalate	ug/L	50	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Caprolactam	ug/L	--	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Carbazole	ug/L	--	82 J	25 J [4 J]	260 J	11 U	4.5 J	10 U	16	3.2 J [3.6 J]	74	12	10 U	2.6 J
Chrysene	ug/L	0.002	3 J	51 J [3 J]	880 D	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	ug/L	--	10 U	12 J [10 U]	200	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Dibenzofuran	ug/L	--	39	24 J [6 J]	330	11 U	6.8 J	10 U	20	2.5 J [2.7 J]	74	10 U	10 U	10 U
Diethylphthalate	ug/L	50	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Dimethylphthalate	ug/L	50	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Di-n-butyl phthalate	ug/L	50	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Di-n-octyl phthalate	ug/L	50	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Fluoranthene	ug/L	50	12	100 J [8 J]	1,600 D	11 U	10 U	10 U	11 U	10 U [10 U]	6.4 J	10 U	10 U	10 U
Fluorene	ug/L	50	26	29 J [6 J]	340	11 U	5.4 J	10 U	13	2.9 J [3.2 J]	70	1.2 J	10 U	10 U
Hexachlorobenzene	ug/L	0.04	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Hexachlorobutadiene	ug/L	0.5	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	ug/L	5	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Hexachloroethane	ug/L	5	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	ug/L	0.002	2 J	42 J [10 UJ]	790 D	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Isophorone	ug/L	50	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Naphthalene	ug/L	10	3,900 D	150 J [7 J]	4,000 D	11 U	10	10 U	670 D	1.5 J [1.7 J]	960 D	75	2.7 J	27
Nitrobenzene	ug/L	0.4	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
N-Nitroso-di-N-propylamine	ug/L	--	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	ug/L	50	NA	NA	NA	11 U	10 U	10 U	11 U	10 U [10 U]	10 U	10 U	10 U	10 U
Pentachlorophenol	ug/L	1	NA	NA	NA	21 U	20 U	20 U	22 U	20 U [20 U]	20 U	20 U	20 U	20 U
Phenanthrene	ug/L	50	32	74 J [3 J]	1,400 D	11 U	3.9 J	10 U	9.9 J	1.3 J [1.8 J]	60	10 U	10 U	10 U
Phenol	ug/L	1	10	10 U [10 U]	54	11 U	10 U	12	9 J	3.5 J [10 U]	3.5 J	13	10 U	31
Pyrene	ug/L	50	9 J	89 J [6 J]	1,400 D	11 U	10 U	10 U	11 U	10 U [10 U]	4 J	10 U	10 U	10 U
Total PAHs	ug/L		4,450 J	874 J [57 J]	16,200	ND	32.9	ND	812.9	10.7/13.8	1,325.4	81.3	2.7	27
Miscellaneous														
Cyanide	ug/L	200	259	1,260 [1,600]	NA	28.9	3.6 U	55.5	15.5	3.6 U [3.6 U]	943	53.8	359	29.2

Notes:

1. All concentrations reported in micrograms per liter (ug/L); equivalent to parts per billion (ppb).
2. Detected concentrations are bolded.
3. Shaded values indicate the result exceeds New York State Technical and Operational Guidance Values Series (1.1.1) Class GA Ambient Water Quality Standards or Guidance Values

Data Qualifiers:

D = Concentration is based on a diluted sample analysis.

J = Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than zero. The concentration given is an approximate value

U = The compound was not detected at the indicated concentration.

Figures

SYR-85-RGB AMS RCB L: ON=*, OFF=REF*
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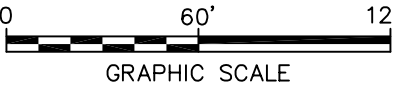
LEGEND:

- MW-10 MONITORING WELL
- VP-1 SOIL VAPOR SAMPLING POINT
- PZ-1 PIEZOMETER
- HA-1 HAND-AUGER BORING
- TP-1 TEST PIT
- B-1 SOIL BORING
- SS-01 SURFACE SOIL SAMPLE
- FEATURE FROM 1909 SANBORN MAP
- FEATURE FROM SEPTEMBER 1925 SANBORN MAP
- APPROXIMATE SITE BOUNDARY
- APPROXIMATE ROAD RIGHT-OF-WAY
- CHAINLINK FENCE
- UTILITY POLE
- CATCH BASIN
- MANHOLE
- TOPOGRAPHIC CONTOUR (2 FT. CONTOUR INTERVAL)
- A-A' CROSS SECTION LOCATION

NOTES:

1. BASE MAP FROM SURVEY BY WCT SURVEYORS, P.C., ON 11/21/2003, 12/22/2003 AND 4/7/2004. ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. BASE MAP UPDATED BY C.T. MALE SURVEYORS ON SEPTEMBER 7, 2006.
2. HISTORICAL FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.

DRAFT



NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK
REMEDIAL INVESTIGATION

CROSS SECTION LOCATION MAP

an ARCADIS company

FIGURE
1

SYR-85-RGB RCA RCB L: ON=*, OFF=REF*
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BY: RBASSETT
PAGESETUP: 2:10 PM
LAYOUT: Layout1



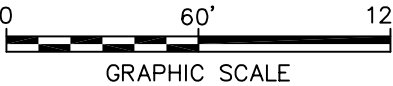
LEGEND:

- MW-10 MONITORING WELL
- PZ-1 PIEZOMETER
- 253 GROUNDWATER ELEVATION CONTOUR
- (252.14) GROUNDWATER ELEVATION
- FEATURE FROM 1909 SANBORN MAP
- FEATURE FROM SEPTEMBER 1925 SANBORN MAP
- APPROXIMATE SITE BOUNDARY
- APPROXIMATE ROAD RIGHT-OF-WAY
- CHAINLINK FENCE
- UTILITY POLE
- CATCH BASIN
- MANHOLE
- TOPOGRAPHIC CONTOUR (2 FT. CONTOUR INTERVAL)

NOTES:

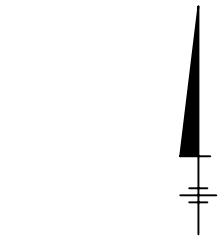
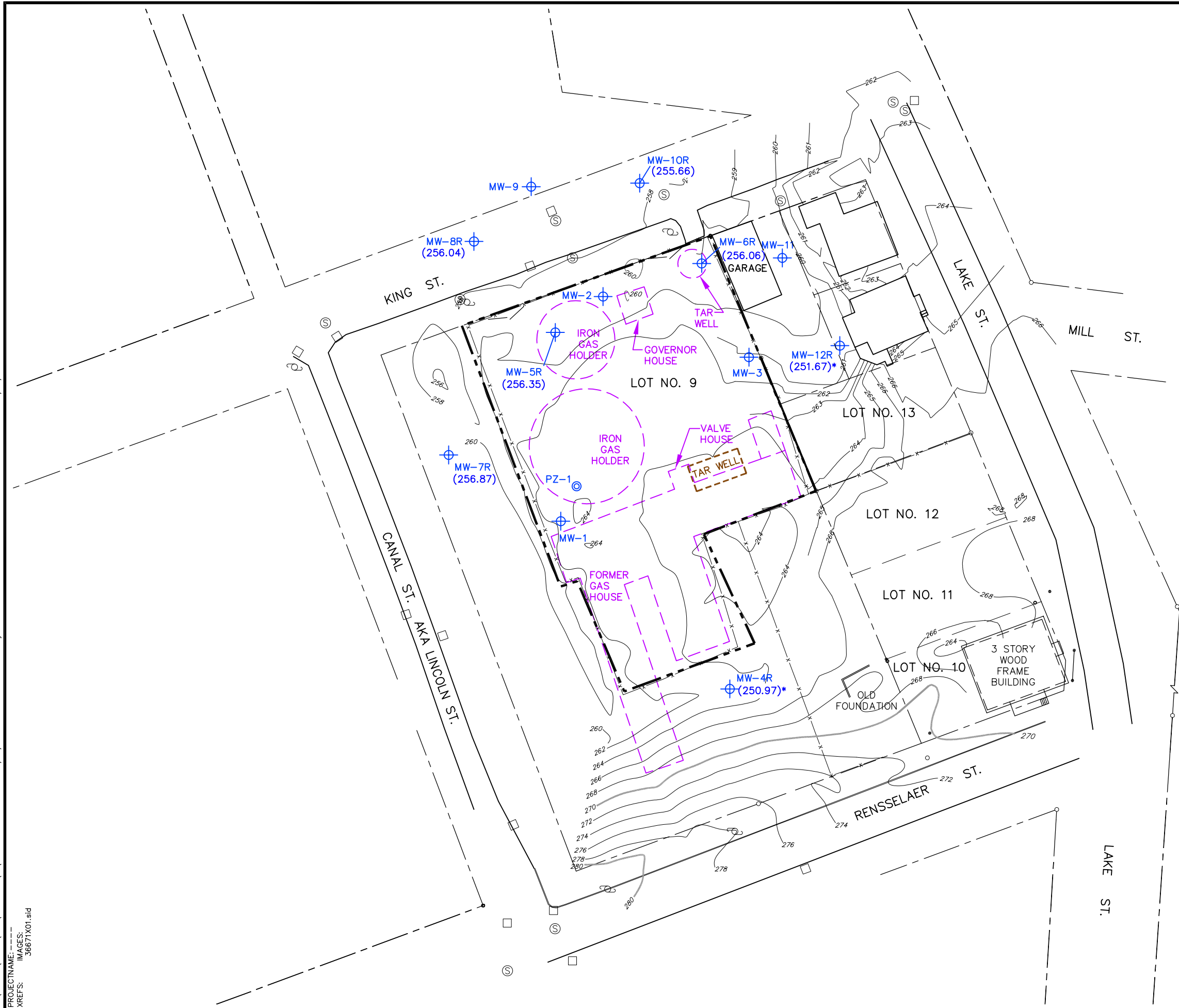
1. BASE MAP FROM SURVEY BY WCT SURVEYORS, P.C., ON 11/21/2003, 12/22/2003 AND 4/7/2004. ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. BASE MAP UPDATED BY C.T. MALE SURVEYORS ON SEPTEMBER 7, 2006.
2. HISTORICAL FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.

DRAFT



NATIONAL GRID OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE OGDENSBURG, NEW YORK REMEDIAL INVESTIGATION	
WATER TABLE ELEVATION CONTOURS - 10/2/06	
 an ARCADIS company	FIGURE 3

SYR-85-RGB RCA RCB L: ON=*, OFF=REF*
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BY: RBASSETT
PAGESETUP: 2:30 PM
LAYOUT: Layout1



LEGEND:

- MW-10 (Symbol) MONITORING WELL
- PZ-1 (Symbol) PIEZOMETER
- (255.66) GROUNDWATER ELEVATION
- (TAR WELL) (Symbol) FEATURE FROM 1909 SANBORN MAP
- (TAR WELL) (Symbol) FEATURE FROM SEPTEMBER 1925 SANBORN MAP
- (Symbol) APPROXIMATE SITE BOUNDARY
- (Symbol) APPROXIMATE ROAD RIGHT-OF WAY
- (Symbol) CHAINLINK FENCE
- (Symbol) UTILITY POLE
- (Symbol) CATCH BASIN
- (Symbol) MANHOLE
- (Symbol) TOPOGRAPHIC CONTOUR (2 FT. CONTOUR INTERVAL)

NOTES:

1. BASE MAP FROM SURVEY BY WCT SURVEYORS, P.C., ON 11/21/2003, 12/22/2003 AND 4/7/2004. ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. BASE MAP UPDATED BY C.T. MALE SURVEYORS ON SEPTEMBER 7, 2006.
2. HISTORICAL FEATURE LOCATIONS AND SCALE ARE APPROXIMATE.
3. *GROUNDWATER LEVEL INSIDE WELL MAY NOT HAVE EQUILIBRATED WITH ATMOSPHERIC PRESSURE.

DRAFT



NATIONAL GRID
OGDENSBURG (KING STREET) NON-OWNED FORMER MGP SITE
OGDENSBURG, NEW YORK
REMEDIAL INVESTIGATION

**SHALLOW BEDROCK
POTENTIOMETRIC ELEVATIONS**
- 10/2/06

BBL
an ARCADIS company

FIGURE
4

Attachment A

Test Pit, Soil Boring, and Monitoring Well Logs



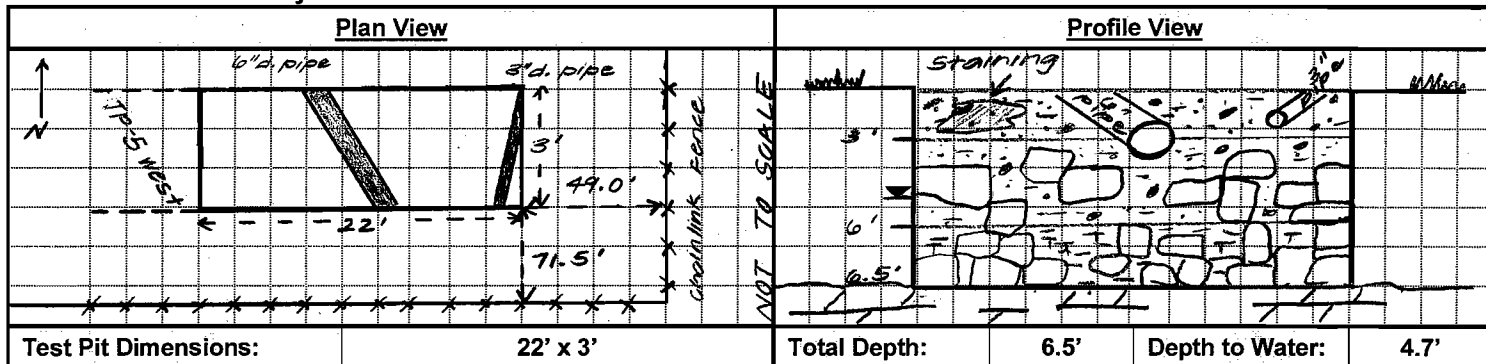
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Test Pit Log

Test Pit ID: TP-5 East

Client:	National Grid	Date:	5/23/2006
Project:	King St. Former MGP Site	Weather:	Cloudy
Location:	Ogdensburg, NY	Temperature:	60°s
Project #:	36671.010	Wind:	Calm
Geologist:	K. Gross	Subcontractor:	Parratt Wolff
Coordinates:	NA	Equipment:	Rubber tired backhoe

Sketch of Test Pit Layout:



Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0 – 3	1 – 3: 26.7	Medium brown fine SAND, some medium to coarse Sand and fine to coarse Gravel, little Silt, loose, dry to moist (due to recent rain). Bands of black, tan, bluish-green, and orange visible on the south side wall from 0.5' – 2' bgs.	TP-5 (1' – 3') for Cn
3 – 6	4.7 – 6.5: 1058	Approximately 1' x 3' x 3' ROCK blocks, likely dolomite, and brown fine SAND, some medium to coarse Sand and fine to coarse Gravel, little Silt, loose, moist to wet at 4.7' bgs. Some rainbow sheen (~ 50% of water surface) and little LNAPL (~ 15% of water surface) on water at 4.7' bgs.	TP-5 (4.7' – 6.5') for VOCs, SVOCs, and Cn
6 – 6.5	NA	Large ROCK blocks as above, likely dolomite, and brown Clayey SILT pocketed with black very sticky (tar-like) NAPL, some rock blocks partially coated with black very sticky NAPL, NAPL in voids between rock blocks. Competent bedrock at 6.5' bgs.	

Notes:

NA = Not Available/Applicable; bgs = below ground surface.

6" steel pipe with little bluish-green staining, in approximate center of test pit and 4' bgs, running NW-SE.

3" abandoned gas line (coated with yellow plastic) in east end of test pit at 3' bgs, running N-S.

Photograph Summary:

#363	Bands of staining 0.5' – 2' bgs, north side wall
#352	6" steel pipe and 3" abandoned gas line (Orientation: E)
#353	Bluish-green stained soil
#355	Bluish-green stained soil, north side wall
#358	Black sticky NAPL coating backhoe bucket
#360	Black sticky NAPL on large blocks of rock 6' – 6.5' bgs
#361	North side wall of completed test pit
#362	Rainbow sheen and NAPL on water surface at 4.7' bgs
#364	Large blocks of rock excavated from 3' – 6.5' bgs (Orientation: S)



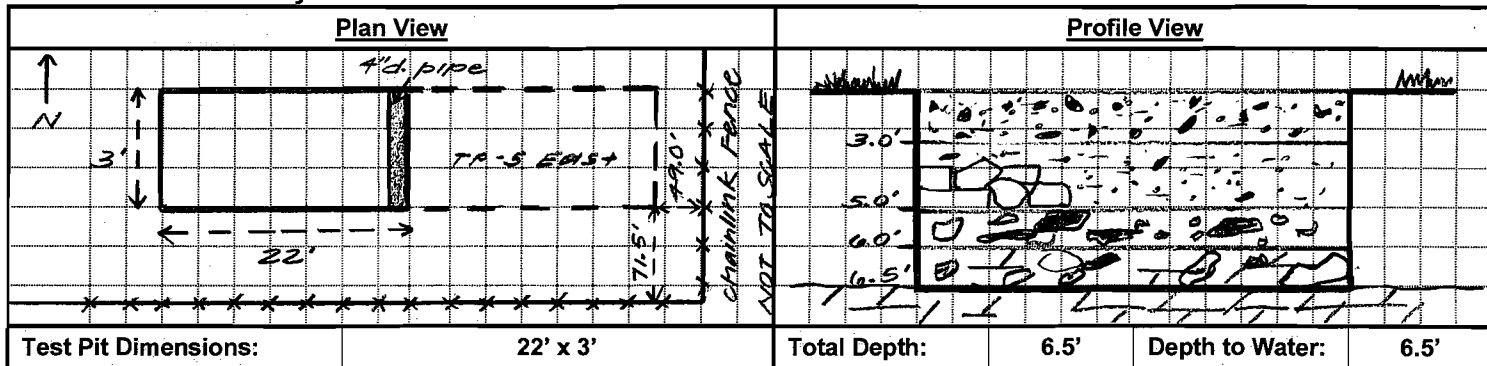
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Test Pit Log

Test Pit ID: TP-5 West

Client:	National Grid	Date:	5/23/2006
Project:	King St. Former MGP Site	Weather:	Cloudy
Location:	Ogdensburg, NY	Temperature:	60°s
Project #:	36671.010	Wind:	Calm
Geologist:	K. Gross	Subcontractor:	Parratt Wolff
Coordinates:	NA	Equipment:	Komatsu WB140 Rubber tired backhoe

Sketch of Test Pit Layout:



Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0 - 3	0 - 1: 1.1	Medium brown fine SAND, some medium to coarse Sand and fine to coarse Gravel, little Silt, trace red and tan Bricks, loose, dry to moist (due to recent rain).	
3 - 5	2 - 4: 65.8	Medium brown to orangish-brown fine SAND, little Silt and Ash, little medium to coarse Sand, trace fine to coarse Gravel, soft, moist. Approximately 1' x 3' solid rock blocks, likely dolomite, at west end of test pit, from 4 - 5' bgs.	
5 - 6	167	Black stained fine to coarse GRAVEL and weather BEDROCK, some to little fine to coarse Sand, little Silt, loose, moist, little rainbow sheen, little to some black sticky (tar-like) NAPL.	
6 - 6.5	982	Weathered BEDROCK coated with black sticky (tar-like) NAPL, little water on top of bedrock, some rainbow sheen. Competent bedrock at approximately 6.5' bgs.	

Notes:

NA = Not Available/Applicable; bgs = below ground surface.

4" pipe, unknown material, apparently very old, encountered approximately 5' bgs running N-S at the eastern end of the test pit.

Photograph Summary:

#343	Little sticky NAPL at 5' - 6' bgs
#344	Sticky NAPL on soils from 5' - 6' bgs.
#348	Excavated test pit to ~ 6' bgs, north side wall



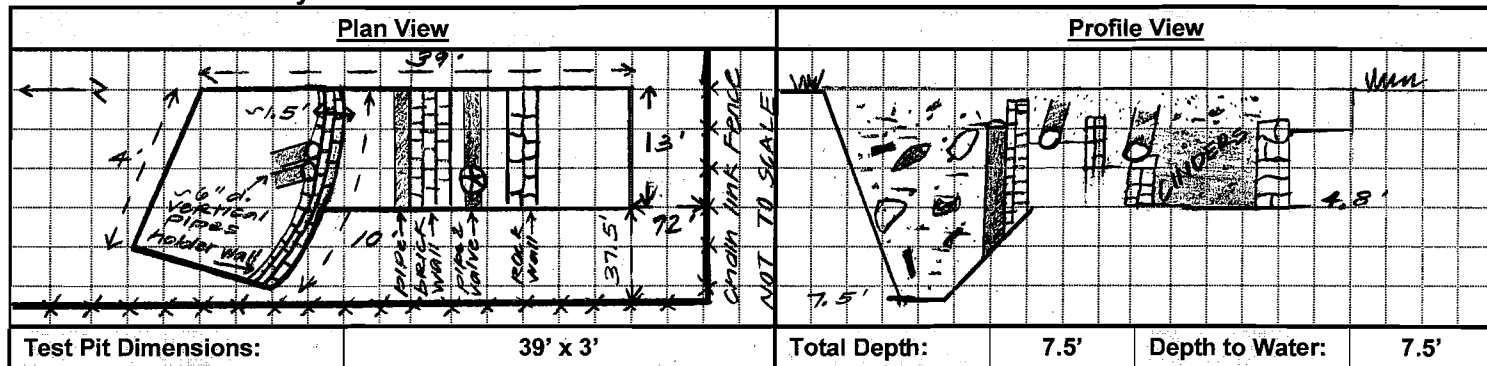
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Test Pit Log

Test Pit ID: TP-6

Client:	National Grid	Date:	5/23/2006
Project:	King St. Former MGP Site	Weather:	Cloudy
Location:	Ogdensburg, NY	Temperature:	60°s
Project #:	36671.010	Wind:	Calm
Geologist:	K. Gross	Subcontractor:	Parratt Wolff
Coordinates:	NA	Equipment:	Komatsu WB140 Rubber tired backhoe

Sketch of Test Pit Layout:



Depth Interval (feet)	PID Screening Result (ppm)	Description of Soil/Material	Samples Collected
0 - 7.5	0 - 2: 25.6 1 - 3: 19.3 2 - 4: 27.8 5 - 7: 36.4	Brown fine to coarse SAND, little to some Silt, red and tan Brick, Clinkers, fine to coarse Gravel, Cinders, and large Rock blocks (1' x 3' x 3'), loose. Water at 7.5' bgs, little rainbow sheen on water surface.	TP-6 (0' - 2') and TP-6 (5' - 7') for VOCs, SVOCs, and Cn

Notes:

NA = Not Available/Applicable; bgs = below ground surface.

6" pipes encountered in the center of the test pit at approximately 2' bgs, running E-W. Turn valve is attached to southern pipe.

Rock and mortar wall and "floor" with metal-like covering observed south of pipes; refusal on "floor" at 4.8' bgs.

Brick and mortar holder wall encountered at approximately 1.5' bgs. Two ~ 6" diameter pipes were observed to run vertically along the south holder wall.

Photograph Summary:

#373	Rock and mortar wall (Orientation: W)
#374	Rock and mortar wall, cinders, pipe and valve (Orientation: W)
#375	Turn valve on pipe (Orientation: W)
#376	"Floor" encountered at 4.8' bgs
#379	Brick and mortar holder wall with vertical pipes (Orientation: S)
#380	Brick and mortar holder wall (Orientation: SW)
#382	Completed test pit (Orientation: N)
#384	Completed test pit, north end (Orientation: E)

Well ID: MW-4R

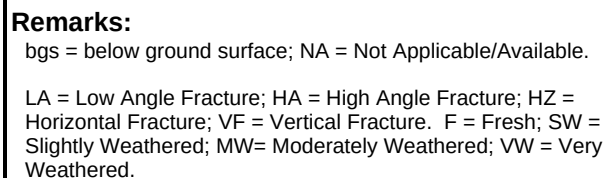
Client: National Grid

Location: King St. Fort
Ogdensburg

Location: King St. Former MGP Site
Ogdensburg, New York

Diagram illustrating the components of a sand drain assembly, showing a cross-section of the structure. The components are labeled as follows:

- Flush-mount concrete surface pad with locking j-plug.
- Sand Drain (0.5' - 1.0' bgs)
- Cement-Bentonite Grout (1.0' - 4.0' bgs)
- 4" Steel Casing (0.0' - 6.0' bgs)
- Cement-Bentonite Grout (0.0' - 6.0' bgs)
- Bentonite Seal (4.0' - 6.0' bgs)
- 2" Sch. 40 PVC Riser (0.3' - 8.0' bgs)
- #1 Silica Sand Pack (6.0' - 18.0' bgs)
- 2" Sch. 40 0.020" Slot PVC Screen (8.0' - 18.0' bgs)

Page: 1 of 2

Client:

National Grid

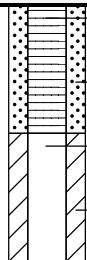
Well ID: MW-4R

DRAFT

Site Location:

King St. Former MGP Site
Ogdensburg, New York

Borehole Depth: 20.0' bgs

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
245		6	15-20	NA	83	5.15	0.0		LA/SW LA/SW HZ/SW HZ/SW HZ/F HA/F	Light gray fine grained Ogdensburg DOLOMITE, massive (trace Shale laminations), trace fine grained white Calcite, weak response to HCL, fresh to slightly weathered, hard. Coarse grained 17.05' - 17.2' bgs with plentiful coarse grained white Calcite and trace 1/4" to 1/2" white Calcite inclusions. Trace black staining (2 spots 0.1" diameter) in horizontal break at 17.92' bgs. Shale laminations increase below 19.0' bgs.	 2" Sch. 40 0.020" Slot PVC Screen (8.0' - 18.0' bgs) #1 Silica Sand Pack (6.0' - 18.0' bgs) 2" Sch. 40 PVC Sump (18.0' - 20.0' bgs) Cement-Bentonite Grout (18.0' - 20.0' bgs)
20										End of boring at 20.0' bgs.	
240											
25											
235											
30											
230											
35											



Remarks:

bgs = below ground surface; NA = Not Applicable/Available.

LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW= Moderately Weathered; VW = Very Weathered.

Water Level Data

Date	Depth	Elev.
------	-------	-------

Depth measured from top of casing.

Date Start/Finish: 5/9/2006 - 5/23/2006 Drilling Company: Parratt Wolff Driller's Name: Rick Nvatka Drilling Method: Hollow Stem Auger/ Conventional Coring Sampler Size: 2" x 2' 5' HX Corebarrel Auger Size: 6-1/4" Rig Type: CME 75 Truck-Mount	Northing: 2136560.653 Easting: 232953.3572 Casing Elevation: 259.19' AMSL Surface Elevation: 259.5' AMSL Borehole Depth: 24.4' bgs Geologist: Kristina Gross	Well ID: MW-5R Client: National Grid Location: King St. Former MGP Site Ogdensburg, New York
--	---	--

DRAFT

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
260	0										
		1	0-2	21 11 13 50/0.3	24	1.1	186			Brown SILT, little Roots and Grass, loose, dry. Light brown fine SAND, trace medium subrounded Gravel, loose, dry. Refusal at 1.8' bgs. Auger to 3.0' bgs without sampling. Light brown fine SAND, some red crushed Brick, trace medium subrounded Gravel, loose, dry. [FILL] Black-stained fine to medium SAND, little fine subrounded Gravel in sticky (tar-like) black NAPL, strong MGP-type odor, medium dense, moist. Black-stained fine to medium SAND, little fine subrounded Gravel, strong MGP-type odor, pockets/globules (approx. 1/2" - 3/4" diameter) of sticky (tar-like) black NAPL surrounded with NAPL stringers, medium dense, moist. Black-stained fine to medium SAND, little fine angular Gravel, strong MGP-type odor, trace brownish-black oily NAPL blebs (approx. 1/4" diameter), medium dense, wet.	Flush-mount concrete surface pad with locking j-plug. Sand Drain (0.5' - 1.0' bgs) Cement-Bentonite Grout (0.0' - 10.0' bgs) 4" Steel Casing (0.0' - 10.0' bgs) 2" Sch. 40 PVC Riser (0.3' - 12.4' bgs) Cement-Bentonite Grout (1.0' - 10.0' bgs) Bentonite Seal (8.0' - 10.0' bgs) #1 Silica Sand Pack (10.0' - 22.4' bgs) 2" Sch. 40 0.020" Slot PVC Screen (12.4' - 22.4' bgs)
255	5	2	3-5	4 3 9 8	12	1.8	351			Air hammer to 10.2' bgs without sampling.	
		3	5-7	9 7 6 11	13	1.1	601				
		4	7-7.2	50/0.2	NA	0.2	352				
250	10										
		5	10-14.9	NA	74	4.4	0.0		HZ HZ HZ LA HZ HZ HZ HZ	Medium gray fine to medium grained Ogdensburg DOLOMITE, little Shale laminations to bands, trace white fine to medium grained Calcite, horizontal bedding, weak response to HCL, slightly weathered, hard. Little rainbow sheen on gravel at top of Run 5. Weathered solution filled horizontal hairline fracture at 11.7' bgs. Bedrock fractures HZ at approximately 12.8' and 12.82' bgs.	
245	15	6	14.9-19.9	NA	65	5.3	0.0		HZ/SW LA/SW		

	Remarks: bgs = below ground surface; NA = Not Applicable/Available. LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW= Moderately Weathered; VW = Very Weathered. Fractures from 10.2' - 15.0' bgs fresh to slightly	Water Level Data <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Date</th><th>Depth</th><th>Elev.</th></tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date	Depth	Elev.															
	Date	Depth	Elev.																	
Depth measured from top of casing.																				

Client:

National Grid

Well ID: MW-5R

DRAFT

Site Location:

King St. Former MGP Site
Ogdensburg, New York

Borehole Depth: 24.4' bgs

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
240		6	14.9-19.9	NA	65	5.3	0.0		HZ/F HZ/F HZ/F HZ/MW HZ/F HZ/SW	Medium gray fine to medium grained Ogdensburg DOLOMITE, little Shale laminations to bands, trace white fine to medium grained Calcite, horizontal bedding, weak response to HCL, slightly weathered, hard. Bedrock fractures LA/F at approximately 17.18' bgs and HZ/F at approximately 17.3' bgs. White Calcite inclusion, 1/2" diameter, at 18.72' bgs. Light gray medium to coarse grained Ogdensburg DOLOMITE, massive (no laminations), trace white medium grained Calcite, horizontal bedding, fresh to slightly weathered, hard. Little to some coarse white and pink Calcite inclusions (1/2" to 2" diameter) from 19.9' - 24.4' bgs.	2" Sch. 40 0.020" Slot PVC Screen (12.4' - 22.4' bgs) #1 Silica Sand Pack (10.0' - 22.4' bgs)
20		7	19.9-24.4	NA	85	4.6	0.0		HZ/SW HZ/MW HZ/F HZ/F HZ/SW HZ/VW	Bedrock fractures HZ/SW at approximately 20.8' and 20.9' bgs. Trace Shale laminations (21.45', 22.38', 22.55', and 23.3' bgs). Fine Gravel/weathered ROCK and Silt in horizontal break at 23.65' bgs.	2" Sch. 40 PVC Sump (22.4' - 24.4' bgs) Cement-Bentonite Grout (22.4' - 24.4' bgs)
235										End of boring at 24.4' bgs.	
25											
230											
30											
225											
35											



Remarks:

bgs = below ground surface; NA = Not Applicable/Available.

LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW = Moderately Weathered; VW = Very Weathered. Fractures from 10.2' - 15.0' bgs fresh to slightly

Water Level Data

Date	Depth	Elev.

Depth measured from top of casing.

Date Start/Finish: 5/10/2006 - 5/22/2006 Drilling Company: Parratt Wolff Driller's Name: Rick Nvatka Drilling Method: Hollow Stem Auger/ Conventional Coring Sampler Size: 2" x 2' 5' HX Corebarrel Auger Size: 6-1/4" Rig Type: CME 75 Truck-Mount	Northing: 2136602.403 Easting: 233042.0218 Casing Elevation: 258.83' AMSL Surface Elevation: 259.14' AMSL Borehole Depth: 26.3' bgs Geologist: Kristina Gross	Well ID: MW-6R Client: National Grid Location: King St. Former MGP Site Ogdensburg, New York
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DRAFT

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
260											
0		1	0-2	9 9 5 2	14	1.0	50.2			Light gray fine SAND, little medium to coarse Sand and fine angular to subrounded Gravel, loose, dry. [FILL] Dark grayish-black fine SAND, little Silt, trace fine subrounded Gravel and Coal fragments, medium dense, moist. [FILL] Trace red crushed Brick, moderate MGP-type odor, trace to little sticky black NAPL throughout from 2.3' - 2.7' bgs. Moderate MGP-type odor, moist to wet, from 4.0' - 4.7' bgs. Trace sticky black NAPL from 4.6' - 4.7' bgs.	Flush-mount concrete surface pad with locking j-plug. Sand Drain (0.5' - 1.0' bgs) Cement-Bentonite Grout (0.0' - 12.3' bgs) 4" Steel Casing (0.0' - 12.3' bgs) 2" Sch. 40 PVC Riser (0.3' - 14.3' bgs) Cement-Bentonite Grout (1.0' - 10.0' bgs) Bentonite Seal (10.0' - 12.0' bgs) #1 Silica Sand Pack (12.0' - 24.3' bgs) 2" Sch. 40 0.020" Slot PVC Screen (14.3' - 24.3' bgs)
255		2	2-4	5 2 2 3	4	0.7	149				
5		3	4-6	8 5 3 8	8	0.7	119				
		4	6-8	12 17 12 28	19	1.1	879			Dark gray fine SAND, some fine angular to subrounded Gravel, little Silt, medium dense, moist to wet. Sample coated in very sticky NAPL, strong MGP-type odor, trace rainbow sheen from 6.6' - 7.1' bgs.	
250		5	8-9.3	5 50/0.3	NA	0.3	380			Black very sticky (taffy-like) NAPL with fine SAND and little fine to medium Gravel, medium plasticity.	
10										Air hammer without sampling to 12.3' bgs.	
245		6	12.3-14.8	NA	46	2.35	0.0		HZ HZ HZ	Medium gray medium grained Ogdensburg DOLOMITE, some Shale laminations and medium grained pink and white Clacite, horizontal bedding, strong response to HCL, slightly weathered, hard. Trace black NAPL (3 spots approx. 1/4" diameter) at 13.08' bgs. Trace rainbow sheen at 13.2' bgs.	
15		7	14.8-19.8	NA	100	5	0.0		HZ		

 an ARCADIS company	Remarks: bgs = below ground surface; NA = Not Applicable/Available. Bedrock breaks fresh to slightly weathered.	Water Level Data <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Date</th><th>Depth</th><th>Elev.</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	Date	Depth	Elev.												
	Date	Depth	Elev.														
		Depth measured from top of casing.															

Client:

National Grid

Well ID: MW-6R

DRAFT

Site Location:

King St. Former MGP Site
Ogdensburg, New York

Borehole Depth: 26.3' bgs

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
240		7	14.8-19.8	NA	100	5	0.0		HZ	Light gray coarse grained Ogdesburg DOLOMITE, trace Shale laminations, horizontal bedding, weak response to HCL, fresh to slightly weathered, hard.	2" Sch. 40 0.020" Slot PVC Screen (14.3' - 24.3' bgs) #1 Silica Sand Pack (12.0' - 24.3' bgs) 2" Sch. 40 PVC Sump (24.3' - 26.3' bgs) Cement-Bentonite Grout (24.3' - 26.3' bgs)
20									HZ		
									LA		
									HZ	White Calcite inclusion from 19.0' - 19.3' bgs.	
									LA		
									VF	Vertical fracture (90 degrees) from 20.2' - 20.9' bgs.	
									VF	Bedrock fractures HZ at approximately 20.75' and 20.9' bgs and VF at approximately 20.8' bgs.	
		8	19.8-24.8	NA	65	5.3	0.0		HZ	Grades to light gray fine to medium grained Ogdesburg DOLOMITE, little Shale laminations, trace fine to medium white Calcite, horizontal to 5 degree bedding, weak response to HCL, slightly weathered, hard.	
235									HZ		
									LA	Strong MGP-type odor and black staining (approx. 3/4" diameter) at 23.15' bgs.	
25									HZ		
									LA	White Calcite inclusion (2" diameter) at 25.0' bgs.	
		9	24.8-26.3	NA	100	2.5	0.0		HZ		
										End of boring at 26.3' bgs.	
230											
30											
225											
35											



Remarks:

bgs = below ground surface; NA = Not Applicable/Available.

Bedrock breaks fresh to slightly weathered.

Water Level Data

Date	Depth	Elev.

Depth measured from top of casing.

Date Start/Finish: 5/11/2006 - 5/25/2006 Drilling Company: Parratt Wolff Driller's Name: Rick Nvatka Drilling Method: Hollow Stem Auger/ Conventional Coring Sampler Size: 2" x 2 1/2" HX Corebarrel Auger Size: 6-1/4" Rig Type: CME 75 Truck-Mount	Northing: 2136486.498 Easting: 232888.7742 Casing Elevation: 258.76' AMSL Surface Elevation: 259' AMSL Borehole Depth: 23.0' bgs Geologist: Kristina Gross	Well ID: MW-7R Client: National Grid Location: King St. Former MGP Site Ogdensburg, New York
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DRAFT

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
260											
0		1	0-2	1/1'	NA	0.9	1.7			Medium brown SILT and fine SAND, some Leaves and Roots, loose, moist. [FILL]	Flush-mount concrete surface pad with locking j-plug.
				1						Dark brownish-black fine SAND, little medium Sand and Coal fragments, trace Silt, loose, moist. [FILL]	Sand Drain (0.5' - 1.0' bgs)
		2	2-4	1	2	0.4	1.0			Wet at 2.0' bgs. Some Silt and trace medium Gravel from 2.0' - 4.0' bgs.	Cement-Bentonite Grout (0.0' - 9.3' bgs)
255				1							4" Steel Casing (0.0' - 9.3' bgs)
				6						Dark grayish-black SILT, little fine Sand and Wood, moderate MGP-type odor, medium dense, wet. [FILL]	Cement-Bentonite Grout (1.0' - 7.0' bgs)
5		3	4-6	6	13	0.6	150			Black-stained fine to medium SAND, little coarse Sand, subangular fine Gravel, and red and tan crushed Brick, moderate MGP-type odor, little black sticky (tar-like) NAPL throughout, loose, wet. [FILL]	2" Sch. 40 PVC Riser (0.3' - 11.0' bgs)
		4	6-6.9	6	NA	0.5	261			Air hammer to 9.3' bgs without sampling.	Bentonite Seal (7.0' - 9.0' bgs)
				50/0.4							
250											
10		5	9.3-13.9	NA	76	4.7	0.0		HZ/F-SW HZ/SW HZ/F HZ/MW	Medium gray fine to medium grained Ogdensburg DOLOMITE, some Shale laminations, little to some fine grained white Calcite throughout with trace 1/4" to 1/2" diameter White Calcite inclusions, horizontal bedding, moderate response to HCL, fresh to slightly weathered, hard.	#1 Silica Sand Pack (9.0' - 21.0' bgs)
									HZ/F HZ/SW LA/SW	Little Silt and fine Gravel/weathered Rock and 1" diameter black sticky NAPL in horizontal break at 10.7' bgs.	2" Sch. 40 0.020" Slot PVC Screen (11.0' - 21.0' bgs)
										Trace black sticky NAPL (4 spots 0.1" diameter) in low angle (5 degrees) break at 12.5' bgs.	
245										High angle (65 degrees) break from 15.2' - 15.8' bgs intersected by high angle (50 degree) break from 15.4' - 15.5' bgs. Trace black NAPL (0.1" diameter) and trace black staining on high angle break from 15.2' - 15.8' bgs. Trace black staining on intersecting high angle break from 15.4' - 15.5' bgs.	
15		6	13.9-18.6	NA	67	5.0	0.0		HZ/F-SW HZ/F-SW HZ/SW HA/SW	Bedrock fractures HA/SW at approximately 15.45' and 15.5' bgs.	

 an ARCADIS company	Remarks: bgs = below ground surface; NA = Not Applicable/Available. LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW= Moderately Weathered; VW = Very Weathered.	Water Level Data <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Date</th><th>Depth</th><th>Elev.</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	Date	Depth	Elev.												
	Date	Depth	Elev.														
Depth measured from top of casing.																	

Client:

National Grid

Well ID: MW-7R

DRAFT

Site Location:

King St. Former MGP Site
Ogdensburg, New York

Borehole Depth: 23.0' bgs

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
240		6	13.9-18.6	NA	67	5.0	0.0		HZ/SW HZ/SW HZ/F	Light gray medium to coarse grained Ogdensburg DOLOMITE, massive (no laminations), little to trace fine grained white and pink Calcite throughout and little 1/4" to 3" diameter white and pink Clacite inclusions, horizontal bedding, moderate to weak response to HCL, fresh to slightly weathered, hard. Bedrock fractures HZ/SW at approximately 16.15' bgs and LA/SW at approximately 16.2' bgs. Little black staining (4 spots 0.1" to 0.2" diameter) in horizontal break at 18.57' bgs.	2" Sch. 40 0.020" Slot PVC Screen (11.0' - 21.0' bgs)
20		7	18.6-21.6	NA	78	3.4	0.0		HZ/SW HZ/SW LA/SW LA/MW HA/F-SW LA/MW LA/F	Fine to medium grained from 18.6' - 21.6' bgs. Trace Silt and fine Gravel/weathered Rock in low angle (5 degree) break at 19.2' bgs. Shale lamination from 20.3' - 20.35' bgs. Pinkish-white Calcite inclusion from 20.75' - 20.95' bgs. Bedrock fractures LA/MW at approximately 20.3' bgs and LA/SW at approximately 20.35' bgs. Fine grained, very hard, from 21.6' - 23.0' bgs. Bedrock fractures LA/F at approximately 20.65' bgs, HA/F at approximately 20.75' bgs, and HZ/F at approximately 20.85' bgs.	#1 Silica Sand Pack (9.0' - 21.0' bgs)
		8	21.6-23.0	NA	93	2.0	0.0		HZ/SW HZ/SW	Slightly weathered horizontal hairline fracture at 22.5' bgs.	2" Sch. 40 PVC Sump (21.0' - 23.0' bgs) Cement-Bentonite Grout (21.0' - 23.0' bgs)
235										End of boring at 23.0' bgs.	
25											
230											
30											
225											
35											



Remarks:

bgs = below ground surface; NA = Not Applicable/Available.

LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW= Moderately Weathered; VW = Very Weathered.

Water Level Data

Date Depth Elev.

Depth measured from top of casing.

Date Start/Finish: 5/17/2006 - 5/24/2006 Drilling Company: Parratt Wolff Driller's Name: Rick Nvotka Drilling Method: Hollow Stem Auger/ Conventional Coring Sampler Size: 2" x 2' 5' HX Corebarrel Auger Size: 6-1/4" Rig Type: CME 75 Truck-Mount	Northing: 2136615.728 Easting: 232904.091 Casing Elevation: 256.97' AMSL Surface Elevation: 257.38' AMSL Borehole Depth: 23.0' bgs Geologist: Kristina Gross	Well ID: MW-8R Client: National Grid Location: King St. Former MGP Site Ogdensburg, New York
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DRAFT

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
260											
0											
		1	0-2	17 7 5 4	12	0.3	4.6			Medium brown fine to coarse SAND, loose, wet due to rain. [FILL]	Flush-mount concrete surface pad with locking j-plug.
255		2	2-4	3 23 6 4	29	0.9	18.6			Tan and black banded SILT, little fine Sand, trace fine Gravel, stiff, moist to wet due to rain.	Sand Drain (0.5' - 1.0' bgs)
5		3	4-5.9	3 4 6 50/0.4	10	0.1	31.7			Tan SILT and fine GRAVEL, medium dense, moist.	Cement-Bentonite Grout (0.0' - 9.0' bgs)
250										Air hammer to 9.0' bgs without sampling.	4" Steel Casing (0.0' - 9.0' bgs)
											Cement-Bentonite Grout (1.0' - 7.0' bgs)
10											2" Sch. 40 PVC Riser (0.3' - 11.0' bgs)
											Bentonite Seal (7.0' - 9.0' bgs)
245		4	9-14.2	NA	71	5.1	0.0		HZ/SW HZ/SW HZ/SW HZ/SW HZ/SW	Medium gray fine to medium grained Ogdensburg DOLOMITE, little Shale laminations to bands, little to some white fine grained Calcite, trace 1/4" to 1.5" diameter white Calcite inclusions, horizontal bedding, moderate response to HCL, fresh to slightly weathered, hard. Bedrock fractures HZ/SW at approximately 10.05', 10.1', 10.5', and 10.9' bgs. 1" diameter black sticky NAPL in horizontal break at 10.9' bgs. Bedrock fractures HZ/SW at approximately 11.55' bgs, VF/F at approximately 11.65' bgs, and HZ/F at approximately 11.7' bgs.	#1 Silica Sand Pack (9.0' - 21.0' bgs)
15		5	14.2-19.2	NA	75	5.3	0.0		LA/SW LA/F HZ/SW HZ/F HZ/F	Trace black staining (3 spots 0.1" diameter) in horizontal break at 15.28' bgs.	2" Sch. 40 0.020" Slot PVC Screen (11.0' - 21.0' bgs)

 an ARCADIS company	Remarks: bgs = below ground surface; NA = Not Applicable/Available. LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW= Moderately Weathered; VW = Very Weathered.	Water Level Data <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Date</th><th>Depth</th><th>Elev.</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	Date	Depth	Elev.															
	Date	Depth	Elev.																	
Depth measured from top of casing.																				

Client:

National Grid

Well ID: MW-8R

DRAFT

Site Location:

King St. Former MGP Site
Ogdensburg, New York

Borehole Depth: 23.0' bgs

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
240		5	14.2-19.2	NA	75	5.3	0.0		HZ/F HZ/F HZ/F HZ/F	Medium gray fine to medium grained Ogdensburg DOLOMITE, little Shale laminations to bands, little to some white fine grained Calcite , trace 1/4" to 1.5" diameter white Calcite inclusions, horizontal bedding, moderate response to HCL, fresh to slightly weathered, hard. Bedrock fractures HZ/F at approximately 18.05' bgs and HZ/MW at approximately 18.15' bgs. Little black sticky NAPL (8 spots 0.2" diameter, 1 spot 1" diameter) with little black staining in horizontal break at 18.15' bgs.	2" Sch. 40 0.020" Slot PVC Screen (11.0' - 21.0' bgs) #1 Silica Sand Pack (9.0' - 21.0' bgs)
20		6	19.2-23.0	NA	78	3.4	0.0		HZ/SW HZ/SW HZ/SW LA/SW	Bedrock fractures HZ/SW at approximately 21.42' and 21.52' bgs. 0.2" diameter black stain at 22.5' bgs.	2" Sch. 40 PVC Sump (21.0' - 23.0' bgs) Cement-Bentonite Grout (21.0' - 23.0' bgs)
235										End of boring at 23.0' bgs.	
25											
230											
30											
225											
35											



Remarks:

bgs = below ground surface; NA = Not Applicable/Available.

LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW= Moderately Weathered; VW = Very Weathered.

Water Level Data

Date	Depth	Elev.

Depth measured from top of casing.

Date Start/Finish: 5/12/2006 - 5/15/2006
Drilling Company: Parratt Wolff
Driller's Name: Rick Nvatka
Drilling Method: Hollow Stem Auger

Sampler Size: 2" x 2"
Auger Size: 4-1/4"
Rig Type: CME 75 Truck-Mount

Northing: 2136648.909
Easting: 232938.7441

Casing Elevation: 256.78' AMSL
Surface Elevation: 257' AMSL
Borehole Depth: 7.3' bgs

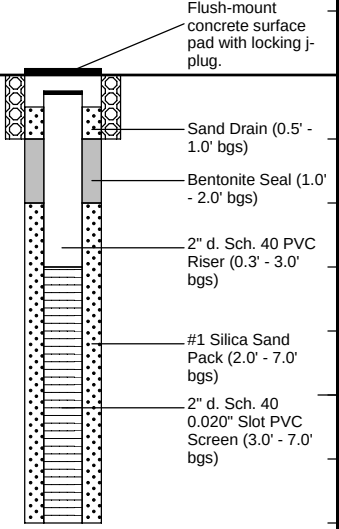
Geologist: Kristina Gross

Well ID: MW-9

Client: National Grid

Location: King St. Former MGP Site
Ogdensburg, New York

DRAFT

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
260											
0											
255		1	0-2	5 2 2 1	4	0.8	NA			Medium brown fine SAND, some fine Gravel and medium to coarse Sand, little Brick, loose, dry. [FILL]	
		2	2-4	2 3 41 9	44	0.9	NA			Dark brown fine to medium SAND and fine GRAVEL, loose, wet.	
5		3	4-6	2 5 6 10	11	0.5	NA			Heavy black staining, slight MGP-type odor, from 6.0' - 7.3' bgs.	
250		4	6-7.3	8 11 50/0.3	NA	0.4	NA			Refusal at 7.3' bgs.	
10											
245											
15											



Remarks:
bgs = below ground surface; NA = Not Applicable/Available.

Headspace readings not available due to heavy rain/PID malfunctioning.

Water Level Data

Date	Depth	Elev.
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Depth measured from top of casing.

Date Start/Finish: 5/17/2006 - 5/24/2006 Drilling Company: Parratt Wolff Driller's Name: Rick Nvotka Drilling Method: Hollow Stem Auger/ Conventional Coring Sampler Size: 2" x 2' 5" HX Corebarrel Auger Size: 6-1/4" Rig Type: CME 75 Truck-Mount	Northing: 2136651.037 Easting: 233004.4591 Casing Elevation: 257.23' AMSL Surface Elevation: 257.58' AMSL Borehole Depth: 23.75' bgs Geologist: Kristina Gross	Well ID: MW-10R Client: National Grid Location: King St. Former MGP Site Ogdensburg, New York
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DRAFT

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
260											
0											
		1	0-2	6 7 5 8	12	1.5	2.3			Medium brown SILT, some fine SAND, little Coal fragments, trace angular to subangular fine Gravel, medium dense, dry to moist due to rain. [FILL]	Flush-mount concrete surface pad with locking j-plug. Sand Drain (0.5' - 1.0' bgs) Cement-Bentonite Grout (0.0' - 9.0' bgs) 4" Steel Casing (0.0' - 9.0' bgs) Cement-Bentonite Grout (1.0' - 7.0' bgs) 2" Sch. 40 PVC Riser (0.3' - 11.75' bgs) Bentonite Seal (7.0' - 9.0' bgs) #1 Silica Sand Pack (9.0' - 21.75' bgs) 2" Sch. 40 0.020" Slot PVC Screen (11.75' - 21.75' bgs)
255		2	2-4	6 2 5 3	7	0.4	5.2			Dark brown SILT and CINDERS, little fine Sand and red and tan crushed Brick, loose, moist. [FILL]	
		3	4-5.9	2 3 5 50/0.4	8	1.0	15.2			Black-stained SILT, some Cinders, little fine Sand, trace angular fine Gravel, soft, moist to wet. [FILL] Tan SILT, little fine Gravel, hard, moist.	
5										Air hammer to 9.0' bgs without sampling.	
250											
		4	9-9.75	NA	47	0.7	0.0		HZ/F	Light to medium gray medium to coarse grained Ogdensburg DOLOMITE, trace Shale laminations and fine grained white Calcite, horizontal bedding, weak response to HCL, slightly weathered, hard.	
10									HZ/SW HZ/SW HZ/F HZ/SW	1/4" diameter white Calcite inclusions from 9.75' - 11.25' bgs. Approximately 24 black NAPL spots 0.01" to 0.1" diameter in horizontal break at 10.1' bgs.	
245		5	9.75-14.75	NA	71	4.8	0.0		HZ/SW HZ/F HZ/F HZ/F HZ/F	Medium gray fine to medium grained Ogdensburg DOLOMITE, some Shale laminations to bands and fine grained to 1/2" diameter white Calcite inclusions, horizontal bedding, moderate response to HCL, slightly weathered, hard.	
15		6	14.75-19.75	NA	87	5.1	0.0		HZ/F HZ/F	Solution filled hairline fracture at 14.5' bgs.	

 an ARCADIS company	Remarks: bgs = below ground surface; NA = Not Applicable/Available. LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW= Moderately Weathered; VW = Very Weathered.	Water Level Data <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Date</th><th>Depth</th><th>Elev.</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	Date	Depth	Elev.															
	Date	Depth	Elev.																	
Depth measured from top of casing.																				

Client:

National Grid

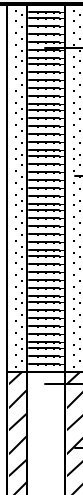
Well ID: MW-10R

DRAFT

Site Location:

King St. Former MGP Site
Ogdensburg, New York

Borehole Depth: 23.75' bgs

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
240		6	14.75-19.75	NA	87	5.1	0.0		HZ/F HZ/SW HZ/F-SW	Medium gray fine to medium grained Ogdensburg DOLOMITE, some Shale laminations to bands and fine grained to 1/2" diameter white Calcite inclusions, horizontal bedding, moderate response to HCL, slightly weathered, hard.	 2" Sch. 40 0.020" Slot PVC Screen (11.75' - 21.75' bgs) #1 Silica Sand Pack (9.0' - 21.75' bgs) 2" Sch. 40 PVC Sump (21.75' - 23.75' bgs) Cement-Bentonite Grout (21.75' - 23.75' bgs)
20									HZ/SW HZ/F LZ/MW HZ/F	Bedrock fractures HZ/F at approximately 16.46' bgs and HZ/F-SW at approximately 16.5' bgs.	
235		7	19.75-23.75	NA	87	3.4	0.0		HZ/SW HZ/SW LA/SW	Light gray medium to coarse grained Ogdensburg DOLOMITE, massive (no laminations), some to 25% of total composition fine grained to 1.5" diameter white Calcite inclusions, horizontal bedding, strong response to HCL, fresh to slightly weathered, hard.	
									HZ/SW		
25										End of boring at 23.75' bgs.	
230											
30											
225											
35											



Remarks:

bgs = below ground surface; NA = Not Applicable/Available.

LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW = Moderately Weathered; VW = Very Weathered.

Water Level Data

Date	Depth	Elev.

Depth measured from top of casing.

Date Start/Finish:5/12/2006 - 5/15/2006

Drilling Company:Parratt Wolff

Driller's Name:Rick Nvotka

Drilling Method:Hollow Stem Auger

Sampler Size:2" x 2' Split Spoon

Auger Size:4-1/4"

Rig Type:CME 75 Truck-Mount

Northing:2136605.776

Easting:233090.8447

Casing Elevation:258.89' AMSL

Surface Elevation:259.16' AMSL

Borehole Depth:7.1' bgs

Geologist:Kristina Gross

Well ID:MW-11

Client:National Grid

Location:King St. Former MGP Site
Ogdensburg, New York

DRAFT

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
260											
0		1	0-2	2 2 1 2	3	0.8	1.2			Medium brown Silt, little fine Sand, Grass, and Roots, loose, moist due to rain. Dark brown fine to medium SAND, little Silt, Cinders, and red crushed Brick, loose, moist.	Flush-mount concrete surface pad with locking j-plug. Sand Drain (0.5' - 1.1' bgs) Bentonite Seal (1.1' - 2.1' bgs) 2" d. Sch. 40 PVC Riser (0.3' - 3.1' bgs) #1 Silica Sand Pack (2.1' - 7.1' bgs) 2" d. Sch. 40 0.020" Slot PVC Screen (3.1' - 7.1' bgs)
255		2	2-4	2 1 1 2	2	0.8	0.0				
5		3	4-6	2 3 4 6	7	0.6	252			Black CINDERS, little red and tan crushed Brick and fine Sand, loose, wet.	
		4	6-7.1	1 10 50/0.1	NA	0.4	110			Gray medium GRAVEL/ crushed ROCK, little Cinders and fine Sand, loose, wet.	
250										Refusal at 7.1' bgs.	
10											
245											
15											

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an ARCADIS company

Remarks:

bgs = below ground surface; NA = Not Applicable/Available.

Water Level Data

Date	Depth	Elev.

Depth measured from top of casing.

Well ID: MW-12R

Client: National Grid

Location: King St. Former MGP Site
Ogdensburg, New York

Client: National Grid

Location: King St. Former MGP Site
Ogdensburg, New York

 an ARCADIS company	Remarks:	Water Level Data
	bgs = below ground surface; NA = Not Applicable/Available.	Date Depth Elev.
	LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW= Moderately Weathered; VW = Very Weathered.	
		Depth measured from top of casing.

Page: 1 of 2

Client:

National Grid

Well ID: MW-12R

DRAFT

Site Location:

King St. Former MGP Site
Ogdensburg, New York

Borehole Depth: 22.0' bgs

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
20	240	6	15.8-20.8	NA	90	5.0	0.0		HZ/MW HZ/MW HZ/F LA/F LA/MW	Light gray Ogdensburg DOLOMITE, well graded horizontal bedding grading from coarse grained from 15.8' - 16.4' bgs grading to fine grained from 16.4' - 19.2' bgs, trace Shale laminations, trace fine grained white Calcite throughout, 1/4" to 1" diameter white Calcite inclusions plentiful in coarse grained layers, weak response to HCL, fresh to slightly weathered, hard. Some Silt in horizontal break at 16.4' bgs. Band of coarse grained DOLOMITE and CALCITE (Calcite approx. 50% minimum content) from 18.25' - 18.45' bgs.	2" Sch. 40 0.020" Slot PVC Screen (10.0' - 20.0' bgs) #1 Silica Sand Pack (8.0' - 20.0' bgs)
240		7	20.8-22.0	NA	97	1.8	0.0		HZ/SW HZ/F HZ/MW HZ/SW HZ/MW	Medium gray Ogdensburg DOLOMITE, well graded horizontal bedding, medium grained 19.2' - 20.8' bgs, grading to medium to coarse from 20.8' - 21.4' bgs, grading to fine from 21.4' - 22.0' bgs, trace Shale laminations from 20.8' - 21.4' bgs, trace fine grained white Calcite throughout, 1/4" to 1" diameter white Calcite inclusions plentiful in coarse grained layers, weak response to HCL, fresh to slightly weathered, hard.	2" Sch. 40 PVC Sump (20.0' - 22.0' bgs) Cement-Bentonite Grout (20.0' - 22.0' bgs)
25	235									End of boring at 22.0' bgs.	
30	230										
35											
225											



Remarks:

bgs = below ground surface; NA = Not Applicable/Available.

LA = Low Angle Fracture; HA = High Angle Fracture; HZ = Horizontal Fracture; VF = Vertical Fracture. F = Fresh; SW = Slightly Weathered; MW = Moderately Weathered; VW = Very Weathered.

Water Level Data

Date	Depth	Elev.
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Depth measured from top of casing.

Date Start/Finish: 3/8/2006
Drilling Company: Parratt Wolff
Driller's Name: Rick Nvatka
Drilling Method: Hollow Stem Auger

Sampler Size: 2" x 2"
Auger Size: 4-1/4"
Rig Type: CME 75 Truck-Mount

Northing: 2136467.527
Easting: 232966.2587

Casing Elevation: 263.54' AMSL
Surface Elevation: 263.86' AMSL
Borehole Depth: 16.4' bgs

Geologist: Kristina Gross

Well ID: PZ-1

Client: National Grid

Location: King St. Former MGP Site
Ogdensburg, New York

DRAFT

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
265											
0											
		1	0-2	4 6 5 4	11	0.8	0.0			Brown Silt and Roots, loose, dry. [FILL] Brown SILT and fine GRAVEL, loose, dry. [FILL]	Flush-mount concrete surface pad with locking j-plug. Sand Drain (0.5' - 1.0' bgs)
		2	2-4	2 4 2 5	6	0.6	0.0			Dark brown SILT and angular fine GRAVEL, some to little red Brick, loose, dry. [FILL]	Bentonite Seal (1.0' - 4.4' bgs)
260											
		3	4-6	2 2 2 5	4	0.6	0.0			Dark brown SILT and crushed red BRICK, little angular fine Gravel, loose, dry. [FILL] Moist at 6.0' bgs. Wet at approximately 7.0' bgs.	1" Sch. 40 PVC Riser (0.3' - 6.4' bgs) #1 Silica Sand Pack (4.4' - 16.4' bgs)
5											
		4	6-8	2 3 5 8	8	0.4	0.0				
		5	8-10	6 7 3 2	10	0.9	0.0			Dark to medium brown fine to coarse SAND and crushed red BRICK, little subrounded fine Gravel and Mortar fragments, loose to medium dense, wet.	1" Sch. 40 0.020" Slot PVC Screen (6.4' - 16.4' bgs)
255											
10											
		6	10-12	3 6 8 8	14	0.7	0.0				
		7	12-14	10 12 4 5	16	0.8	0.0				
250											
		8	14-16	13 18 31 28	49	1.6	0.4			Crushed Rock (Gray Limestone) below 15.0' bgs.	
15											



Remarks:
bgs = below ground surface; NA = Not Applicable/Available.

Water Level Data		
Date	Depth	Elev.
Depth measured from top of casing.		

Client:

National Grid

Site Location:

King St. Former MGP Site
Ogdensburg, New York

Well ID: PZ-1

Borehole Depth: 16.4' bgs

DRAFT

Depth (ft. bgs)	Elevation (ft. AMSL)	Sample Run Number	Sample/Int/Type	Blows per 6 Inches	N - Value / RQD (%)	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Bedrock Fractures	Stratigraphic Description	Well Construction
		9	16-16.4	50/0.4	NA	0.4	21.4			Black stained decomposed MORTAR, trace crushed red Brick, very loose (soupy), wet, weak MGP-type odor, trace black sticky NAPL. Refusal at 16.4' bgs.	
245											
20											
240											
25											
235											
30											
230											
35											

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Remarks:

bgs = below ground surface; NA = Not Applicable/Available.

Water Level Data

Date	Depth	Elev.
Depth measured from top of casing.		

Project: 36671.001 Template: J:\LogPlot\36671\Well2006BR.Idf
Data File: J:\LogPlot\36671\PZ-1.dat Date: 6/2/2006

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