

August 25, 2010

Henry Willems
Environmental Engineer
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7014

**RE: Draft Remedial Investigation Interim Data Summary
Williamsburg Works Manufactured Gas Plant (MGP) Site
Brooklyn, New York 11211
Index No. A2-055-0606
Site No. 224055**

Dear Mr. Willems:

On behalf of National Grid, GEI Consultants, Inc. (GEI) has prepared this letter to provide you with the analytical results for soil, sediment, and groundwater samples collected beneath and adjacent to the Williamsburg Works former Manufactured Gas Plant (MGP) Site in Brooklyn, New York (the Site). The data was collected from June through December 2009 as part of the remedial investigation (RI) that National Grid is completing under a New York State Department of Conservation (NYSDEC) and New York State Department of Health (NYSDOH)-approved work plan and addendums. The original work plan titled *Remedial Investigation Work Plan for the Williamsburg Works Former MGP Site* dated May 2008 was approved on June 23, 2008. The 50 Kent Ave Addendum was approved on December 3, 2008, 35 Kent Ave Addendum approved on March 3, 2009, and deeper borings at 50 Kent Ave Addendum was approved on December 10, 2009.

The interim data result transmittal includes this summary letter, analytical result tables, figures, and soil boring and test pit logs. Analytical testing results for the soil vapor and ambient air samples collected at the 35 Kent Avenue property have been provided in a draft data transmittal letter dated February 2, 2010.

Further investigation is necessary to define the nature and extent of Site impacts. National Grid has prepared a Supplemental Remedial Investigation (SRI) Work Plan under a separate cover describing proposed off-Site sample locations.

The remainder of the letter summarizes the RI sampling activities, findings, conceptual site model, and conclusions.

1.0 SUMMARY OF SAMPLING ACTIVITIES

GEI executed the approved RI work plan at and adjacent to the Site from June 4 to December 30, 2010. Analytical samples were submitted to TestAmerica, a NYSDOH-approved laboratory, in Shelton, Connecticut for chemical analyses. Once analyzed, the results were reviewed by a data validator to assure that analysis was completed according to state regulatory guidelines. The rationale for each sample is described in Table 1. The validated laboratory testing results are provided in Tables 2 through 6. The sample locations are shown in Plate 1.

1.1 Surface Soils

Surface soils were sampled at nine locations (WW-SS-01 through WW-SS-09) from the upper 2 inches of the soil within the street rights-of-way (ROW). Samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals, pesticides, polychlorinated biphenyls (PCBs), herbicides, and free cyanide in accordance with the approved-RI work plan.

1.2 Subsurface Soils

1.2.1 Soil Borings

Fifty-six subsurface borings (WW-SB-01 through WW-SB-11, WW-SB-13 through WW-SB-32, WW-SB-34 through WW-SB-42, WW-MW-01 through WW-MW-08, and WW-MW-10 through WW-MW-17) were installed at or adjacent to the Site. A Geoprobe[®] drill rig or sonic drill rig was used to install 50 soil borings to a clay layer underlying the Site or to refusal. Boring depths ranged from 45 to 78 feet below grade. The remaining six soil borings were installed through the clay layer to 97 feet using a sonic drill rig. Soil boring logs providing geologic information and observations of impacts are provided in Attachment A. Two to five analytical soil samples were collected from each boring. Typical depth intervals include a sample from within the first 5 feet bgs, most impacted areas, and at the completion of the boring. All samples were analyzed for VOCs, SVOCs, metals, and free cyanide in accordance with the RI work plan. One sample in the fill at each boring was also analyzed for pesticides, PCBs, and herbicides. Samples collected at 35 Kent Avenue were also analyzed for ammonia as requested by the property owner.

1.2.2 Test Pits

Six test pits (WW-TP-01 through WW-TP-06) spanning the former holder walls were excavated to the water table at depths ranging from 3 to 6.5 feet within the 50 Kent Avenue parcel. Test pit logs providing geologic information and photographs are provided in Attachment A. One grab soil sample was collected from each test pit from the interval with the highest PID reading or at the water table interface and analyzed for VOCs, SVOCs, metals, pesticides, PCBs, herbicides, and free cyanide in accordance with the RI work plan.

1.3 Sediment

Seven sediment cores (WW-SED-01 through WW-SED-07) were installed using vibrocore methods to a depth of 20 feet or to refusal ranging from 12 to 17.3 feet in the East River. Sediment core logs providing geologic information and observations of impacts are attached. Three analytical sediment samples were collected from each core. Samples were collected from the top 6 inches, most impacted area, and at the bottom of the core. All samples were analyzed for VOCs, SVOCs, metals, pesticides, PCBs, herbicides, and free cyanide in accordance with the RI work plan.

1.4 Groundwater

Monitoring wells were sampled at 16 locations (WW-MW-01 through WW-MW-08, and WW-MW-10 through WW-MW-17) and temporary monitoring wells were sampled at six soil boring locations: WW-SB-03, WW-SB-05, and WW-SB-07 inside the holder footprints within the 50 Kent Avenue parcel and WW-SB-19, WW-SB-21 and WW-SB-22 inside the holder footprints within the 35 Kent Avenue parcel. One analytical groundwater sample was collected from each well and analytical groundwater grab samples were collected from one to three depth intervals in each of the borings listed above. Samples were analyzed for VOCs, SVOCs, metals, pesticides, PCBs, herbicides, and total cyanide in accordance with the RI work plan. Temporary monitoring wells at 35 Kent Avenue were also analyzed for ammonia.

2.0 SITE GEOLOGY AND HYDROGEOLOGY

2.1 Geology

Subsurface soils observed beneath the Site and the surrounding areas were consistent with fill materials. Brick, concrete, wood, and coal were generally encountered to approximately 25 feet and observed as deep as 35 feet in soil

boring WW-SB-26. Below the fill layer, stratigraphy was predominantly widely graded sand with occasional layers of silty sand and silt. A confining clay layer is present beneath the entire RI study area. A contour map of the clay layer is provided as Figure 4. The top of the clay layer was observed ranging from 31.8 to 69.6 feet bgs. In the six borings installed below the clay layer, thickness of clay ranged from 9.9 to 26.7 feet. Cross sections A-A', C-C', D-D', E-E', and F-F' illustrate the geology and are provided as Figures 1 through 3 and Plate 2. Boring logs provide detailed geologic descriptions and are provided in Attachment A.

2.2 Hydrogeology

Groundwater was encountered between approximately 1.3 and 16 feet bgs. Groundwater contour maps of high and low tides are provided as Figures 5 and 6. Groundwater on the Site flows to the northwest toward the East River. Portions of the former holding tank structures remain intact below the ground surface and hold residual water. As the water gradually drains from fractures in the holder walls, the water levels surrounding the holder are elevated above what would typically be the natural level of groundwater.

3.0 SUMMARY OF FINDINGS

Plate 1 provides a summary of Site conditions, historic structures, and sample locations. The validated laboratory testing results are provided in Tables 2 through 7. The soil results were compared against 6NYCRR Subpart 375 Unrestricted Use Soil Cleanup Objectives (Unrestricted SCOs), with exceedances highlighted in gray. The analytical results for soil samples collected at or adjacent to 35 Kent Avenue were also compared to the Restricted Use Industrial SCOs (Industrial SCOs) because the area is zoned for industrial use. Exceedances of the Industrial SCOs are highlighted in orange. All remaining soil analytical results were compared to the Restricted Use Commercial SCOs (Commercial SCOs) because the planned future use is a park. Exceedances of the Commercial SCOs are highlighted in yellow.

The sediment results were compared against Effects Range Low (ER-L) and Effects Range Medium (ER-M), according to the Technical Guidance for Screening Contaminated Sediments (NYSDEC, 1999). Exceedances of the ER-L are highlighted in gray. Exceedances of the ER-M are highlighted in yellow.

The groundwater results were compared against New York Ambient Water Quality Standards, Criteria and Guidance Values (AWQS), with exceedances highlighted in gray. The AWQS are standards for drinking water consumption; however the Site and the surrounding area are supplied with potable water by New York City.

3.1 Surface Soils

No visual impacts were observed in surface soils collected adjacent to the site. Within these soils, concentrations of VOCs (including benzene, toluene, ethylbenzene, xylene [BTEX]) and naphthalene, herbicides, and free cyanide were either not detected or present below the Unrestricted SCOs (Table 2). Polycyclic aromatic hydrocarbons (PAHs), PCBs, pesticides, and some metals were present above the Unrestricted SCOs. Benzo[a]pyrene was present in four samples above the Commercial SCO and dibenz[a,h]anthracene, arsenic, and copper were present above the Commercial SCO in one sample each.

3.2 Subsurface Soils

3.2.1 Soil Borings

Visual impacts (e.g. petroleum sheen and staining) and tar-related impacts (e.g. staining and blebs) were observed in the top 5 feet of subsurface soils at and adjacent to the Site. The majority of shallow impacts were observed on the

western portion of N 12th Street, but shallow impacts were also seen at locations WW-MW-08 and WW-SB-31 on N 11th Street and WW-SB-41 on the 50 Kent Avenue parcel. No visual impacts were observed in the top 5 feet at or adjacent to the 35 Kent Avenue parcel.

Within shallow soils (less than 5 feet below grade), concentrations of VOCs, SVOCs, PCBs, pesticides, and metals were present above the Unrestricted SCOs (Tables 3 and 4). Concentrations of PAHs, arsenic, barium, and lead were detected above the Commercial or Industrial SCOs.

Below 5 feet, subsurface soils exhibited visual petroleum impacts including sheen and staining to as deep as 43 feet below grade but were primarily encountered less than 20 feet below grade. Petroleum-like odors were encountered as deep as 65 feet below grade. Tar impacts including sheen, staining, blebs and globs, coating, tar lenses, and tar saturation were also encountered to approximately 60 feet below grade. Naphthalene-like odors were observed as deep as 65 feet below grade.

Soils deeper than 5 feet below grade contained concentrations of VOCs, SVOCs, and metals above the Unrestricted SCOs. BTEX, SVOCs, arsenic, barium, cadmium, copper, lead, and mercury were detected at concentrations above the Commercial or Industrial SCOs. Samples collected at the termination of borings above the clay did not exceed the Commercial or Industrial SCOs with the exception of the sample from soil boring WW-SB-23, which contained concentrations of PAHs slightly above the Commercial SCOs.

There were no visual impacts observed in soil collected below the clay layer. Naphthalene-like odor was recorded in a 0.4-foot layer directly below the clay in WW-SB-42. Within this soil, concentrations of BTEX, PAHs, and manganese were present above the Unrestricted SCOs. Benzo(a)pyrene was detected at a concentration above the Commercial SCO. Soils collected at the termination of the borings extended below the clay-contained metals at concentrations above the Unrestricted SCOs. Barium was the only metal that exceeded the Commercial SCO.

3.2.2 Test Pits

There were no visual impacts observed in the test pits. A petroleum-like sheen, however, was observed on the infiltrated groundwater in WW-TP-03. Naphthalene-like odor was recorded from approximately 1 foot below ground surface to the water table in WW-TP-01 through WW-TP-03, and at the water table in WW-TP-05. Within test pit soils concentrations of PCBs, herbicides, and free cyanide were either not detected or present below the Unrestricted SCOs (Table 3). Concentrations of VOCs, SVOCs, pesticides, and metals were present above the Unrestricted SCOs. PAHs and lead were detected at concentrations above the Commercial SCOs.

3.3 Sediment

Visual impacts including petroleum-like sheen and tar-like staining and saturation were observed in the top 0.5 feet of sediment. Within these sediments concentrations of BTEX, SVOCs, PCBs, pesticides, and metals were present above the ER-L (Table 5). SVOCs, pesticides, and metals were detected at concentrations greater than the ER-M.

Below 0.5 feet sediment exhibited petroleum-like sheens to as deep as 17.3 feet below the mudline as well as tar-like impacts including staining, coating, and saturation to as deep as 10 feet below the mudline. Petroleum and tar-like odors were encountered to 20 feet below the mudline at the termination depth of the sediment core. Within these sediments, concentrations of BTEX, SVOCs, PCBs, pesticides, and metals were detected at concentrations above the ER-L. SVOCs, pesticides, and metals were detected at concentrations greater than the ER-M.

3.4 Groundwater

Impacts including sheen, petroleum-like odor, and naphthalene-like odor were encountered in multiple wells during sampling. Groundwater samples from these wells did not contain PCBs or herbicides above the AWQS (Table 6). Concentrations of VOCs, SVOCs, metals, pesticides, total cyanide, and ammonia were detected above the AWQS. The Site and surrounding areas are supplied with drinking water by the City of New York.

4.0 CONCEPTUAL SITE MODEL

This section provides a conceptual site model discussing observed impacts, possible contaminant migration pathways, and potential receptors. The data collected at the Site suggests the source of the tar is from the former Site gas holders and tar handling structures which are located within the 50 Kent Avenue parcel. Cross sections (Plate 2 and Figures 1 through 3) depict the vertical and lateral extent of physical observations of tar in the subsurface soils. Tar-saturated soils at the Site were generally in the coarse-grained layers (sand and gravelly sand layers) within the former gas holders (WW-SB-03, and WW-SB-05 through WW-SB-08) and immediately adjacent to the former gas holders (WW-SB-23, WW-SB-24, and WW-SB-41). Soil boring WW-MW-08 had a one-foot lens of tar saturation from 7.6 to 8.6 feet below ground surface. These potentially mobile tar impacts in soil were observed at depths ranging from approximately 7.6 to 39.5 feet below the ground surface. Tar-saturated soils were also observed at the surface and to a depth of 10 feet below the sediment water interface WW-SED-06.

Tar within the former holder structures was measured as thick as 14 feet. However, the tar impacts have extended from the holder tank source area on the southeast portion of the Site downgradient to the northwest. It appears that releases of tar from the source area generally migrated downward through the permeable fill and sandy deposits until it encountered denser material, silty lenses, or the confining clay layer at approximately 60 feet below grade. The tar then migrated laterally to the northwest through the permeable sandy layers toward the East River.

The downward progression of tar generally stopped above dense sand and silty lenses prior to reaching the depth of clay. Tar impacts were encountered immediately above the clay layer in WW-SB-23 and WW-SB-41 both located immediately outside one of the former gas holders. The downward mobility of the tar stopped above the clay as the tar pressure head (driving force) was generally not able to overcome surface tension forces and pore pressures. It appears that tar has not penetrated into the clay; there were no visual impacts observed below the clay layer. A naphthalene-like odor was detected at WW-SB-42 in an approximately 0.4 foot layer below the clay.

Visually tar-impacted soils were not observed in the following borings:

- WW-MW-01 upgradient of the site on Wythe Avenue.
- WW-MW-02 on the southwest boundary of 35 Kent Avenue, outside one of the former gas holder footprints, on N 11th Street.
- WW-MW-16 northeast and cross gradient of the site, on Kent Avenue.
- WW-SB-01 on the southwest boundary of 35 Kent Avenue, on N 11th Street.
- WW-SB-02 on the northeast boundary of 35 Kent Avenue on N 12th Street.
- WW-SB-11 on the northern corner of 50 Kent Avenue, downgradient of the former holder tank footprints.
- WW-SB-19 within one of the former holder tank footprints in the 35 Kent Avenue building.
- WW-SB-27 northeast of the site, cross gradient of the former holder tanks, on N 12th Street.
- WW-SB-30 southwest of the site, downgradient of the former holder tank footprints, on N11th Street.

Locations WW-MW-01, WW-MW-02, WW-MW-16, WW-SB-01 and WW-MW-19 appear to bound the eastern extent of tar-impacted soils. Further investigation is necessary to delineate the tar boundary to the north, south, and west.

Soil samples WW-SB-03(20-22), WW-SB -05(20-24), and WW-SB -23(31-33) contained the highest concentrations of total BTEX. Soil samples WW-SB-04(18-20), WW-SB -05(20-24), and WW-SB -23(31-33) had the highest concentrations of total PAHs. These samples were collected from the bottom of the former holder structures and immediately adjacent to the former holder tank footprints. Generally, soil concentrations of total BTEX and total PAHs are significantly reduced away from the three former gas holder footprints at the 50 Kent Avenue property which is a tar source area.

The greatest groundwater impacts were generally detected within the southern downgradient portion of the tar source area. No measurable tar was observed in any wells at the Site. Soil samples WW-MW-05(4-14), WW-SB-07(2.5-7.5) and WW-SB-21(40-50) contained the highest concentrations of total BTEX. Soil samples WW-MW-05(4-14), WW-MW-11(4-14), and WW-SB-07(2.5-7.5) contained the highest concentrations of total PAHs. Locations WW-MW-05 and WW-SB-07 are within and immediately adjacent to the former holder footprints at 50 Kent Avenue, soil boring WW-SB-21 is located within a former holder footprint at 35 Kent Avenue, and monitoring well WW-MW-11 is south and downgradient of the Site.

Groundwater impacts in samples collected from 35 Kent Avenue were greater in the deeper sampling intervals. Shallow groundwater impacts are higher in the source area and the southern downgradient portions of the Site. Concentrations generally decrease in areas of the northern portion of the Site, along the western end of N 12th Street.

Petroleum-impacted soils and sediments were encountered within many of the borings throughout the Site investigation. In many cases staining, sheen, and odors were commingled with tar impacts. Oil tanks were present on the northwest portion of the Site during former MGP operations. There were underground storage tanks (USTs) containing diesel fuel and gasoline with releases on the Department of Sanitation yard at 50 Kent Avenue. In addition, Bayside Fuel Company is currently located adjacent to the northern property boundary of the site. Due to the historic use and the downgradient locations of the Site-related oil tanks compared to the location of the Department of Sanitation USTs and current and more extensive storage from the adjacent property; petroleum impacts are likely associated with the Department of Sanitation and Bayside Fuel Company.

5.0 QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT (QHHEA)

Surface soil contains benzo(a)pyrene, dibenz[a,h]anthracene, arsenic, and copper at concentrations greater than the Commercial SCOs. If disturbed, there is a potential for site visitors, site workers, and utility and construction workers to be exposed to these compounds.

Shallow subsurface soils contain PAHs and metals at concentrations greater than the Commercial or Industrial SCOs. If disturbed, there is a potential for site workers and utility and construction workers to be exposed to these compounds. However, most soils are beneath buildings or other paved areas. Soil borings WW-SB-25, WW-SB-26, WW-SB-34, WW-SB-35, and WW-SB-36 are located on a grass corridor between the sidewalk and buildings along N 12th Street. In addition, utility and construction workers excavating in the adjacent ROWs could be exposed to PAHs and metals above the Commercial or Industrial SCOs in the subsurface soils.

Subsurface soils below the first 5 feet contain VOCs, SVOCs, and metals at concentrations greater than the Commercial or Industrial SCOs. Based upon the depth of these impacts, there is a potential for exposure of utility and construction workers. The potential exposure would be a function of deep excavation of soil.

Groundwater contains VOCs, SVOCs, metals, pesticides, total cyanide, and ammonia at concentrations greater than the AWQSS. As drinking water is supplied to the Site, the only potential complete exposure pathway to groundwater

would result from excavation activities that encounter groundwater; the presence of the buildings and paved areas limits this potential pathway.

A soil vapor intrusion assessment was completed for the 35 Kent Avenue property and is described in detail in the Interim Data Deliverable submitted to NYSDEC on February 2, 2010. Based on the sampling conducted at the 35 Kent Avenue property, it does not appear that the indoor air at the property is being impacted by MGP site-related chemicals through soil vapor intrusion. Chemicals detected in indoor air above the NYSDOH Background Indoor Air concentrations (toluene, tetrachloroethene, and trichloroethene) do not appear to be related to the former MGP Site. Potential sources of toluene, tetrachloroethene, and trichloroethene observed in the indoor air of the building include paint, paint thinners, and paint removers.

6.0 CONCLUSIONS

There were no visual impacts observed in the surface soil samples. Analytical results demonstrate that exposed surface soils contain benzo[a]pyrene, dibenz[a,h]anthracene, arsenic, and copper at concentrations greater than the Commercial SCO. Most soil is beneath buildings or other paved areas reducing the amount of exposed surface soil.

Visual impacts associated with the former MGP as well as petroleum impacts likely associated with potential off-site sources were encountered within the shallow subsurface soils at and adjacent to the Site. Analytical soil samples demonstrate that shallow subsurface soils (less than 5 feet below grade) consisting of fill contain PAHs and metals at concentrations greater than the Commercial or Industrial SCOs.

Visual impacts associated with the former MGP as well as visual petroleum impacts likely associated with potential off-site sources were also encountered at depths greater than 5 feet. Analytical soil samples demonstrate that subsurface soils contain VOCs, SVOCs, and metals at concentrations greater than the Commercial or Industrial SCOs.

If disturbed, surface and subsurface soils may pose an exposure risk to site visitors, site workers, and/or utility and construction workers.

Visual impacts associated with the former MGP operations as well as visual petroleum impacts likely associated with potential off-site sources were observed in the sediment in the East River. These sediment samples contain concentrations of SVOCs, pesticides, and metals at concentrations greater than the ER-M.

The Site and vicinity are supplied with potable water by the City of New York, which precludes the consumption of groundwater. Analytical water samples demonstrate groundwater contains VOCs, SVOCs, metals, pesticides, total cyanide, and ammonia at concentrations greater than the AWQS. Contact with groundwater may result in an exposure risk to utility and construction workers.

The former holder tank structures appear to be a source area of site-related tar impacts. The test pit investigation confirmed that former holder structures are partially intact. Borings within and surrounding the former holders indicate that tar is partially contained within the structures and is migrating to the northwest. Impacts are confined above the clay layer present approximately 60 feet below grade.

Based on the findings, further investigation is necessary to define the nature and extent of impacts at the Site. A SRI work plan proposing further site investigation is being submitted under a separate cover. These findings will be incorporated into a comprehensive RI report at the completion of proposed SRI activities. If you have any

questions or require additional information, please feel free to contact me at (718) 963-5453 or by e-mail at donald.campbell@us.ngrid.com.

Sincerely,

A handwritten signature in dark ink that reads "Donald Campbell". The signature is written in a cursive style with a large, stylized "D" and "C".

Donald Campbell
Project Manager

Attachments

c: B. Callaghan (NYSDOH)
T. Bell (National Grid)
F. Murphy (National Grid)
D. Terry (GEI)
R. DeHate (GEI)
M. Felter (GEI)

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Table 1
Sample Descriptions, Rationale and Analysis
Williamsburg Works MGP Site
Brooklyn, New York

Sample I.D.	Sample Location	Laboratory Sample Description (Sample Depth Feet)	Sample Rationale	Number of Samples			VOCs (EPA)	SVOCs (EPA)	TAL Metals (6000/7000)	Cyanide ¹	Herbicides (EPA)	PCBs (EPA 8082)	Pesticides (EPA)	Ammonia (EPA 350.1)
				Soil	Groundwater	Soil Vapor/ Indoor Air/ Outdoor Air								
Surface Soil Sample Locations														
WW-SS-01	North 12th Street, adjacent to the site	WW-SS-01 (0-0.2)	Soil sample to evaluate surface soil conditions adjacent to the site	X			X	X	X	X	X	X	X	
WW-SS-02	North 11th Street, adjacent to the site	WW-SS-02 (0-0.2)	Soil sample to evaluate surface soil conditions adjacent to the site	X			X	X	X	X	X	X	X	
WW-SS-03	North 12th Street, adjacent to the site	WW-SS-03 (0-0.2)	Soil sample to evaluate surface soil conditions at the site	X			X	X	X	X	X	X	X	
WW-SS-04	North 11th Street, adjacent to the site	WW-SS-04 (0-0.2)	Soil sample to evaluate surface soil conditions at the site	X			X	X	X	X	X	X	X	
WW-SS-05	North 12th Street, adjacent to the site	WW-SS-05 (0-0.2)	Soil sample to evaluate surface soil conditions adjacent to the site	X			X	X	X	X	X	X	X	
WW-SS-06	North 11th Street, adjacent to the site	WW-SS-06 (0-0.2)	Soil sample to evaluate surface soil conditions adjacent to the site	X			X	X	X	X	X	X	X	
WW-SS-07	North 12th Street, adjacent to the site	WW-SS-07 (0-0.2)	Soil sample to evaluate surface soil conditions adjacent to the site	X			X	X	X	X	X	X	X	
WW-SS-08	North 11th Street, adjacent to the site	WW-SS-08 (0-0.2)	Soil sample to evaluate surface soil conditions adjacent to the site	X			X	X	X	X	X	X	X	
WW-SS-09	North 12th Street, adjacent to the site	WW-SS-09 (0-0.2)	Soil sample to evaluate surface soil conditions adjacent to the site	X			X	X	X	X	X	X	X	
Test Pit Sample Locations														
WW-TP-01	50 Kent Avenue, within the gas holder footprint	WW-TP-01 (2-2.5)	Evaluate soil quality at the depth with the highest VOC reading within the gas holder wall	X			X	X	X	X	X	X	X	
WW-TP-02	50 Kent Avenue, within the gas holder footprint	WW-TP-02 (2-2.5)	Evaluate soil quality at the depth with the highest VOC reading within the suspected gas holder wall	X			X	X	X	X	X	X	X	
WW-TP-03	50 Kent Avenue, within the gas holder footprint	WW-TP-03 (3.5-4)	Evaluate soil quality at the depth with the highest VOC reading and sheen, within the gas holder wall	X			X	X	X	X	X	X	X	
WW-TP-04	50 Kent Avenue, within the gas holder footprint	WW-TP-04 (4.5-5)	Evaluate soil quality at the water table within the gas holder wall	X			X	X	X	X	X	X	X	
WW-TP-05	50 Kent Avenue, within the gas holder footprint	WW-TP-05 (6-6.5)	Evaluate soil quality at the depth with the highest VOC reading within the gas holder wall	X			X	X	X	X	X	X	X	
WW-TP-06	50 Kent Avenue, within the gas holder footprint	WW-TP-06 (6-6.5)	Evaluate soil quality at the water table within the gas holder wall	X			X	X	X	X	X	X	X	
Subsurface Soil Borings, Monitoring Wells and Temporary Groundwater Sample Locations														
WW-SB-01	North 11th Street, south of the site	WW-SB-01 (1-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-01 (14-15)	Evaluate soil quality at the depth with the highest VOC reading and sheen	X			X	X	X	X				
WW-SB-02	North 12th Street, north of the site	WW-SB-02 (2-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-02 (10.5-11.5)	Evaluate soil quality at the depth with the highest VOC reading	X			X	X	X	X				
WW-SB-03	50 Kent Avenue, within the gas holder footprint	WW-SB-03 (3-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-03 (20-22)	Evaluate soil quality at the depth with the highest VOC reading and tar saturation	X			X	X	X	X				
		WW-SB-03 (6-10)	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-SB-04	50 Kent Avenue, within the gas holder footprint	WW-SB-04 (2-4)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-04 (18-20)	Evaluate soil quality at the depth with the highest VOC reading and tar-like staining	X			X	X	X	X				
WW-SB-05	50 Kent Avenue, within the gas holder footprint	WW-SB-05 (3-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-05 (20-24)	Evaluate soil quality at the depth with the highest VOC reading and tar saturation	X			X	X	X	X				
		WW-SB-05 (3-8)	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	

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Sample Descriptions, Rationale and Analysis
Williamsburg Works MGP Site
Brooklyn, New York

Sample I.D.	Sample Location	Laboratory Sample Description (Sample Depth Feet)	Sample Rationale	Number of Samples			VOCs (EPA)	SVOCs (EPA)	TAL Metals (6000/7000)	Cyanide ¹	Herbicides (EPA)	PCBs (EPA 8082)	Pesticides (EPA)	Ammonia (EPA 350.1)
				Soil	Groundwater	Soil Vapor/ Indoor Air/ Outdoor Air								
WW-SB-06	50 Kent Avenue, within the gas holder footprint	(none)	No laboratory samples were collected due to the addition of WW-SB-23 located immediately outside the holder.											
WW-SB-07	50 Kent Avenue, within the gas holder footprint	WW-SB-07 (3-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-07 (19-22)	Evaluate soil quality at the depth with the highest VOC reading, tar-like coating, and partial tar saturation	X			X	X	X	X				
		WW-SB-07 (2.5-7.5)	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-SB-08	50 Kent Avenue, within the gas holder footprint	(none)	No laboratory samples were collected due to the addition of WW-SB-24 located immediately outside the holder.											
WW-SB-09	50 Kent Avenue, downgradient of the gas holder footprint	WW-SB-09 (2-4)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-09 (11-12)	Evaluate soil quality at the depth with high VOC readings, sheen, and tar-like staining	X			X	X	X	X				
		WW-SB-09 (53-54)	Evaluate soil quality at the depth with the highest VOC reading, tar-like staining, and partial tar-like coating	X			X	X	X	X				
WW-SB-10	50 Kent Avenue, downgradient of the gas holder footprint	WW-SB-10 (2-3)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-10 (49-50)	Evaluate soil quality at the depth with the highest VOC reading	X			X	X	X	X				
		WW-SB-10 (51-52)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
WW-SB-11	50 Kent Avenue, downgradient of the gas holder footprint	WW-SB-11 (1-2)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-11 (50-51)	Evaluate soil quality at the depth with the highest VOC reading	X			X	X	X	X				
		WW-SB-11 (63-64)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
WW-SB-13	North 11th Street, south of the site	WW-SB-13 (4-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-13 (12-15)	Evaluate soil quality at the depth with the highest VOC reading, sheen, and tar-like coating	X			X	X	X	X				
		WW-SB-13 (37-38)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				

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				Soil	Groundwater	Soil Vapor/ Indoor Air/ Outdoor Air								
WW-SB-14	North 12th Street, north of the site	WW-SB-14 (1-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-14 (10-11)	Evaluate soil quality at the depth with the highest VOC reading, sheen, tar-like staining, and partial tar-like coating	X			X	X	X	X				
WW-SB-15	North 12th Street, north of the site	WW-SB-15 (3-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-15 (7-9)	Evaluate soil quality at the depth with the highest VOC reading	X			X	X	X	X				
WW-SB-16	North 12th Street, north of the site	WW-SB-16 (0.5-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-16 (12-13)	Evaluate soil quality at the depth with tar-like blebs	X			X	X	X	X				
WW-SB-17	North 11th Street, south of the site	WW-SB-17 (2-4)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-17 (32-33)	Evaluate soil quality at the depth with the highest VOC reading, sheen, tar-like staining, and partial tar-like coating	X			X	X	X	X				
		WW-SB-17 (45-46)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
WW-SB-18	Kent Avenue, north of the site	WW-SB-18 (3.5-4.5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-18 (9-10)	Evaluate soil quality at the depth with the highest VOC reading	X			X	X	X	X				
		WW-SB-18 (51-53)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
WW-SB-19	35 Kent Avenue, within the gas holder footprint	WW-SB-19 (2-3)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	X
		WW-SB-19 (4-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	X
		WW-SB-19 (14-15)	Evaluate soil quality at the depth with a high VOC reading	X			X	X	X	X				X
		WW-SB-19 (25-35)	Evaluate soil quality at the depth with a high VOC reading and petroleum-like staining	X			X	X	X	X				X
		WW-SB-19 (47-50)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				X
		WW-SB-19 (5-15)	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	X
		WW-SB-19 (25-35)	Evaluate groundwater quality at the depth with a high VOC reading and petroleum-like staining		X		X	X	X	X				X
WW-SB-20	35 Kent Avenue, within the gas holder footprint	WW-SB-19 (40-50)	Evaluate groundwater quality above the suspected confining clay layer		X		X	X	X	X				X
		WW-SB-20 (3-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	X
		WW-SB-20 (55-57)	Evaluate soil quality at the depth with the highest VOC reading, tar-like staining, and partial tar-like coating	X			X	X	X	X				
		WW-SB-20 (62-63)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				

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				Soil	Groundwater	Soil Vapor/ Indoor Air/ Outdoor Air								
WW-SB-21	35 Kent Avenue, within the gas holder footprint	WW-SB-21 (1-2)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	X
		WW-SB-21 (33-34)	Evaluate soil quality at the depth with a high VOC reading, tar-like staining, and blebs	X			X	X	X	X				X
		WW-SB-21 (68-69)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				X
		WW-SB-21 (4-14)	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	X
		WW-SB-21 (15-25)	Evaluate ground water quality at the depth with the highest VOC reading		X		X	X	X	X				X
		WW-SB-21 (40-50)	Evaluate groundwater quality below the depth of impacts		X		X	X	X	X				X
WW-SB-22	35 Kent Avenue, downgradient of the gas holder footprint	WW-SB-22 (3-4)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	X
		WW-SB-22 (13-15)	Evaluate the soil quality at the depth of high VOC reading and black staining	X			X	X	X	X				X
		WW-SB-22 (37-38)	Evaluate soil quality at the depth with the highest VOC reading	X			X	X	X	X				X
		WW-SB-22 (65-65.5)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				X
		WW-SB-22 (6-16)	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	X
		WW-SB-22 (35-45)	Evaluate groundwater quality at the depth with the highest VOC reading and tar-like staining		X		X	X	X	X				X
		WW-SB-22 (55-65)	Evaluate groundwater quality above the suspected confining clay layer		X		X	X	X	X				X
WW-SB-23	50 Kent Avenue, downgradient of the gas holder footprint	WW-SB-23 (1-4)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-23 (31-33)	Evaluate soil quality at the depth with a high VOC reading, tar-like coating, and partial saturation	X			X	X	X	X				
		WW-SB-23 (62-63)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
WW-SB-24	50 Kent Avenue, downgradient of the gas holder footprint	WW-SB-24 (4-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-24 (38-40)	Evaluate soil quality at the depth with the highest VOC reading and tar saturation	X			X	X	X	X				
		WW-SB-24 (53-55)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
WW-SB-25	Stepout of WW-SB-11, North 12th Street, north of the site	WW-SB-25 (1-3)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-25 (34-35)	Evaluate soil quality at the depth with the highest VOC reading and tar-like coating	X			X	X	X	X				
		WW-SB-25 (52-53)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
WW-SB-26	Stepout of WW-SB-09, North 12th Street, north of the site	WW-SB-26 (1-4)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-26 (12-13)	Evaluate soil quality at the depth with the highest VOC reading and sheen	X			X	X	X	X				

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				Soil	Groundwater	Soil Vapor/ Indoor Air/ Outdoor Air								
WW-SB-27	Stepout of WW-MW-07, North 12th Street, north of the site	WW-SB-27 (4-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-27 (14-15)	Evaluate soil quality from the depth with the highest VOC reading	X			X	X	X	X				
WW-SB-28	Stepout of WW-MW-06, North 11th Street, south of the site	WW-SB-28 (3-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-28 (22-23)	Evaluate soil quality at the depth with the highest VOC reading, tar-like staining, and tar-like coating	X			X	X	X	X				
WW-SB-29	Stepout of WW-SB-10, North 11th Street, south of the site	WW-SB-29 (2-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-29 (20-22)	Evaluate soil quality at the depth with a high VOC reading, tar-like staining, blebs, and partial tar-like coating	X			X	X	X	X				
WW-SB-30	Stepout of WW-MW-08, North 11th Street, south of the site	WW-SB-30 (2-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-30 (7-9)	Evaluate soil quality at the depth with the highest VOC reading	X			X	X	X	X				
		WW-SB-30 (45-50)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
WW-SB-31	Stepout of WW-SB-13, North 11th Street, south of the site	WW-SB-31 (1-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-31 (15-17)	Evaluate soil quality at the depth with the highest VOC reading, tar and petroleum-like staining	X			X	X	X	X				
		WW-SB-31 (52-54)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
WW-SB-32	Stepout of WW-MW-11, North 11th Street, south of the site	WW-SB-32 (4-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-32 (10-11)	Evaluate soil quality at the depth with the highest VOC reading, tar-like staining, and tar-like coating	X			X	X	X	X				
		WW-SB-32 (43-44)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
WW-SB-33	Stepout of WW-SB-14, North 12th Street, north of the site	(none)	No laboratory samples were collected due to repeated refusal at 4'											
WW-SB-34	Stepout of WW-MW-13, North 12th Street, north of the site	WW-SB-34 (2-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-34 (10-13)	Evaluate soil quality at the depth with a high VOC reading, sheen, blebs, and partial tar-like staining and coating	X			X	X	X	X				
WW-SB-35	Stepout of WW-SB-15, North 12th Street, north of the site	WW-SB-35 (1-4.5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X				
		WW-SB-35 (8-10)	Evaluate soil quality at the depth with the highest VOC reading and petroleum-like staining	X			X	X	X	X				
WW-SB-36	Stepout of WW-MW-15, North 12th Street, downgradient of and north of the site	WW-SB-36 (3-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SB-36 (9-10)	Evaluate soil quality at the depth with the highest VOC reading and petroleum-like staining	X			X	X	X	X				
WW-SB-37	50 Kent Avenue, downgradient of the gas holder footprint	WW-SB-37 (96-97)	Evaluate the soil quality beneath the clay layer, at the termination depth of the boring	X			X	X	X	X				
WW-SB-38	50 Kent Avenue, adjacent to the gas holder footprint	WW-SB-38 (96.5-97)	Evaluate the soil quality beneath the clay layer, at the termination depth of the boring	X			X	X	X	X				
WW-SB-39	50 Kent Avenue, downgradient of the gas holder footprint	WW-SB-39 (96-97)	Evaluate the soil quality beneath the clay layer, at the termination depth of the boring	X			X	X	X	X				
WW-SB-40	50 Kent Avenue, downgradient of the gas holder footprint	WW-SB-40 (95-95.5)	Evaluate the soil quality beneath the clay layer, at the termination depth of the boring	X			X	X	X	X				
WW-SB-41	50 Kent Avenue, downgradient of the gas holder footprint	WW-SB-41 (96-97)	Evaluate the soil quality beneath the clay layer, at the termination depth of the boring	X			X	X	X	X				

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				Soil	Groundwater	Soil Vapor/ Indoor Air/ Outdoor Air								
WW-SB-42	50 Kent Avenue, downgradient of the gas holder footprint	WW-SB-42 (62-62.5)	Evaluate the soil quality at the depth of high VOC reading and slight odor	X			X	X	X	X				
		WW-SB-42 (96.5-97)	Evaluate the soil quality below the observed impacts, at the termination depth of the boring	X			X	X	X	X				
WW-MW-01	Wythe Avenue, east and upgradient of the site	WW-MW-01 (0.5-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-01 (16-17)	Evaluate soil quality at the depth of the water table	X			X	X	X	X				
		WW-MW-01 (63-64)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-01	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-02	North 11th Street, south of the site	WW-MW-02 (2-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-02 (15-17)	Evaluate soil quality at the depth with the highest VOC reading and gray staining	X			X	X	X	X				
		WW-MW-02 (50-53)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-02	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-03	North 12th Street, north of the site	WW-MW-03 (2-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-03 (28-30)	Evaluate soil quality at the depth with the highest VOC reading, sheen, tar-like staining, and partial tar-like coating	X			X	X	X	X				
		WW-MW-03 (60-63)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-03	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-04	50 Kent Avenue, downgradient of the gas holder footprint	WW-MW-04 (5-10)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X				
		WW-MW-04 (31-33)	Evaluate soil quality at the depth with the highest VOC reading and tar-like coating	X			X	X	X	X				
		WW-MW-04 (58-59)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-04	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	

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				Soil	Groundwater	Soil Vapor/ Indoor Air/ Outdoor Air								
WW-MW-05	50 Kent Avenue, adjacent to the gas holder footprints	WW-MW-05 (0.75-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-05 (12-13)	Evaluate soil quality at the depth with the highest VOC reading, sheen, and partial tar-like staining and coating	X			X	X	X	X				
		WW-MW-05 (63-64)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-05	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-06	North 11th Street, south of the site	WW-MW-06 (0.5-1.5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-06 (50-52)	Evaluate soil quality at the depth with the highest VOC reading, sheen, and tar-like coating	X			X	X	X	X				
		WW-MW-06 (58-60)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-06	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-07	50 Kent Avenue, adjacent to the gas holder footprint	WW-MW-07 (4-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-07 (48.5-49.5)	Evaluate soil quality at the depth with the highest VOC reading and tar-like staining	X			X	X	X	X				
		WW-MW-07 (59-60)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-07	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-08	North 11th Street, south of the site	WW-MW-08 (2-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-08 (7.5-8.5)	Evaluate soil quality at the depth with the highest VOC reading, sheen, and tar saturation	X			X	X	X	X				
		WW-MW-08 (40-45)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-08	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-10	North 12th Street, north of the site	WW-MW-10 (4-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-10 (10-11.5)	Evaluate soil quality at the depth with a high VOC reading, sheen, and tar-like blebs	X			X	X	X	X				
		WW-MW-10	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-11	North 11th Street, south of the site	WW-MW-11 (3-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-11 (11-14)	Evaluate soil quality at the depth with the highest VOC reading, sheen, and tar-like staining	X			X	X	X	X				
		WW-MW-11 (39-40)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-11	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	

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				Soil	Groundwater	Soil Vapor/ Indoor Air/ Outdoor Air								
WW-MW-12	North 11th Street, south of the site	WW-MW-12 (0.5-3)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-12 (9-10)	Evaluate soil quality at the depth with the highest VOC reading and sheen	X			X	X	X	X				
		WW-MW-12	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-13	North 12th Street, north of the site	WW-MW-13 (2-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-13 (5-10)	Evaluate soil quality at the depth with the highest VOC reading, tar-like staining, and pockets of coating	X			X	X	X	X				
		WW-MW-13	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-14	North 11th Street, downgradient of and south of the site	WW-MW-14 (3-5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-14 (36-37)	Evaluate soil quality at the depth with a high VOC reading and tar-like coating	X			X	X	X	X				
		WW-MW-14 (55-57)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-14	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-15	North 12th Street, downgradient of and north of the site	WW-MW-15 (1-4)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-15 (12-13)	Evaluate soil quality at the depth with the highest VOC reading	X			X	X	X	X				
		WW-MW-15	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-16	Kent Avenue, north of the site	WW-MW-16 (2-3.5)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-16 (20-21)	Evaluate soil quality at the depth with the highest VOC reading	X			X	X	X	X				
		WW-MW-16 (38-40)	Evaluate soil quality below the greatest impacts	X			X	X	X	X				
		WW-MW-16	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
WW-MW-17	50 Kent Avenue, downgradient of the gas holder footprint	WW-MW-17 (1-2)	Evaluate soil quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-MW-17 (7-8)	Evaluate soil quality at the depth with a high VOC reading and tar-like staining	X			X	X	X	X				
		WW-MW-17 (54-55)	Evaluate soil quality above the suspected confining clay layer	X			X	X	X	X				
		WW-MW-17	Evaluate groundwater quality at the water table		X		X	X	X	X	X	X	X	
Sediment Sample Locations														
WW-SED-01	East River, adjacent to the site	WW-SED-01 (0-0.5)	Evaluate sediment quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SED-01 (1-2)	Evaluate sediment quality at the depth with the highest VOC reading and tar-like staining	X			X	X	X	X	X	X	X	
		WW-SED-01 (19.5-20)	Evaluate sediment quality below the greatest impacts and at the termination of boring	X			X	X	X	X	X	X	X	

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Sample I.D.	Sample Location	Laboratory Sample Description (Sample Depth Feet)	Sample Rationale	Number of Samples			VOCs (EPA)	SVOCs (EPA)	TAL Metals (6000/7000)	Cyanide ¹	Herbicides (EPA)	PCBs (EPA 8082)	Pesticides (EPA)	Ammonia (EPA 350.1)
				Soil	Groundwater	Soil Vapor/ Indoor Air/ Outdoor Air								
WW-SED-02	East River, adjacent to the site	WW-SED-02 (0-0.5)	Evaluate sediment quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SED-02 (4-5)	Evaluate sediment quality at the depth with the highest VOC reading and tar-like staining	X			X	X	X	X	X	X	X	
		WW-SED-02 (11-12)	Evaluate sediment quality below the greatest impacts and at the termination of boring	X			X	X	X	X	X	X	X	
WW-SED-03	East River, adjacent to the site	WW-SED-03 (0-0.5)	Evaluate sediment quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SED-03 (9-10)	Evaluate sediment quality at the depth with the highest VOC reading and tar-like coating	X			X	X	X	X	X	X	X	
		WW-SED-03 (16.5-17)	Evaluate sediment quality below the greatest impacts and at the termination of boring	X			X	X	X	X	X	X	X	
WW-SED-04	East River, adjacent to the site	WW-SED-04 (0-0.5)	Evaluate sediment quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SED-04 (3-4)	Evaluate sediment quality at the depth with the highest VOC reading and tar-like coating	X			X	X	X	X	X	X	X	
		WW-SED-04 (16.75-17.3)	Evaluate sediment quality below the greatest impacts and at the termination of boring	X			X	X	X	X	X	X	X	
WW-SED-05	East River	WW-SED-05 (0-0.5)	Evaluate sediment quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SED-05 (4.5-5)	Evaluate sediment quality at the depth with the highest VOC reading, sheen, and tar-like coating	X			X	X	X	X	X	X	X	
		WW-SED-05 (19.5-20)	Evaluate sediment quality below the greatest impacts and at the termination of boring	X			X	X	X	X	X	X	X	
WW-SED-06	East River	WW-SED-06 (0-0.5)	Evaluate sediment quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SED-06 (9-10)	Evaluate sediment quality at the depth with the highest VOC reading and tar saturation	X			X	X	X	X	X	X	X	
		WW-SED-06 (15-18.5)	Evaluate sediment quality below the greatest impacts and at the termination of boring	X			X	X	X	X	X	X	X	
WW-SED-07	East River	WW-SED-07 (0-0.5)	Evaluate sediment quality of the shallow subsurface	X			X	X	X	X	X	X	X	
		WW-SED-07 (4-4.5)	Evaluate sediment quality at the depth with the highest VOC reading	X			X	X	X	X	X	X	X	
		WW-SED-07 (15-15.7)	Evaluate sediment quality below the greatest impacts and at the termination of boring	X			X	X	X	X	X	X	X	

Notes:

Chemical analysis test methods specified are from U.S. EPA SW-846 test methods

EPA TO-15 analysis will include VOCs and naphthalene

EPA - Environmental Protection Agency

VOC - volatile organic compounds

SVOC - semivolatile organic compounds

TAL - target analyte list

PCBs - polychlorinated biphenyls

bgs - below ground surface

¹-Soils were analyzed by Free Cyanide [extraction by EPA Method 9013A and analysis by Microdiffusion American Society for Testing and Materials (ASTM)], water was analyzed by Total Cyanide EPA Method 9012B

Table 2
Detected Surface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWSS-01 (0-0.2) 10/6/2009	WWSS-02 (0-0.2) 10/6/2009	WWSS-03 (0-0.2) 10/6/2009	WWSS-04 (0-0.2) 10/6/2009	Duplicate of: WWSS-04 (0-0.2) 10/6/2009	WWSS-05 (0-0.2) 10/6/2009	WWSS-06 (0-0.2) 10/6/2009	WWSS-07 (0-0.2) 10/6/2009	WWSS-08 (0-0.2) 10/6/2009	WWSS-09 (0-0.2) 10/6/2009
BTEX (mg/kg)												
Toluene	0.7	500	0.00016 J	0.0052 U	0.0052 U	0.0058 U	0.0058 UJ	0.0055 U	0.0056 U	0.0053 U	0.0054 U	0.0062 U
Total BTEX	NE	NE	0.00016	ND	ND	ND	ND	ND	ND	ND	ND	ND
Other VOCs (mg/kg)												
Total VOCs	NE	NE	0.00016	ND	ND	ND	ND	ND	ND	ND	ND	ND
Noncarcinogenic PAHs (mg/kg)												
Acenaphthene	20	500	1.2 U	1.1 U	1.1 U	0.18 J	1.3 UJ	1.2 U	0.23 J	0.1 J	0.12 J	1.3 U
Acenaphthylene	100	500	0.23 J	0.51 J	0.21 J	0.79 J	0.13 J	1.2 U	1.2 U	1.1 U	0.11 J	0.11 J
Anthracene	100	500	0.14 J	0.21 J	0.14 J	0.58 J	0.071 J	0.12 J	0.35 J	0.19 J	0.32 J	0.15 J
Benzo[g,h,i]perylene	100	500	1.1 J	1.8 J	0.75 J	2.6 J	0.61 J	0.49 J	1.4	0.78 J	1.7	0.97 J
Fluoranthene	100	500	0.95 J	1.1 J	0.75 J	2.3 J	0.28 J	1.1 J	2.1	1.1 J	2.2	0.92 J
Fluorene	30	500	0.087 J	1.1 U	0.076 J	0.2 J	1.3 UJ	1.2 U	0.19 J	1.1 U	1.2 U	1.3 U
Phenanthrene	100	500	0.73 J	0.43 J	0.74 J	2.7 J	0.2 J	0.7 J	1.9	0.91 J	1.4	0.75 J
Pyrene	100	500	1.5	2.6 J	1.7 J	4.8 J	0.55 J	1.1 J	2.6	1.5	3.2	1.5
Total Noncarcinogenic PAHs	NE	NE	4.737	6.65	4.366	14.15	1.841	3.51	8.77	4.58	9.05	4.4
Carcinogenic PAHs (mg/kg)												
Benz[a]anthracene	1	5.6	0.66 J	1.2 J	0.59 J	2.1 J	0.28 J	0.5 J	0.96 J	0.54 J	1.2	0.53 J
Benzo[a]pyrene	1	1	1 J	1.6 J	0.71 J	2.9 J	0.37 J	0.6 J	1.1 J	0.64 J	1.5	0.7 J
Benzo[b]fluoranthene	1	5.6	1 J	1.8 J	0.87 J	2.9 J	0.47 J	0.81 J	1.4	0.8 J	1.6	0.77 J
Benzo[k]fluoranthene	0.8	56	0.5 J	0.73 J	0.25 J	1.2 J	0.14 J	0.36 J	0.59 J	0.26 J	0.68 J	0.32 J
Chrysene	1	56	0.73 J	1.3 J	1 J	2.6 J	0.33 J	0.63 J	1.1 J	0.64 J	1.3	0.63 J
Dibenz[a,h]anthracene	0.33	0.56	1.2 U	0.48 J	1.1 UJ	0.73 J	1.3 UJ	1.2 U	1.2 U	1.1 UJ	1.2 U	1.3 UJ
Indeno[1,2,3-cd]pyrene	0.5	5.6	1.1 J	1.9 J	0.73 J	2.9 J	0.52 J	0.43 J	1.2 J	0.66 J	1.7	1 J
Total Carcinogenic PAHs	NE	NE	4.99	9.01	4.15	15.33	2.11	3.33	6.35	3.54	7.98	3.95
Total PAHs	NE	NE	9.727	15.66	8.516	29.48	3.951	6.84	15.12	8.12	17.03	8.35
Other SVOCs (mg/kg)												
Bis(2-ethylhexyl)phthalate	NE	NE	1.2 U	1.1 UJ	1.6 UJ	3 J	5.7 UJ	1.2 UJ	5.7 U	5.3 U	2.3 U	4.6 U
Butyl benzyl phthalate	NE	NE	0.078 J	0.18 J	0.25 J	0.34 J	0.48 J	0.24 J	0.31 J	0.68 J	1.1 J	0.3 J
Carbazole	NE	NE	1.2 U	1.1 U	0.063 J	0.16 J	1.3 UJ	0.08 J	0.2 J	0.095 J	0.13 J	1.3 U
Dibenzofuran	7	350	1.2 U	1.1 U	1.1 U	0.12 J	1.3 UJ	1.2 U	0.17 J	1.1 U	1.2 U	1.3 U
Di-n-butyl phthalate	NE	NE	1.2 U	1.1 U	0.25 J	0.11 J	1.3 UJ	1.2 U	1.2 U	0.2 J	1.2 U	0.23 J
Phenol	0.33	500	1.2 U	1.1 U	1.1 U	0.31 U	1.3 UJ	1.2 U	0.15 J	1.1 U	1.2 U	1.3 U
Total Other SVOCs	NE	NE	0.078	0.18	0.563	3.73	0.48	0.32	0.83	0.975	1.23	0.53
PCBs (mg/kg)												
Aroclor 1248	NE	NE	0.019 UJ	0.0071 J	0.17 U	0.019 U	0.02 UJ	0.019 UJ	0.018 J	0.018 UJ	0.018 U	0.021 UJ
Aroclor 1254	NE	NE	0.024 JN	0.02 J	0.17 U	0.15 J	0.043 J	0.024 J	0.06 J	0.021 J	0.12 J	0.022 J
Aroclor 1260	NE	NE	0.045 J	0.045 JN	0.17 U	0.2 J	0.073 J	0.041 J	0.042 U	0.017 J	0.1	0.021 UJ
Aroclor 1268	NE	NE	0.017 J	0.085 J	1.8 J	0.12 J	0.079 J	0.022 J	0.011 J	0.0078 J	0.071 J	0.0075 J
Total PCBs	0.1	500	0.086	0.1571	1.8	0.47	0.195	0.087	0.089	0.0458	0.291	0.0295

Table 2
Detected Surface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWSS-01 (0-0.2) 10/6/2009	WWSS-02 (0-0.2) 10/6/2009	WWSS-03 (0-0.2) 10/6/2009	WWSS-04 (0-0.2) 10/6/2009	Duplicate of: WWSS-04 (0-0.2) 10/6/2009	WWSS-05 (0-0.2) 10/6/2009	WWSS-06 (0-0.2) 10/6/2009	WWSS-07 (0-0.2) 10/6/2009	WWSS-08 (0-0.2) 10/6/2009	WWSS-09 (0-0.2) 10/6/2009
Pesticides (mg/kg)												
Aldrin	0.005	0.68	0.0019 UJ	0.0017 UJ	0.017 UJ	0.0022 J	0.002 UJ	0.0018 UJ	0.0019 UJ	0.0018 UJ	0.0018 UJ	0.0021 UJ
Alpha-chlordane	0.094	24	0.0026 JN	0.0056 J	0.017 UJ	0.0019 UJ	0.002 UJ	0.0018 UJ	0.0038 J	0.0018 UJ	0.0018 UJ	0.0021 UJ
Beta-BHC	0.036	3	0.0019 UJ	0.0014 J	0.017 UJ	0.0037 JN	0.0025 JN	0.0018 UJ	0.0019 UJ	0.0018 UJ	0.0018 UJ	0.0021 UJ
Chlordane, gamma	NE	NE	0.005 JN	0.0076 JN	0.017 UJ	0.0051 JN	0.0041 JN	0.0018 UJ	0.0042 JN	0.003 JN	0.0031 JN	0.0021 UJ
DDD,4,4-	0.0033	92	0.0037 U	0.0033 U	0.034 UJ	0.011 JN	0.0084 JN	0.0036 UJ	0.0068 J	0.0041 JN	0.011 J	0.004 UJ
DDE,4,4-	0.0033	62	0.0037 UJ	0.0086 J	0.034 UJ	0.015 J	0.012 J	0.0024 J	0.0047 J	0.0035 J	0.0046 J	0.004 UJ
DDT,4,4-	0.0033	47	0.011 J	0.018 J	0.15 J	0.042 J	0.033 J	0.01 J	0.011 J	0.0066 UJ	0.013 J	0.011 J
Delta-BHC	0.04	500	0.00066 J	0.0017 U	0.017 UJ	0.003 J	0.0019 J	0.0018 UJ	0.0019 UJ	0.0018 UJ	0.0018 UJ	0.0021 UJ
Dieldrin	0.005	1.4	0.0037 UJ	0.0033 UJ	0.034 UJ	0.0046 J	0.0042 J	0.0013 J	0.0036 UJ	0.0034 UJ	0.0036 UJ	0.004 UJ
Endosulfan I	2.4	200	0.0019 UJ	0.0017 UJ	0.017 UJ	0.0075 J	0.0068 J	0.0018 UJ	0.0019 UJ	0.0018 UJ	0.0018 UJ	0.0021 UJ
Endrin	0.014	89	0.0037 U	0.0033 UJ	0.049 JN	0.0039 JN	0.0039 UJ	R	0.0036 UJ	0.0034 UJ	0.0036 UJ	R
Endrin aldehyde	NE	NE	0.0058 J	0.01 J	0.58 JN	0.0071 JN	0.029 JN	0.0074 JN	0.0056 JN	0.0056 JN	0.0098 JN	0.011 JN
Gamma-BHC	0.1	9.2	0.0019 U	0.0017 U	0.017 UJ	0.0034 JN	0.002 UJ	0.0018 UJ	0.0019 UJ	0.0018 UJ	0.0018 UJ	0.0021 UJ
Heptachlor epoxide	NE	NE	0.0041 J	0.0017 UJ	0.017 UJ	0.0036 JN	0.0072 J	0.0018 UJ	0.0019 UJ	0.0018 UJ	0.0018 UJ	0.0021 UJ
Methoxychlor	NE	NE	0.019 UJ	0.017 UJ	0.21 JN	0.019 UJ	0.027 JN	0.018 UJ	0.019 UJ	0.018 UJ	0.02 JN	0.021 UJ
Herbicides (mg/kg)												
Total Herbicides	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)												
Aluminum	NE	NE	5580	4010	2560	4390	4600	4270	4160	2440	5260	13700
Arsenic	13	16	19.9 J	4.4 J	5.3 U	5.9 U	5.9 U	5.8 U	5.8 U	5.4 U	5.6 U	6.1 J
Barium	350	400	77.2 J	51.3 J	40.3 J	102 J	102 J	68.8 J	327 J	76.8 J	199 J	203 J
Beryllium	7.2	590	0.4 J	0.27 J	0.17 J	0.28 J	0.31 J	0.26 J	0.28 J	0.15 J	0.32 J	1.6
Cadmium	2.5	9.3	0.6 J	0.43 J	0.34 J	2.1	2.5	1 J	0.94 J	0.6 J	0.66 J	1.5 U
Calcium	NE	NE	17000	59500	124000	13900	12800	9680	15200	21700	17600	64900
Chromium	NE	NE	16.2	12.5	11.6	22.4	31.5	20.9	21.1	22.5	23.8	32.3
Cobalt	NE	NE	5.8	5	3.9 J	5.5	7.6	4	4.3	4 J	4.8	4.1
Copper	50	270	71.5	66.5	59.3	89.9	88.1	51.9	347	57.2	75.6	130
Iron	NE	NE	11600	11500	11800	12800	15100	10200	15700	20500	12200	14900
Lead	63	1000	233	166	133	241	248	99.6	251	99.1	125	106
Magnesium	NE	NE	5600	13700	60300	6380	6820	5840	7230	9290	7630	18400
Manganese	1600	10,000	208	159	205	188	227	272	205	195	248	963
Mercury	0.18	2.8	0.37	0.16	0.099	0.2	0.2	0.11	0.094	0.094	0.12	0.091
Nickel	30	310	21.1	15.9	14	19.7	24.2	14.6	16.7	19.4	19.3	20.9
Potassium	NE	NE	751 J	550 J	526 J	491 J	540 J	423 J	430 J	277 J	531 J	1710 J
Silver	2	1500	1.4 U	0.16 J	1.3 UJ	1.4 U	0.57 J	1.4 U	0.39 J	1.3 UJ	1.3 U	0.1 J
Sodium	NE	NE	182 J	383 J	176 J	141 J	152 J	103 J	238 J	134 J	231 J	954 J
Vanadium	NE	NE	23.1	31.4	31.9	18.6	21.1	15.4	19.4	13.3	19	24.8
Zinc	109	10,000	239	171	372	832	922	456	462	626	465	336
Other (mg/kg)												
Free Cyanide	27	27	0.226 UJ	0.205 UJ	0.206 UJ	0.231 UJ	0.233 UJ	0.218 UJ	0.223 UJ	0.063 J	0.216 UJ	0.242 UJ

Table 2
Detected Surface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Notes:

mg/kg - milligrams/kilogram or parts per million (ppm)

BTEX - benzene, toluene, ethylbenzene, and xylenes

VOCs - volatile organic compounds

PAHs - polycyclic aromatic hydrocarbons

SVOCs - semivolatile organic compounds

PCBs - polychlorinated biphenyls

Total BTEX, Total VOCs, Total PAHs, Total SVOCs, and Total PCBs are calculated using detects only.

6 NYCRR - New York State Register and Official Compilation of Codes, Rules and Regulations of the State of New York

UNRESTRICTED USE SCO - regulatory comparison against 6 NYCRR, Chapter IV, Part 375-6 Unrestricted Use Soil Cleanup Objectives

COMMERCIAL USE SCO - regulatory comparison against 6 NYCRR, Chapter IV, Part 375-6 Restricted Use Commercial Soil Cleanup Objectives

NE - not established

NA - not analyzed

ND - not detected; total concentration is listed as ND because no compounds were detected in the group

Bolding indicates a detected concentration

Gray shading and bolding indicates that the detected result value exceeds established UNRESTRICTED USE SCO

Yellow shading and bolding indicates that the detected result value exceeds established UNRESTRICTED USE SCO and COMMERCIAL USE SCO

Validation Qualifiers:

J - estimated value

JN - analyte is presumptively present at an approximated quantity

U - indicates not detected to the reporting limit for organic analysis and the method detection limit for inorganic analysis

UJ - not detected at or above the reporting limit shown and the reporting limit is estimated

R - rejected

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWMW-04 (5-10) 6/15/2009	WWMW-04 (31-33) 6/15/2009	WWMW-04 (58-59) 6/15/2009	WWMW-05 (0.75-5) 6/10/2009	Duplicate of: WWMW-05 (0.75-5) 6/10/2009	WWMW-05 (12-13) 6/10/2009	WWMW-05 (63-64) 6/11/2009	WWMW-06 (0.5-1.5) 6/17/2009	WWMW-06 (50-52) 6/18/2009	WWMW-06 (58-60) 6/18/2009	WWMW-07 (4-5) 6/22/2009	WWMW-07 (48.5-49.5) 6/23/2009	WWMW-07 (59-60) 6/23/2009	WWMW-08 (2-5) 6/19/2009	WWMW-08 (7.5-8.5) 6/19/2009	WWMW-08 (40-45) 6/19/2009	Duplicate of: WWMW-08 (40-45) 6/19/2009	WWMW-10 (4-5) 9/8/2009	WWMW-10 (10-11.5) 9/8/2009
BTEX (mg/kg)																					
Benzene	0.06	44	0.021 J	62 J	0.0042 J	3.8 J	2.1 J	84	0.0057 U	0.0051 U	160	0.15	0.0061 U	230	2.8	2.8	7.1 J	0.013	0.0081	0.029 UJ	2.4 U
Toluene	0.7	500	0.0014 J	220 J	0.003 J	26	19	220	0.00068 J	0.0051 U	460	0.05	0.0061 U	400	0.6 U	4.1	4.6 J	0.0061 U	0.0064 U	0.029 U	2.4 U
Ethylbenzene	1	390	0.0056 UJ	220 J	0.018	38	32	320	0.002 J	0.0051 U	440	0.058	0.0061 U	64	0.89	7.2	470	0.0061 UJ	0.0064 U	0.32 J	2.9 U
Xylene, total	0.26	500	0.0011 J	320 J	0.02	81	65	340	0.002 J	0.0051 U	570	0.073	0.0061 U	550	0.87 U	8.9	550	0.0061 UJ	0.0064 U	0.43 U	1.9 U
Total BTEX	NE	NE	0.0235	822	0.0452	148.8	118.1	964	0.00468	ND	1630	0.331	ND	1244	3.69	23	1031.7	0.013	0.0081	0.32	ND
Other VOCs (mg/kg)																					
Acetone	0.05	500	0.048 J	14 UJ	0.039 J	28 U	5.6 U	31 U	0.028 U	0.039 J	52 U	0.049 J	0.025 U	66 U	1.5 U	1.6 U	37 U	0.024 UJ	0.049 J	0.043 UJ	6 U
Butanone, 2-	0.12	500	0.011 UJ	5.8 UJ	0.012 U	11 U	2.3 U	13 U	0.011 U	0.01 U	21 U	0.011 U	0.012 U	26 U	0.6 U	0.63 U	15 U	0.012 UJ	0.013 U	0.058 UJ	2.4 U
Carbon disulfide	NE	NE	0.0012 J	1.5 J	0.0058 U	11 U	2.3 U	13 U	0.0057 U	0.0051 U	21 U	0.0054 U	0.0061 U	26 U	0.6 U	0.28 J	15 U	0.0061 U	0.0064 U	0.029 UJ	2.4 U
Chloroform	0.37	350	0.0056 UJ	5.8 UJ	0.0058 U	11 U	2.3 U	13 U	0.0057 U	0.0051 U	21 U	0.0054 U	0.0061 U	26 U	0.6 U	0.63 U	15 U	0.0061 U	0.0064 U	0.029 U	2.4 U
Chloromethane	NE	NE	0.0056 UJ	5.8 UJ	0.0058 U	11 U	2.3 U	13 U	0.0057 U	0.0051 U	21 U	0.0054 U	0.0061 U	26 U	0.6 U	0.63 U	15 U	0.0061 U	0.0064 U	0.029 UJ	2.4 U
Dichloroethene, cis-1,2-	0.25	500	0.0015 J	5.8 UJ	0.0058 U	11 U	2.3 U	13 U	0.0057 U	0.0051 U	21 U	0.0054 U	0.0061 U	26 U	0.6 U	0.63 U	15 U	0.0061 U	0.0064 U	0.029 U	2.4 U
Methylene chloride	0.05	500	0.022 UJ	6.1 UJ	0.023 U	11 U	2.3 U	13 U	0.023 U	0.02 U	21 U	0.021 U	0.025 U	26 U	0.6 U	0.7 UJ	15 U	0.024 U	0.026 U	0.12 U	2.4 U
Styrene	NE	NE	0.0056 UJ	60 J	0.0058 U	14	11	13 U	0.00026 J	0.0051 U	20 J	0.0045 J	0.0061 U	420	0.6 U	0.52 J	15 U	0.0061 UJ	0.0064 U	0.029 U	2.4 U
Tetrachloroethene	1.3	150	0.0056 UJ	5.8 UJ	0.0058 U	11 U	2.3 U	13 U	0.0057 U	0.0051 U	21 U	0.0054 U	0.0061 U	26 U	0.6 U	0.63 U	15 U	0.0061 UJ	0.0064 U	0.029 UJ	2.4 U
Trichloroethane, 1,1,2-	NE	NE	0.0056 UJ	5.8 UJ	0.0058 U	11 U	2.3 U	13 U	0.0057 U	0.0051 U	21 U	0.0054 U	0.0061 U	26 U	0.6 U	0.63 U	15 U	0.0061 U	0.0064 U	0.029 U	2.4 U
Trichloroethene	0.47	200	0.0053 J	5.8 UJ	0.0058 U	11 U	2.3 U	13 U	0.0057 U	0.0051 U	21 U	0.0054 U	0.0061 U	26 U	0.6 U	0.63 U	15 U	0.0061 U	0.0064 U	0.029 U	2.4 U
Total Other VOCs	NE	NE	0.056	61.5	0.039	14	11	ND	0.00026	0.039	20	0.0535	ND	420	ND	0.8	ND	ND	0.049	ND	ND
Total VOCs	NE	NE	0.0795	883.5	0.0842	162.8	129.1	964	0.00494	0.039	1650	0.3845	ND	1664	3.69	23.8	1031.7	0.013	0.0571	0.32	ND
Noncarcinogenic PAHs (mg/kg)																					
Acenaphthene	20	500	0.3 U	31 J	0.31 UJ	6.8 J	10 J	73	0.3 U	0.15 J	44 J	0.03 J	0.27 J	46 J	0.028 J	21	290	0.32 U	0.34 U	21	56 J
Acenaphthylene	100	500	0.069 J	280	0.31 UJ	68	110	14 J	0.077 J	2.9	460	0.13 J	2.9	460	0.13 J	6.8	37 J	0.32 U	0.34 U	2.5 J	9.9 J
Anthracene	100	500	0.054 J	110 J	0.31 UJ	23 J	36 J	26 J	0.058 J	1	170	0.071 J	0.99	130 J	0.051 J	9.7	91 J	0.32 U	0.34 U	8.6	16 J
Benzo[g,h,i]perylene	100	500	0.3 J	86 J	0.31 UJ	61 U	61 U	33 U	0.3 U	1.7 J	88 J	0.29 U	6.1	350 U	0.32 U	9.2 J	12 J	0.42	0.44	1 J	3 J
Fluoranthene	100	500	0.13 J	88 J	0.31 UJ	22 J	37 J	25 J	0.065 J	2	140 J	0.079 J	5.4	130 J	0.057 J	15	76 J	0.32 U	0.34 U	9.5	27 J
Fluorene	30	500	0.042 J	150	0.31 UJ	38 J	63	40	0.075 J	0.28	230	0.084 J	0.37 J	220 J	0.066 J	12	120 J	0.32 U	0.34 U	13	39 J
Methylnaphthalene,2-	NE	NE	0.1 J	790	0.072 J	200 J	300 J	200	0.18 J	0.37	1200	0.32	0.26 J	1200	0.37	9.3	840	0.023 J	0.014 J	11	29 J
Naphthalene	12	500	0.054 J	2100	0.13 J	540 J	760 J	500	0.27 J	0.64	2600	0.84	0.58 J	3300	1	32	1700	0.062 J	0.038 J	29 J	56 J
Phenanthrene	100	500	0.22 J	390	0.033 J	90	140	93	0.23 J	0.96	610	0.27 J	1.9	490	0.2 J	33	310	0.32 U	0.34 U	32	90 J
Pyrene	100	500	0.23 J	150 J	0.31 UJ	33 J	52 J	36	0.11 J	2.3	240	0.12 J	5.6	190 J	0.086 J	23	120 J	0.32 U	0.34 U	14	40 J
Total Noncarcinogenic PAHs	NE	NE	1.199	4175	0.235	1020.8	1508	1007	1.065	12.3	5782	1.944	24.37	6166	1.988	171	3596	0.505	0.492	141.6	365.9
Carcinogenic PAHs (mg/kg)																					
Benzo[a]anthracene	1	5.6	0.088 J	56 J	0.31 UJ	12 J	19 J	14 J	0.045 J	2.1	89 J	0.056 J	6.9	83 J	0.04 J	11	44 J	0.32 U	0.34 U	5.9	15 J
Benzo[a]pyrene	1	1	0.088 J	42 J	0.31 UJ	8.5 J	15 J	11 J	0.3 U	3.6 J	64 J	0.033 J	12	58 J	0.03 J	18	35 J	0.044 J	0.049 J	4.4	13 J
Benzo[b]fluoranthene	1	5.6	0.14 J	26 J	0.31 UJ	6.3 J	10 J	7.9 J	0.3 U	3.1 J	39 J	0.016 J	8.1	34 J	0.32 U	14	24 J	0.07 J	0.34 U	3.3	9.5 J
Benzo[k]fluoranthene	0.8	56	0.046 J	150 U	0.31 UJ	61 U	61 U	33 U	0.3 U	1.1 J	15 J	0.29 U	3.3	350 U	0.32 U	5.6 J	160 U	0.32 U	0.34 U	1.6 J	3.4 J
Chrysene	1	56	0.1 J	56 J	0.31 UJ	11 J	18 J	12 J	0.038 J	2.4	86 J	0.043 J	6	75 J	0.028 J	12	43 J	0.32 U	0.34 U	5.9	15 J
Dibenzo[a,h]anthracene	0.33	0.56	0.19 J	150 U	0.31 UJ	61 U	61 U	33 U	0.3 U	0.57 J	140 U	0.29 U	2.3	350 U	0.32 U	6 J	160 U	0.32 U	0.34 U	3.1 U	16 UJ
Indeno[1,2,3-cd]pyrene	0.5	5.6	0.38	150 U	0.31 UJ	61 U	61 U	7.7 J	0.3 U	2 J	72 J	0.29 U	7.6	350 U	0.32 U	13	110 J	0.28 J	0.34 U	1.2 J	3.4 J
Total Carcinogenic PAHs	NE	NE	1.032	180	ND	37.8	62	52.6	0.083	14.87	365	0.148	46.2	250	0.098	79.6	256	0.394	0.049	22.3	59.3
Total PAHs	NE	NE	2.231	4355	0.235	1058.6	1570	1059.6	1.148	27.17	6147	2.092	70.57	6416	2.086	250.6	3852	0.899	0.541	163.9	425.2
Other SVOCs (mg/kg)																					
Bis(2-ethylhexyl)phthalate	NE	NE	0.15 J	150 U	0.31 UJ	61 U	61 U	33 U	0.031 J	0.21 J	140 U	0.089 J	0.21 J	350 U	0.32 U	6.6 U					

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWMW-04 (5-10) 6/15/2009	WWMW-04 (31-33) 6/15/2009	WWMW-04 (58-59) 6/15/2009	WWMW-05 (0.75-5) 6/10/2009	Duplicate of: WWMW-05 (0.75-5) 6/10/2009	WWMW-05 (12-13) 6/10/2009	WWMW-05 (63-64) 6/11/2009	WWMW-06 (0.5-1.5) 6/17/2009	WWMW-06 (50-52) 6/18/2009	WWMW-06 (58-60) 6/18/2009	WWMW-07 (4-5) 6/22/2009	WWMW-07 (48.5-49.5) 6/23/2009	WWMW-07 (59-60) 6/23/2009	WWMW-08 (2-5) 6/19/2009	WWMW-08 (7.5-8.5) 6/19/2009	WWMW-08 (40-45) 6/19/2009	Duplicate of: WWMW-08 (40-45) 6/19/2009	WWMW-10 (4-5) 9/8/2009	WWMW-10 (10-11.5) 9/8/2009
Pesticides (mg/kg)																					
Aldrin	0.005	0.68	0.0019 U	NA	NA	0.0089 J	0.019 U	NA	NA	0.0017 U	NA	NA	0.0021 U	NA	NA	0.0021 U	NA	NA	NA	0.04 U	NA
Alpha-bhc	0.02	3.4	0.0019 U	NA	NA	0.0096 UJ	0.019 U	NA	NA	0.0017 U	NA	NA	0.0021 U	NA	NA	0.0084 JN	NA	NA	NA	0.04 U	NA
Alpha-chlordane	0.094	24	0.0019 U	NA	NA	0.011 JN	0.019 U	NA	NA	0.0019 J	NA	NA	0.0021 U	NA	NA	0.0021 UJ	NA	NA	NA	0.04 U	NA
Beta-BHC	0.036	3	0.0019 U	NA	NA	0.026 J	0.018 J	NA	NA	0.0014 J	NA	NA	0.0027 J	NA	NA	0.012 J	NA	NA	NA	0.04 U	NA
Chlordane, gamma	NE	NE	0.0019 U	NA	NA	0.012 JN	0.019 U	NA	NA	0.0027 JN	NA	NA	0.0045 J	NA	NA	0.0029 J	NA	NA	NA	0.04 U	NA
DDD,4,4-	0.0033	92	0.0037 U	NA	NA	0.019 U	0.037 U	NA	NA	0.015 JN	NA	NA	0.004 UJ	NA	NA	0.0041 UJ	NA	NA	NA	0.04 U	NA
DDE,4,4-	0.0033	62	0.0037 U	NA	NA	0.019 U	0.037 U	NA	NA	0.0036 JN	NA	NA	0.004 U	NA	NA	0.0041 UJ	NA	NA	NA	0.04 U	NA
DDT,4,4-	0.0033	47	0.0071 J	NA	NA	0.35 J	0.42 J	NA	NA	0.0034 UJ	NA	NA	0.014 JN	NA	NA	0.051 J	NA	NA	NA	0.04 U	NA
Delta-BHC	0.04	500	0.00082 J	NA	NA	0.0043 J	0.019 UJ	NA	NA	0.0014 J	NA	NA	0.0021 U	NA	NA	0.0021 UJ	NA	NA	NA	0.04 U	NA
Dieldrin	0.005	1.4	0.0021 J	NA	NA	0.019 UJ	0.043 J	NA	NA	0.0034 U	NA	NA	0.004 UJ	NA	NA	0.0041 UJ	NA	NA	NA	0.04 U	NA
Endosulfan I	2.4	200	0.0019 U	NA	NA	0.0096 U	0.019 U	NA	NA	0.0017 U	NA	NA	0.0021 U	NA	NA	0.0021 UJ	NA	NA	NA	0.04 U	NA
Endosulfan II	2.4	200	0.0037 U	NA	NA	0.019 U	0.037 U	NA	NA	0.011 JN	NA	NA	0.0087 JN	NA	NA	0.0041 U	NA	NA	NA	0.04 U	NA
Endosulfan sulfate	2.4	200	0.0037 U	NA	NA	0.18 J	0.21	NA	NA	0.0034 U	NA	NA	0.017 J	NA	NA	0.0041 UJ	NA	NA	NA	0.04 U	NA
Endrin	0.014	89	0.0037 U	NA	NA	0.019 UJ	0.037 U	NA	NA	0.0034 U	NA	NA	0.0074 JN	NA	NA	0.013 J	NA	NA	NA	0.04 U	NA
Endrin aldehyde	NE	NE	0.0037 U	NA	NA	0.065 JN	0.041 JN	NA	NA	0.023 J	NA	NA	0.023 J	NA	NA	0.0041 U	NA	NA	NA	0.04 U	NA
Endrin ketone	NE	NE	0.0037 U	NA	NA	0.019 U	0.037 U	NA	NA	0.0034 U	NA	NA	0.019 J	NA	NA	0.0041 U	NA	NA	NA	0.04 U	NA
Gamma-BHC	0.1	9.2	0.0019 UJ	NA	NA	0.0096 UJ	0.019 UJ	NA	NA	0.0017 UJ	NA	NA	0.0021 U	NA	NA	0.0022 JN	NA	NA	NA	0.04 U	NA
Heptachlor	0.042	15	0.0019 UJ	NA	NA	0.0096 UJ	0.019 UJ	NA	NA	0.0017 UJ	NA	NA	0.0043 J	NA	NA	0.0021 U	NA	NA	NA	0.04 U	NA
Heptachlor epoxide	NE	NE	0.0019 U	NA	NA	0.0096 UJ	0.019 U	NA	NA	0.0091	NA	NA	0.0021 U	NA	NA	0.0021 UJ	NA	NA	NA	0.04 U	NA
Methoxychlor	NE	NE	0.019 U	NA	NA	0.28 J	0.19 U	NA	NA	0.017 U	NA	NA	0.033 JN	NA	NA	0.021 U	NA	NA	NA	0.077 U	NA
Herbicides (mg/kg)																					
Silvex	3.8	500	0.024 U	NA	NA	0.023 U	0.023 U	NA	NA	0.023 U	NA	NA	0.024 U	NA	NA	0.014	NA	NA	NA	0.023 U	NA
Metals (mg/kg)																					
Aluminum	NE	NE	5960 J	2580 J	2250 J	6230	7010	7180	2650	4850 J	2370 J	2690 J	7330	1860	2790	6800 J	4480 J	2710 J	7800 J	7690	4450
Antimony	NE	NE	4.5 UJ	4.5 UJ	4.6 UJ	4.6 UJ	4.6 UJ	4.9 UJ	4.6 UJ	4 UJ	4.2 UJ	4.3 UJ	4.8 UJ	5.3 UJ	4.9 UJ	5 UJ	4.9 UJ	4.9 UJ	5.2 UJ	4.7 UJ	4.7 UJ
Arsenic	13	16	2.4 J	5.8 UJ	5.8 UJ	3.6 J	3.3 J	2.7 J	5.8 UJ	5.1 J	1.7 J	5.4 UJ	2.3 J	6.7 U	6.3 U	6.6 J	2.3 J	3.1 J	14.3 J	6.0 U	6.0 U
Barium	350	400	180 J	19.1 J	15.7 J	56.1	64.6	39.7	18.3	65.3 J	15.2 J	21.9 J	48.5 J	18.4 J	19.9 J	71.4 J	26.5 J	39.7 J	87.2 J	33.6	19.3
Beryllium	7.2	590	0.58 J	0.23 J	0.41 J	0.56 J	0.57 J	0.47 J	0.68 J	0.42 J	0.26 J	0.47 J	0.67 J	0.42 J	0.53 J	0.7 J	0.44 J	0.8 J	1.8	1.4 U	1.4 U
Cadmium	2.5	9.3	1.4 UJ	1.4 U	1.4 UJ	1.4 U	1.4 U	1.5 U	1.4 UJ	0.25 J	1.3 U	1.3 UJ	0.33 J	1.6 U	1.5 UJ	1.5 U	1.5 U	1.5 U	1.6 U	0.57 J	0.33 J
Calcium	NE	NE	63700 J	349 J	545 J	1670	1510	1040	413	60600 J	580 J	786 J	1150 J	436 J	666 J	1200 J	737 J	1360 J	2210 J	617 UJ	874 J
Chromium	NE	NE	19.1 J	6.6 J	9.1 J	15.6	18.6	19.9	11.5	11.3 J	6.9 J	11.2 J	15.7 J	8 J	11.5 J	13.2 J	11.2 J	10.3 J	18.2 J	12.8 J	9.2 J
Cobalt	NE	NE	7.1 J	4.4 J	4.3 J	8.1 J	8.3 J	5.7 J	6.5 J	6.2 J	3.8 J	4.2 J	6.4	6.5	5.3 J	6.7 J	5.3 J	15.8 J	53.9 J	5.1	5.5
Copper	50	270	88	10.4	17.4 J	28.8	39.9	17.2	20.4	88.1	9.3	19.8 J	24.8 J	17.1 J	16.8 J	38.2	12.9	35.1	53.9	11.7	7.5
Iron	NE	NE	9400 J	10900 J	21700 J	16300	17800	15300	43800	11300 J	8800 J	21600 J	15800	10300	25100	20900 J	13000 J	4110 J	9520 J	14500	9600
Lead	63	1000	99.9	2.3 J	5.9	109 J	116 J	108 J	9.8 J	176	3.2	7.4	45 J	4.7 J	5.9 J	314	4.6	14.5 J	25.9 J	11.1 J	5.8 J
Magnesium	NE	NE	6070 J	911 J	640 J	2220	2510	2020	571	22800 J	953 J	888 J	2010	782	794	1740 J	2530 J	568 J	1600 J	2020	1720
Manganese	1600	10,000	157 J	147 J	575 J	324	355	314	409	165 J	291 J	423 J	269	92.1	555	141 J	79.6 J	27.4 J	78.3 J	131	112
Mercury	0.18	2.8	0.11	0.056 U	0.057 U	0.12	0.11	0.016 J	0.055 U	0.64	0.051 U	0.05 U	0.037 J	0.065 UJ	0.0078 J	0.35	0.059 U	0.035	0.018 J	0.015 J	0.059 U
Nickel	30	310	10 J	5.6 J	4.3 J	14.9	16.3	11.6	6.8	16.1 J	6.1 J	6.5 J	13.6 J	7.6 J	5.6 J	14.5 J	13.4 J	16.7 J	70 J	11.8	11.4
Potassium	NE	NE	543 J	424 J	332 J	1070	1290	710	347	599 J	454 J	417 J	806 J	380 J	448 J	562 J	729 J	559 J	799 J	699 J	540 J
Selenium	3.9	1500	R	R	R	10.4 UJ	10.6 UJ	11.2 UJ	10.4 UJ	R	R	R	11 UJ	11.9 U	11.2 U	R	R	R	R	R	R
Silver	2	1500	1.4 UJ	1.4 U	1.4 UJ	1.4 U	0.087 J	1.5 U	1.4 UJ	0.11 J	1.3 U	1.3 UJ	1.5 U	1.6 U	1.5 UJ	1.5 U	1.5 U	1.5 U	1.6 U	1.4 U	1.4 U
Sodium	NE	NE	604	158 U	69.5 U	1320	1300	1210	57.6 J	218	58.9 J	56.9 J	65.1 J	138 J	74.5 UJ	320	347	119 J	248 J	249	139
Thallium	NE	NE	4.1 U	4.1 U	4.2 U	4.2 U	4.2 U	4.5 U	4.2 U	1.1 J	3.8 U	1.1 J	4.4 U	4.8 U	4.5 U	4.6 U	4.4 U	4.4 U	4.7 U	4.3 UJ	4.3 UJ
Vanadium	NE	NE	10.2 J	9.6 J	18.8 J	23.8	27	18.1	21	25.2 J	9.7 J	21 J	25.9 J	17.9 J	21.5 J	18.2 J	14.2 J	18.4 J	26.9 J	18.3	12.9
Zinc	109	10,000	1020 J	13.5 J	21.6 J	64.3	78.9	29.6	35.3	478 J	13.1 J	25.2 J	91.3 J	17.4 J	23.8 J	120 J	20.8 J	81.1 J	287 J	32.1	21.2
Other (mg/kg)																					
Free Cyanide	27	27	0.221 U	0.229 U	0.232 U	0.226 U	0.222 U	0.25 U	0.23 U	0.204 U	0.209 U	0.213 U	0.241 U	0.264 U	0.233 U	0.247 U	0.233 U	0.241 U	0.255 U	0.229 UJ	0.234 UJ

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWMW-11 (3-5) 8/21/2009	WWMW-11 (11-14) 8/25/2009	WWMW-11 (39-40) 8/25/2009	WWMW-12 (0.5-3) 8/28/2009	WWMW-12 (9-10) 8/28/2009	WWMW-13 (2-5) 9/15/2009	WWMW-13 (5-10) 9/15/2009	Duplicate of: WWMW-13 (5-10) 9/15/2009	WWMW-14 (3-5) 9/1/2009	Duplicate of: WWMW-14 (3-5) 9/1/2009	WWMW-14 (36-37) 9/2/2009	WWMW-14 (55-57) 9/2/2009	WWMW-15 (1-4) 9/24/2009	Duplicate of: WWMW-15 (1-4) 9/24/2009	WWMW-15 (12-13) 9/28/2009	WWMW-16 (2-3.5) 7/27/2009	WWMW-16 (20-21) 8/10/2009	Duplicate of: WWMW-16 (20-21) 8/10/2009
BTEX (mg/kg)																				
Benzene	0.06	44	0.0064 U	0.34 J	0.0056 U	0.0055 U	15 U	0.0016 J	1.1 J	2.8 J	0.00074 J	0.006 U	0.87 J	0.0059 U	0.0059 U	0.006 U	0.014 J	0.0057 U	0.58 U	0.59 U
Toluene	0.7	500	0.0072 U	2.3 U	0.0056 U	0.0055 U	15 U	0.0062 U	7.1 U	8.1 U	0.0057 U	0.0018 J	5.7 U	0.0059 U	0.0059 U	0.006 U	0.031 U	0.029	0.58 U	0.59 U
Ethylbenzene	1	390	0.0074 U	25	0.0056 U	0.0055 U	26 U	0.0062 U	70 J	120 J	0.0057 U	0.006 U	34	0.0059 U	0.0059 U	0.006 U	0.0087 J	0.0045 J	0.58 U	0.59 U
Xylene, total	0.26	500	0.015 U	6 U	0.0056 U	0.0055 U	34 U	0.0081 U	36 UJ	72 J	0.0057 U	0.01 U	44 U	0.0062 U	0.0059 U	0.006 U	0.0085 J	0.019	0.58 U	0.59 U
Total BTEX	NE	NE	ND	25.34	ND	ND	ND	0.0016	71.1	194.8	0.00074	0.0018	34.87	ND	ND	ND	0.0312	0.0525	ND	ND
Other VOCs (mg/kg)																				
Acetone	0.05	500	0.024 UJ	R	0.022 U	0.031 U	38 U	0.028 U	18 U	20 U	0.023 UJ	0.0068 UJ	14 U	0.024 UJ	0.0059 UJ	0.0052 UJ	0.12 U	0.023 U	1.4 U	1.5 U
Butanone, 2-	0.12	500	0.012 U	2.3 U	0.011 U	0.011 U	260	0.012 U	7.1 UJ	230 J	0.011 U	0.012 U	5.7 U	0.012 U	0.012 U	0.012 U	0.061 U	0.011 U	0.58 U	0.59 U
Carbon disulfide	NE	NE	0.0059 UJ	2.3 U	0.0056 U	0.0055 U	15 U	0.0062 U	7.1 U	8.1 U	0.0057 U	0.006 U	5.7 U	0.0059 U	0.0059 U	0.006 U	0.031 U	0.0057 U	0.58 U	0.59 U
Chloroform	0.37	350	0.0059 U	2.3 U	0.0056 U	0.0055 U	15 U	0.0062 U	7.1 U	8.1 U	0.0057 U	0.006 U	5.7 U	0.0059 U	0.0059 U	0.006 U	0.031 U	0.0057 U	0.58 U	0.59 U
Chloromethane	NE	NE	0.0059 U	2.3 U	0.0056 U	0.0055 U	15 U	0.0062 UJ	7.1 U	8.1 U	0.0057 U	0.006 U	5.7 U	0.0059 U	0.0059 U	0.006 U	0.031 U	0.0057 U	0.58 U	0.59 U
Dichloroethene, cis-1,2-	0.25	500	0.0059 U	2.3 U	0.0056 U	0.0055 U	15 U	0.0062 U	7.1 U	8.1 U	0.0057 U	0.006 U	5.7 U	0.0059 U	0.0059 U	0.006 U	0.031 U	0.0057 U	0.58 U	0.59 U
Methylene chloride	0.05	500	0.024 U	2.6 U	0.022 U	0.022 U	15 U	0.025 U	7.1 U	8.1 U	0.023 U	0.024 U	5.7 U	0.024 U	0.0046 U	0.0082 U	0.12 U	0.023 U	0.58 U	0.59 U
Styrene	NE	NE	0.001 J	2.3 U	0.0056 U	0.0055 U	15 U	0.0062 U	7.1 U	8.1 U	0.0057 U	0.006 U	5.7 U	0.0059 U	0.0046 U	0.006 U	0.031 U	0.0057 U	0.58 U	0.59 U
Tetrachloroethene	1.3	150	0.0059 U	2.3 U	0.0056 U	0.0055 U	15 U	0.0062 U	7.1 U	8.1 U	0.0057 U	0.006 U	0.95 J	0.0059 U	0.0059 U	0.006 U	0.031 U	0.0057 U	0.58 U	0.59 U
Trichloroethane, 1,1,2-	NE	NE	0.0059 U	2.3 U	0.0056 U	0.0055 U	15 U	0.0062 U	7.1 U	8.1 U	0.0057 U	0.006 U	5.7 U	0.0059 U	0.0059 U	0.006 U	0.031 U	0.0057 U	0.58 U	0.59 U
Trichloroethene	0.47	200	0.0059 U	2.3 U	0.0056 U	0.0055 U	15 U	0.0062 U	7.1 U	8.1 U	0.0057 U	0.006 U	5.7 U	0.0059 U	0.0059 U	0.006 U	0.031 U	0.0057 U	0.58 U	0.59 U
Total Other VOCs	NE	NE	0.001	ND	ND	ND	260	ND	ND	230	ND	ND	7.95	ND	ND	ND	ND	ND	ND	ND
Total VOCs	NE	NE	0.001	25.34	ND	ND	260	0.0016	71.1	424.8	0.00074	0.0018	42.82	ND	ND	ND	0.0312	0.0525	ND	ND
Noncarcinogenic PAHs (mg/kg)																				
Acenaphthene	20	500	1.4 J	110	0.35	2.9 U	3.9 J	19	510	520	0.3 J	0.45 J	180	1.6 J	6.1 U	6.4 U	3	0.054 J	0.31 U	0.31 U
Acenaphthylene	100	500	0.87 J	12 J	0.042 J	2.9 U	4 U	7.4	29 J	38 J	1.5 J	1.3 J	36	0.23 J	1.6 J	1.6 J	1 J	0.068 J	0.31 U	0.31 U
Anthracene	100	500	2.6 J	47 J	0.2 J	1.1 J	6.1	12	160	190	0.97 J	1.4 J	110	0.97 J	1.6 J	1.1 J	2.9	0.17 J	0.31 U	0.038 J
Benzo[g,h,i]perylene	100	500	28 J	15 J	0.13 J	1.5 J	28 J	29	38 U	29 J	2.5 J	6.3 J	16 J	0.098 J	9.3	8.2	7	0.76	0.31 U	0.31 U
Fluoranthene	100	500	17	71	0.23 J	5.7	18	26	150	180	6.6	7.1	140	1.1 J	8.7	4.3 J	8.8	1.1	0.31 U	0.31 U
Fluorene	30	500	1.2 J	59 J	0.2 J	0.28 J	4	9.7	210	230	0.38 J	0.55 J	130	1.1 J	0.46 J	0.39 J	1.7	0.044 J	0.019 J	0.051 J
Methylnaphthalene,2-	NE	NE	8.8 U	340	0.7	2.9 U	11	5.4	210	210	3.1 U	1.6 U	360	1.9 J	6.1 U	6.4 U	0.49 J	0.04 J	0.31 U	0.31 U
Naphthalene	12	500	27 U	740	1 U	2.9 U	11 U	10	610	550	3.1 U	1.6 U	490	1.6 J	6.1 U	6.4 U	1.8	0.31 U	0.31 U	0.31 U
Phenanthrene	100	500	10	160	0.67	3.4	18	25	520	540	3.5	4.7	380	2.7 J	3.2 J	1.9 J	7.7	0.67	0.31 U	0.16 J
Pyrene	100	500	22	80	0.47	6.7	29	57	220	290	7.8	8.7	180	1.5 J	11	6.3 J	11	1	0.31 U	0.31 U
Total Noncarcinogenic PAHs	NE	NE	83.07	1634	2.992	18.68	118	200.5	2619	2777	23.55	30.5	2022	12.798	35.86	23.79	45.39	3.906	0.019	0.249
Carcinogenic PAHs (mg/kg)																				
Benzo[a]anthracene	1	5.6	19	35 J	0.14 J	2.5 J	25	24	83	110	4.3	4.5	76	0.61	6.1	3.9 J	4.6	0.74	0.31 U	0.31 U
Benzo[a]pyrene	1	1	41 J	36 J	0.12 J	2.4 J	48 J	30	70	99	5	5.9	59	0.42	8.3	6.6	6	0.96	0.31 U	0.31 U
Benzo[b]fluoranthene	1	5.6	47 J	30 J	0.13 J	3.5 J	53 J	23	76	74	6.8	5.8	43	0.4	8.4	6.4	5.8	0.92	0.31 U	0.31 U
Benzo[k]fluoranthene	0.8	56	20 J	12 J	0.043 J	1.3 J	25 J	9.9	25 J	34 J	3 J	2.3	18 J	0.19 J	3.3 J	2.3 J	2.2	0.38	0.31 U	0.31 U
Chrysene	1	56	20	36 J	0.13 J	2.4 J	23	24	82	100	4.8	4.7	70	0.65 J	6.5	4 J	4.4	0.75	0.31 U	0.31 U
Dibenz[a,h]anthracene	0.33	0.56	8.2 J	60 U	0.29 U	0.37 J	8.3 J	6.9	3.7 J	44 U	0.48 J	1.2 J	2.5 J	0.32 U	6.1 U	6.4 U	1.3 J	0.44	0.31 U	0.31 U
Indeno[1,2,3-cd]pyrene	0.5	5.6	33 J	14 J	0.11 J	1.6 J	33 J	31	38 U	29 J	2.8 J	6.3 J	17 J	0.1 J	7.8	6.3 J	6.9	0.85	0.31 U	0.31 U
Total Carcinogenic PAHs	NE	NE	188.2	163	0.673	14.07	215.3	148.8	339.7	446	27.18	30.7	285.5	2.37	40.4	29.5	31.2	5.04	ND	ND
Total PAHs	NE	NE	271.27	1797	3.665	32.75	333.3	349.3	2958.7	3223	50.73	61.2	2307.5	15.168	76.26	53.29	76.59	8.946	0.019	0.249
Other SVOCs (mg/kg)																				
Bis(2-ethylhexyl)phthalate	NE	NE	6.2 U	60 U	0.98 U	2.9 U	4 U	0.84 J	38 U	44 U	3.1 U	1.6 U	30 U	0.32 U	6.1 U	6.4 U	1.3 U	0.59 U	0.31 U	0.31 U
Butyl benzyl phthalate	NE	NE	6.2 U	60 U	0.29 U	2.9 U	4 U	3.3 U	38 U	44 U	0.25 J	0.23 J	30 U	0.32 U	1 J	6.4 U	1.3 U	0.31 U	0.31 U	0.31 U
Carbazole	NE	NE	1.1 J	5.2 J	0.29 U	2.9 U	2.1 J	0.48 J	2.2 J	44 U	0.28 J	0.51 J	6.2 J	0.052 J	6.1 U	6.4 U	0.85 J	0.082 J	0.31 U	0.31 U
Dibenzofuran	7	350	1 J	11 J	0.032 J	2.9 U	1.6 J	1.1 J	27 J	34 J	3.1 U	0.26 J	34	0.18 J	6.1 U	6.4 U	1.3 J	0.04 J	0.31 U	0.31 U
Dimethylphenol, 2,4-	NE	NE	6.2 U	60 U	0.29 U	2.9 U	4 U	3.3 U	38 UJ	44 UJ	3.1 U	1.6 U	30 U	0.32 U	6.1 U	6.4 U	1.3 U	0.31 U	0.31 U	0.31 U
Di-n-octyl phthalate	NE	NE	6.2 UJ	60 U	0.29 U	2.9 UJ	4 UJ	3.3 U	38 U	44 U	3.1 U	1.6 U	30 U	0.32 U	6.1 U	6.4 U	1.3 U	0.31 U	0.31 U	0.31 U
Methylphenol, 4-	0.33	500	6.2 U	60 U	0.29 U	2.9 U	4 U	3.3 U	38 U	44 U	3.1 U	1.6 U	30 U	0.32 U	6.1 U	6.4 U	1.3 U	0.31 U	0.31 U	0.31 U
Methylphenol,2-	0.33	500	6.2 U	60 U	0.29 U	2.9 U	4 U	3.3 U	38 U	44 U	3.1 U	1.6 U	30 U	0.32 U	6.1 U	6.4 U	1.3 U	0.31 U	0.31 U	0.31 U
Pentachlorophenol	0.8	6.7	39 U	380 UJ	1.8 UJ	18 UJ	25 UJ	21 U	240 U	270 U	19 U	9.8 U	190 U	2 U	38 U	40 U	8.3 UJ	1.9 U	2 U	2 U
Phenol	0.33	500	6.2 U	60 U	0.29 U	2.9 U	4 U	3.3 U	38 U	44 U	3.1 U	1.6 U	30 U	0.32 U	6.1 U	6.4 U	1.3 U	0.31 U	0.31 U	0.31 U
Total Other SVOCs	NE	NE	2.1	16.2	0.032	ND	3.7	2.42	29.2	34	0.53	1	40.2	0.232	1	ND	2.15	0.122	ND	ND
Total SVOCs	NE	NE	273.37	1813.2	3.697	32.75	337	351.72	2987.9	3257	51.26	62.2	2347.7	15.4	77.26	53.29	78.74	9.068	0.019	0.249
PCBs (mg/kg)																				
Aroclor 1254	NE	NE	0.02 U	NA	NA	0.052 J	NA	2 U	NA	NA	0.21 J	0.094 J	NA	NA	0.041 U	NA	NA	0.019 U	NA	NA
Aroclor 1260	NE	NE	0.02 U	NA	NA	0.026 J	NA	2 U	NA	NA	0.081 J	0.039 J	NA	NA	0.041 U	NA	NA	0.019 U	NA	NA
Aroclor 1268	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.1	1	ND	NA	NA	0.078	NA	ND	NA	NA	0.291	0.133	NA	NA	ND	NA	NA	ND	NA	NA

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWMW-11 (3-5) 8/21/2009	WWMW-11 (11-14) 8/25/2009	WWMW-11 (39-40) 8/25/2009	WWMW-12 (0.5-3) 8/28/2009	WWMW-12 (9-10) 8/28/2009	WWMW-13 (2-5) 9/15/2009	WWMW-13 (5-10) 9/15/2009	Duplicate of: WWMW-13 (5-10) 9/15/2009	WWMW-14 (3-5) 9/1/2009	Duplicate of: WWMW-14 (3-5) 9/1/2009	WWMW-14 (36-37) 9/2/2009	WWMW-14 (55-57) 9/2/2009	WWMW-15 (1-4) 9/24/2009	Duplicate of: WWMW-15 (1-4) 9/24/2009	WWMW-15 (12-13) 9/28/2009	WWMW-16 (2-3.5) 7/27/2009	WWMW-16 (20-21) 8/10/2009	Duplicate of: WWMW-16 (20-21) 8/10/2009
Pesticides (mg/kg)																				
Aldrin	0.005	0.68	0.002 UJ	NA	NA	0.019 UJ	NA	0.11 U	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0019 U	NA	NA
Alpha-bhc	0.02	3.4	0.002 UJ	NA	NA	0.019 UJ	NA	0.11 UJ	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0019 U	NA	NA
Alpha-chlordane	0.094	24	0.002 U	NA	NA	0.019 UJ	NA	0.11 U	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0019 U	NA	NA
Beta-BHC	0.036	3	0.002 UJ	NA	NA	0.019 UJ	NA	0.11 U	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0019 U	NA	NA
Chlordane, gamma	NE	NE	0.0058	NA	NA	0.019 UJ	NA	0.11 U	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0019 U	NA	NA
DDD,4,4-	0.0033	92	0.0039 UJ	NA	NA	0.019 UJ	NA	0.081 J	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0038 U	NA	NA
DDE,4,4-	0.0033	62	0.0039 U	NA	NA	0.019 UJ	NA	0.11 U	NA	NA	0.041 UJ	0.017 J	NA	NA	0.021 U	NA	NA	0.0038 U	NA	NA
DDT,4,4-	0.0033	47	0.0039 U	NA	NA	0.019 U	NA	0.11 U	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0038 UJ	NA	NA
Delta-BHC	0.04	500	0.00089 J	NA	NA	0.019 UJ	NA	0.11 UJ	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0019 U	NA	NA
Dieldrin	0.005	1.4	0.004 J	NA	NA	0.019 UJ	NA	0.11 U	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0038 U	NA	NA
Endosulfan I	2.4	200	0.002 UJ	NA	NA	0.019 UJ	NA	0.11 UJ	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0019 U	NA	NA
Endosulfan II	2.4	200	0.0089 J	NA	NA	0.019 UJ	NA	0.11 U	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0038 U	NA	NA
Endosulfan sulfate	2.4	200	0.0039 U	NA	NA	0.019 U	NA	0.11 U	NA	NA	0.041 U	0.13 U	NA	NA	0.021 U	NA	NA	0.0038 U	NA	NA
Endrin	0.014	89	0.0039 U	NA	NA	0.019 UJ	NA	0.11 U	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0038 U	NA	NA
Endrin aldehyde	NE	NE	0.023 J	NA	NA	0.019 U	NA	0.11 U	NA	NA	0.041 U	0.13 U	NA	NA	0.021 U	NA	NA	0.0038 U	NA	NA
Endrin ketone	NE	NE	0.0041 J	NA	NA	0.019 U	NA	0.099 J	NA	NA	0.026 J	0.13 UJ	NA	NA	0.011 J	NA	NA	0.0049 U	NA	NA
Gamma-BHC	0.1	9.2	0.00077 J	NA	NA	0.019 UJ	NA	0.11 UJ	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0019 U	NA	NA
Heptachlor	0.042	15	0.002 UJ	NA	NA	0.019 UJ	NA	0.11 U	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0019 U	NA	NA
Heptachlor epoxide	NE	NE	0.002 UJ	NA	NA	0.019 UJ	NA	0.11 UJ	NA	NA	0.041 UJ	0.13 UJ	NA	NA	0.021 U	NA	NA	0.0019 U	NA	NA
Methoxychlor	NE	NE	0.02 UJ	NA	NA	0.037 UJ	NA	0.2 U	NA	NA	0.079 UJ	0.26 UJ	NA	NA	0.041 U	NA	NA	0.019 UJ	NA	NA
Herbicides (mg/kg)																				
Silvex	3.8	500	0.025 UJ	NA	NA	0.022 U	NA	0.025 UJ	NA	NA	0.024 U	0.026 U	NA	NA	0.025 U	NA	NA	0.024 U	NA	NA
Metals (mg/kg)																				
Aluminum	NE	NE	2170	1760	4450	3900	4970	1250	1670 J	3400 J	7000	7190	3210	5340	4950	4710	3510	5950	6680	9320
Antimony	NE	NE	4.7 UJ	4.6 UJ	4.6 UJ	4.4 UJ	6.2 UJ	5.0 UJ	5.6 UJ	6.5 UJ	4.6 UJ	4.8 UJ	4.7 UJ	4.8 UJ	4.6 U	4.9 U	5 UJ	4.5 UJ	4.7 UJ	4.7 UJ
Arsenic	13	16	2.7 J	3.8	5.9 U	2.8 J	40.9	4.3	88.2 J	207 J	19.7 J	17.2	7 J	2.8 J	39.2	45.1	65.9	8 UJ	5.9 U	6.0 U
Barium	350	400	30.4	12.8 J	28.5 J	51.5 J	21.8 J	51 J	13.4 J	32 J	171 J	170 J	36.8 J	43.7 J	54	56.1	38 J	67.7	33.4	42.3
Beryllium	7.2	590	1.4 U	0.15 J	0.46 J	0.21 J	0.59 J	1.5 U	1.7 U	2.0 UJ	0.2 J	0.26 J	0.49 J	0.28 J	0.31	0.27	1.5 U	0.5 J	0.45 J	0.56 J
Cadmium	2.5	9.3	1.4 UJ	1.4 UJ	1.4 U	1.3 U	1.9 U	0.41 J	0.63 J	1.9 J	1.2 J	1.1 J	0.31 J	1.4 U	1.4 U	1.5 U	1.5 U	0.32 J	1.4 U	1.4 U
Calcium	NE	NE	1030 UJ	113000 J	1490 J	18400 J	1520 J	4660	686 J	2260 J	33100 J	31100 J	5040 J	10800 J	2260	5380	1960	4320 J	796 J	1050 J
Chromium	NE	NE	13.3 J	3 J	13.2 J	10.8 J	7.1 J	5.4	11.3 J	30.2 J	22.3 J	24.1 J	10.6 J	13 J	15.7	21.6	43.7 J	13.9 J	12 J	20.3 J
Cobalt	NE	NE	1.6	2.2 J	6.4 J	3.4 J	4.4 J	1.5 U	6.4 J	15.2 J	5.8	5.2	5.9	6.2	6.9	4.8	12.2	5.9	4.8	5.8
Copper	50	270	10.2	12 J	16.4 J	50.8 J	20.6 J	29.6	86.9 J	233 J	93.9	136	11.3	13.7	104	142	202	29.6	10.3 J	14.2 J
Iron	NE	NE	5570 J	6210 J	13600 J	8580 J	11700 J	19100 J	11700 J	36300 J	28100 J	20400 J	24400 J	17700 J	17900	12700	14800	20000	15700	18200
Lead	63	1000	36.9 J	11.8 J	4.5 J	87.8 J	78.5 J	108	233 J	576 J	331 J	316 J	5.7 J	4.3 U	345	502	450 J	179	9.2 U	12
Magnesium	NE	NE	493 J	67000 J	2490 J	3790 J	838 J	1450	197 J	894 J	7530	6570	3730	5720	2740	2880	2550	1880 J	2100 J	2930 J
Manganese	1600	10,000	50.9 J	132 J	382 J	126 J	112 J	19.6	150 J	453 J	294	353	875	421	132	90	196	401	199	236
Mercury	0.18	2.8	0.069	0.041 J	0.054 UJ	0.12 J	0.22 J	0.22 J	0.42 J	0.86 J	0.85	0.83	0.0075 J	0.017 J	0.34	1.6	0.11	0.63	0.0099 J	0.02
Nickel	30	310	5.2	5.4	10.8	12.2	16.4	4.1 J	23.2 J	40.9 J	20.6	20.6	10.3	10.1	19.8	14.6	17.1 J	12.4	11.1	13
Potassium	NE	NE	151 UJ	496 J	1250 J	715 J	401 J	128 J	81.7 J	219 J	1240 J	1130 J	774 J	1170 J	903	1000	652 J	690 J	723 J	850 J
Selenium	3.9	1500	10.7 UJ	10.4 U	10.4 U	9.9 U	14.1 U	11.4 UJ	12.7 UJ	14.9 UJ	R	R	R	R	10.5 U	11.2 U	6 J	4.4 J	10.6 U	10.7 U
Silver	2	1500	1.4 U	1.4 U	1.4 U	0.29 J	1.9 U	1.5 U	1.7 U	2 UJ	0.18 J	0.17 J	1.4 UJ	1.4 U	0.083	0.21	0.27 J	0.12 J	1.4 U	1.4 U
Sodium	NE	NE	71.2 U	187 J	229 J	327 J	1480 J	163 UJ	419 J	698	1640	2000	800	1480	1850	1590	1560	199 UJ	183 U	250 U
Thallium	NE	NE	4.3 UJ	4.2 U	4.2 U	4 U	5.6 U	4.6 U	5.1 U	6.0 UJ	4.2 UJ	4.3 UJ	4.3 UJ	4.3 UJ	2.2	1.6	1.1 J	4.1 UJ	4.2 UJ	4.3 UJ
Vanadium	NE	NE	6.5 J	9.6 J	17.7 J	14.1 J	17.9 J	5	5.9 J	15.9 J	24.5 J	24.3 J	19.6 J	22.2 J	19.8	19.7	13.9 J	19.3	17.5 J	29.2 J
Zinc	109	10,000	178	23.3	31.4	126	321	15.9	311 J	539 J	471 J	479 J	32 J	32.6 J	248	177	94.2 J	113	33.1 J	35.8 J
Other (mg/kg)																				
Free Cyanide	27	27	0.231 U	0.228 UJ	0.218 UJ	0.215 UJ	0.299 UJ	0.241 UJ	0.283 UJ	0.321 UJ	0.227 U	0.237 U	0.228 U	0.234 U	0.233 U	0.238 U	0.242 UJ	0.227 U	0.229 U	0.235 U

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWMW-16 (38-40) 8/10/2009	WWMW-17 (1-2) 6/8/2009	WWMW-17 (7-8) 6/8/2009	WWMW-17 (54-55) 6/9/2009	WWSB-03 (3-5) 7/14/2009	Duplicate of: WWSB-03 (3-5) 7/14/2009	WWSB-03 (20-22) 7/14/2009	WWSB-04 (2-4) 10/5/2009	WWSB-04 (18-20) 10/5/2009	Duplicate of: WWSB-04 (18-20) 10/5/2009	WWSB-05 (3-5) 7/14/2009	WWSB-05 (20-24) 7/14/2009	WWSB-07 (3-5) 7/15/2009	WWSB-07 (19-22) 7/15/2009	WWSB-9 (2-4) 6/26/2009	WWSB-09 (11-12) 7/13/2009	WWSB-09 (53-54) 7/14/2009	WWSB-10 (2-3) 6/26/2009	WWSB-10 (49-50) 7/15/2009	WWSB-10 (51-52) 7/15/2009
BTEX (mg/kg)																						
Benzene	0.06	44	0.0061 U	0.0059 U	0.37 J	0.13	0.011	0.0076	270	0.0025 J	100 J	200 J	0.0061 J	3000	0.021	120	0.0059 U	0.73 J	14	0.0041 J	87	2.8
Toluene	0.7	500	0.0012 J	0.0059 U	0.74 J	0.0027 J	0.00034 J	0.0005 J	230	0.0015 J	56 J	110	0.0061 U	4300	0.00031 J	260	0.0059 U	7.6	15	0.0057 U	180	1.2
Ethylbenzene	1	390	0.0061 U	0.0059 U	15 J	0.12	0.0057 U	0.0055 U	3000	0.0053 UJ	1100 J	1900 J	0.0012 J	2800	0.0028 J	38	0.0059 U	38	16	0.0057 UJ	43	1.5
Xylene, total	0.26	500	0.0061 U	0.0059 U	22 J	0.12	0.0057 U	0.0055 U	2800	0.0018 J	920	1500	0.002 J	4300	0.0015 J	320	0.0059 U	87	19	0.0057 UJ	220	1.6
Total BTEX	NE	NE	0.0012	ND	38.11	0.3727	0.01134	0.0081	6300	0.0058	2176	3710	0.0093	14400	0.02561	738	ND	133.33	64	0.0041	530	7.1
Other VOCs (mg/kg)																						
Acetone	0.05	500	0.024 UJ	0.024 U	1.5 U	0.031 U	0.023 UJ	0.022 UJ	350 U	0.019 UJ	160 U	150 U	0.024 UJ	350 U	0.022 UJ	34 U	0.024 U	7.2 U	1.7 U	0.023 U	15 U	1.5 U
Butanone, 2-	0.12	500	0.012 U	0.012 U	0.59 U	0.011 U	0.011 U	0.011 U	140 U	0.011 U	65 U	61 U	0.012 U	140 U	0.011 U	14 U	0.012 U	2.9 U	0.68 U	0.011 U	6 U	0.62 U
Carbon disulfide	NE	NE	0.0061 U	0.0059 U	0.59 U	0.0057 U	0.0057 U	0.0055 U	140 U	0.0012 J	65 U	61 U	0.0061 U	140 U	0.0054 U	14 U	0.0059 U	2.9 U	0.68 U	0.00058 J	6 U	0.62 U
Chloroform	0.37	350	0.0061 U	0.0059 U	0.59 U	0.0057 U	0.0057 U	0.0055 U	140 U	0.0053 U	65 U	61 U	0.0061 U	140 U	0.0054 U	14 U	0.0059 U	2.9 U	0.68 U	0.0057 U	6 U	0.62 U
Chloromethane	NE	NE	0.0061 U	0.0059 U	0.59 U	0.0057 U	0.0057 U	0.0055 U	140 U	0.0053 U	65 U	61 U	0.0061 U	140 U	0.0054 U	14 U	0.0059 U	2.9 U	0.68 U	0.004 J	6 U	0.62 U
Dichloroethene, cis-1,2-	0.25	500	0.0061 U	0.0059 U	0.59 U	0.0057 U	0.0057 U	0.0055 U	140 U	0.0053 UJ	65 U	61 U	0.0019 J	140 U	0.0054 U	14 U	0.0059 U	2.9 U	0.68 U	0.0057 UJ	6 U	0.62 U
Methylene chloride	0.05	500	0.024 U	0.024 U	0.59 U	0.023 U	0.023 U	0.022 U	140 U	0.021 U	65 U	61 U	0.024 U	140 U	0.022 UJ	14 U	0.024 U	2.9 U	0.68 U	0.023 U	6 U	0.62 U
Styrene	NE	NE	0.0061 U	0.011	0.61 J	0.0057 U	0.0057 U	0.0055 U	140 U	0.0053 UJ	65 U	61 U	0.0061 U	1100	0.0054 U	270	0.0059 U	2.9 U	0.24 J	0.0057 UJ	150	0.62 U
Tetrachloroethene	1.3	150	0.0061 U	0.0059 U	0.59 U	0.0057 U	0.0057 U	0.0055 U	140 U	0.0053 UJ	65 U	61 U	0.0061 U	140 U	0.0054 U	14 U	0.00098 J	2.9 U	0.68 U	0.0057 UJ	6 U	0.62 U
Trichloroethane, 1,1,2-	NE	NE	0.0061 U	0.0059 U	0.59 U	0.0057 U	0.0057 U	0.0055 U	140 U	0.0053 U	65 U	61 U	0.0061 U	140 U	0.0054 U	14 U	0.0059 U	2.9 U	0.68 U	0.0057 U	6 U	0.62 U
Trichloroethene	0.47	200	0.0061 U	0.0059 U	0.59 U	0.0057 U	0.0057 U	0.0055 U	140 U	0.0053 U	65 U	61 U	0.047	140 U	0.0054 U	14 U	0.0042 J	2.9 U	0.68 U	0.0057 U	6 U	0.62 U
Total Other VOCs	NE	NE	ND	0.011	0.61	ND	ND	ND	ND	0.0012	ND	ND	0.0489	1100	ND	270	0.00518	ND	0.24	0.00458	150	ND
Total VOCs	NE	NE	0.0012	0.011	38.72	0.3727	0.01134	0.0081	6300	0.007	2176	3710	0.0582	15500	0.02561	1008	0.00518	133.33	64.24	0.00868	680	7.1
Noncarcinogenic PAHs (mg/kg)																						
Acenaphthene	20	500	0.32 U	0.23 J	95	0.36 J	0.064 J	0.13 J	240	0.29 J	2500 J	690 J	4.1	590 J	0.19 J	18 J	0.063 J	24 J	0.55 J	0.16 J	20 J	0.21 J
Acenaphthylene	100	500	0.32 U	0.88 J	16 J	0.033 J	0.55	0.54 J	180 J	0.95	280 J	82 J	1.7 J	6400	1.8	180	1	16 J	3.7	1.6	220	1.7 U
Anthracene	100	500	0.32 U	0.6 J	26 J	0.61 U	0.66	0.71 J	170 J	0.81	980 J	290 J	8	2200 J	1.2	51 J	0.43	26 J	1.6	0.73	77	1.7 U
Benzo[g,h,i]perylene	100	500	0.32 U	5.2 J	28 J	0.61 U	1.1	1.6	26 J	4.9 J	1400 U	330 U	16	280 J	0.96	8 J	1.1	47 J	0.85 J	3.8 J	11 J	1.7 U
Fluoranthene	100	500	0.32 U	3.7	26 J	0.032 J	1.3	2	140 J	2	820 J	250 J	43	2000 J	3.1	48 J	0.96	25 J	1.5	3.1 J	69	1.7 U
Fluorene	30	500	0.32 U	1.3 U	35	0.61 U	0.11 J	1.2 U	220	0.26 J	1300 J	370	3.4	3400	0.37	80	0.11 J	28 J	2	0.23 J	110	1.7 U
Methylnaphthalene,2-	NE	NE	0.32 U	1.3 U	320	1.4	0.17 J	0.21 J	1100	0.51 J	5900 J	1500 J	1.2 J	16000	0.4	430	0.28 J	250	7.5	0.18 J	550	2.3
Naphthalene	12	500	0.32 U	1.3 U	540	7.3	0.16 J	1.2 U	3200	0.86 U	15000 J	3700 J	3 J	38000	0.67	1200	0.41	610	15	0.33	1200	21
Phenanthrene	100	500	0.32 U	1.5	88	0.046 J	0.98	1.6	580	2.3	3200 J	950 J	30	8300	2.3	180	0.89	84	5.6	1.7 J	290	1.7 U
Pyrene	100	500	0.32 U	4.5	29 J	0.03 J	1.8	2.2	230	5.4 J	1600 J	480 J	38	2900 J	1.9	73 J	0.97	37 J	2.3	2.9 J	110	1.7 U
Total Noncarcinogenic PAHs	NE	NE	ND	16.61	1203	9.201	6.894	8.99	6086	17.42	31580	8312	148.4	80070	12.89	2268	6.213	1147	40.6	14.73	2657	23.51
Carcinogenic PAHs (mg/kg)																						
Benz[a]anthracene	1	5.6	0.32 U	5.1	17 J	0.61 U	1.1	1.4	82 J	2.9	470 J	140 J	20	1100 J	1.7	27 J	1.2	16 J	0.92 J	2.7 J	39 J	1.7 U
Benzo[a]pyrene	1	1	0.32 U	11	19 J	0.61 U	0.87	1.2	60 J	5.4 J	340 J	100 J	21	810 J	1.7	20 J	1.8	11 J	0.68 J	5.1 J	29 J	1.7 U
Benzo[b]fluoranthene	1	5.6	0.32 U	9.7	13 J	0.61 U	1.1	1.3	37 J	5.1 J	260 J	82 J	22	540 J	2.3	14 J	1.6	7.3 J	0.42 J	4.1 J	19 J	1.7 U
Benzo[k]fluoranthene	0.8	56	0.32 U	3.9	5.2 J	0.61 U	0.35	0.47 J	17 J	1.7 J	1400 U	330 U	8.4	3000 U	0.91	73 U	0.6	62 U	0.15 J	1.5	6.4 J	1.7 U
Chrysene	1	56	0.32 U	5.2	16 J	0.61 U	1.7	1.9	85 J	3.1	430 J	130 J	19	1000 J	2.1	26 J	1.3	15 J	0.88 J	2.8 J	36 J	1.7 U
Dibenz[a,h]anthracene	0.33	0.56	0.32 U	2.4	29 J	0.61 U	0.39	0.76 J	190 U	1.3 J	1400 U	330 U	4.2	3000 U	0.34	73 U	0.49	62 U	1.5 U	1.2	64 U	1.7 U
Indeno[1,2,3-cd]pyrene	0.5	5.6	0.32 U	5.7	38	0.61 U	1	1.5	25 J	5.1 J	1400 U	38 J	16	280 J	1.1	7.8 J	1.2	46 J	0.83 J	4.3 J	10 J	1.7 U
Total Carcinogenic PAHs	NE	NE	ND	43	137.2	ND	6.51	<														

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWMW-16 (38-40) 8/10/2009	WWMW-17 (1-2) 6/8/2009	WWMW-17 (7-8) 6/8/2009	WWMW-17 (54-55) 6/9/2009	WWSB-03 (3-5) 7/14/2009	Duplicate of: WWSB-03 (3-5) 7/14/2009	WWSB-03 (20-22) 7/14/2009	WWSB-04 (2-4) 10/5/2009	WWSB-04 (18-20) 10/5/2009	Duplicate of: WWSB-04 (18-20) 10/5/2009	WWSB-05 (3-5) 7/14/2009	WWSB-05 (20-24) 7/14/2009	WWSB-07 (3-5) 7/15/2009	WWSB-07 (19-22) 7/15/2009	WWSB-9 (2-4) 6/26/2009	WWSB-09 (11-12) 7/13/2009	WWSB-09 (53-54) 7/14/2009	WWSB-10 (2-3) 6/26/2009	WWSB-10 (49-50) 7/15/2009	WWSB-10 (51-52) 7/15/2009
Pesticides (mg/kg)																						
Aldrin	0.005	0.68	NA	0.002 U	NA	NA	0.0019 U	NA	NA	0.0018 UJ	NA	NA	0.0021 U	NA	0.0018 UJ	NA	0.002 U	NA	NA	0.0019 UJ	NA	NA
Alpha-bhc	0.02	3.4	NA	0.002 U	NA	NA	0.0019 U	NA	NA	0.0018 UJ	NA	NA	0.0022 JN	NA	0.0018 U	NA	0.002 U	NA	NA	0.0019 UJ	NA	NA
Alpha-chlordane	0.094	24	NA	0.002 U	NA	NA	0.0019 U	NA	NA	0.0018 UJ	NA	NA	0.0021 U	NA	0.0018 UJ	NA	0.002 U	NA	NA	0.0019 UJ	NA	NA
Beta-BHC	0.036	3	NA	0.002 U	NA	NA	0.0019 U	NA	NA	0.0032 JN	NA	NA	0.0021 U	NA	0.0018 UJ	NA	0.002 U	NA	NA	0.0023 JN	NA	NA
Chlordane, gamma	NE	NE	NA	0.002 U	NA	NA	0.0019 U	NA	NA	0.0018 UJ	NA	NA	0.0035 J	NA	0.0018 UJ	NA	0.002 U	NA	NA	0.0039 JN	NA	NA
DDD,4,4-	0.0033	92	NA	0.0038 UJ	NA	NA	0.0038 U	NA	NA	0.0035 UJ	NA	NA	0.004 U	NA	0.0036 UJ	NA	0.0039 U	NA	NA	0.0038 UJ	NA	NA
DDE,4,4-	0.0033	62	NA	0.0038 U	NA	NA	0.0038 U	NA	NA	0.0032 J	NA	NA	0.004 UJ	NA	0.0036 U	NA	0.0039 U	NA	NA	0.0038 UJ	NA	NA
DDT,4,4-	0.0033	47	NA	0.0038 UJ	NA	NA	0.013 UJ	NA	NA	0.014 J	NA	NA	0.004 U	NA	0.0036 UJ	NA	0.01 J	NA	NA	0.0038 UJ	NA	NA
Delta-BHC	0.04	500	NA	0.002 U	NA	NA	0.0019 U	NA	NA	0.0018 UJ	NA	NA	0.0021 U	NA	0.0018 UJ	NA	0.002 U	NA	NA	0.0073 J	NA	NA
Dieldrin	0.005	1.4	NA	0.00078 J	NA	NA	0.0038 U	NA	NA	0.0097 J	NA	NA	0.004 U	NA	0.0036 U	NA	0.0022 J	NA	NA	0.0039 J	NA	NA
Endosulfan I	2.4	200	NA	0.002 U	NA	NA	0.0019 U	NA	NA	0.0018 UJ	NA	NA	0.0021 U	NA	0.0018 UJ	NA	0.0027 JN	NA	NA	0.0019 UJ	NA	NA
Endosulfan II	2.4	200	NA	0.0038 U	NA	NA	0.0038 U	NA	NA	0.004 J	NA	NA	0.004 U	NA	0.0036 UJ	NA	0.0039 U	NA	NA	0.0038 UJ	NA	NA
Endosulfan sulfate	2.4	200	NA	0.0038 U	NA	NA	0.0038 U	NA	NA	0.0035 UJ	NA	NA	0.0046 JN	NA	0.0036 UJ	NA	0.0039 U	NA	NA	0.0038 UJ	NA	NA
Endrin	0.014	89	NA	0.0038 U	NA	NA	0.0038 U	NA	NA	0.01 J	NA	NA	0.013 J	NA	0.0036 UJ	NA	0.0099	NA	NA	0.0038 UJ	NA	NA
Endrin aldehyde	NE	NE	NA	0.0038 UJ	NA	NA	0.0038 U	NA	NA	0.011 JN	NA	NA	0.022 J	NA	0.0024 J	NA	0.024 J	NA	NA	0.012 JN	NA	NA
Endrin ketone	NE	NE	NA	0.0038 U	NA	NA	0.0059 J	NA	NA	0.0035 U	NA	NA	0.004 U	NA	0.0036 UJ	NA	0.074	NA	NA	0.0038 UJ	NA	NA
Gamma-BHC	0.1	9.2	NA	0.002 U	NA	NA	0.0019 U	NA	NA	0.004 JN	NA	NA	0.0021 U	NA	0.0018 UJ	NA	0.002 U	NA	NA	0.0087 J	NA	NA
Heptachlor	0.042	15	NA	0.00085 J	NA	NA	0.0019 U	NA	NA	0.0054 J	NA	NA	0.0021 U	NA	0.0018 UJ	NA	0.002 U	NA	NA	0.0019 J	NA	NA
Heptachlor epoxide	NE	NE	NA	0.0032 J	NA	NA	0.0019 U	NA	NA	0.0018 UJ	NA	NA	0.0021 U	NA	0.0018 UJ	NA	0.007 J	NA	NA	0.0019 UJ	NA	NA
Methoxychlor	NE	NE	NA	0.02 UJ	NA	NA	0.019 UJ	NA	NA	0.018 UJ	NA	NA	0.0021 U	NA	0.018 UJ	NA	0.02 U	NA	NA	0.021 J	NA	NA
Herbicides (mg/kg)																						
Silvex	3.8	500	NA	0.024 U	NA	NA	0.025 U	NA	NA	0.021 UJ	NA	NA	0.022 U	NA	0.023 U	NA	0.027 U	NA	NA	0.022 U	NA	NA
Metals (mg/kg)																						
Aluminum	NE	NE	3380	7960	7070	2430	5530	4970	8910	7420	3090	3230	6160	1850	6220	5170	5260	7190	6740	6040	4050	6850
Antimony	NE	NE	4.8 UJ	4.8 UJ	4.9 UJ	4.7 UJ	4.6 UJ	4.6 UJ	5.6 UJ	4.2 UJ	5.3 UJ	5 UJ	4.9 UJ	3.2 J	4.3 UJ	5.6 UJ	4.8 UJ	4.6 UJ	5.6 UJ	4.7 UJ	4.9 UJ	5 UJ
Arsenic	13	16	6.1 U	4.1 J	3.2 J	6 UJ	16.2 J	25.4 J	13.7 J	10.1	21.7	14.9	9.7 J	30 J	7 J	6.9 J	20.4 J	5.9 UJ	7.1 UJ	7.6 J	6.3 UJ	3.7 J
Barium	350	400	19.7	55.3	54.7	15.1	547	683	63.7	83 J	132 J	151 J	95.3	328	111	1760	81.9 J	36.3	55.5	57.3 J	25.1	42.8
Beryllium	7.2	590	0.34 J	0.57 J	0.53 J	0.51 J	0.26 J	0.23 J	0.42 J	0.4 J	0.23 J	0.25 J	0.39 J	0.55 J	0.31 J	0.31 J	0.47 J	0.51 J	0.57 J	0.31 J	0.72 J	0.66 J
Cadmium	2.5	9.3	1.4 UJ	1.5 U	1.5 U	1.4 UJ	1.4 U	1.4 UJ	1.7 U	1.3 UJ	9.2 J	1.3 J	1.5 UJ	1.7 U	1.3 UJ	1.7 UJ	1.5 U	1.4 U	1.7 U	1.4 U	1.5 UJ	1.5 U
Calcium	NE	NE	928 J	8600	14800	507	35900	40500	59300	73800	46000 J	22300 J	23500	22000	77800	63400	22500 J	644 U	3120 U	30900 J	786 U	1360 U
Chromium	NE	NE	9.8 J	21.7	12.8	12.3	45.7	37.1	14.7	13.5 J	12.2 J	14.2 J	11	7.6	11.6	11.1	10.7 J	16.7	16.9	13.9 J	15.2	21.3
Cobalt	NE	NE	4.8	7.3 J	5.5 J	4.4 J	6.9	7.6 J	4.3	6.6	3.5	4.9 J	5.5 J	7.7	6.6 J	2.6 J	4.2	15.1	8.9	5.5	8	178
Copper	50	270	8.1 J	26	21	15.4	129	156	33.7	44	57.3	43.5	37.3	163	79.5	15	36.2 J	15.9	13.7	36.2 J	19.8	17.2
Iron	NE	NE	11300	18400	15000	30500	10500 J	32800 J	12800 J	17900	19500	30300	23000 J	18000 J	18000 J	7910 J	13000	17100 J	13700 J	17600	28200 J	21200 J
Lead	63	1000	6.5 U	299 J	548 J	6.7 J	1180	1550	305	161	858	900	180	901	286	313	129 J	7.5 U	6 U	903 J	9.4 UJ	12.8
Magnesium	NE	NE	1960 J	2930	3810	513	7190	5400	5790	6820	10800 J	2610 J	2870	3200	21500	9140	2070	2300	3770	5010	1210	2310
Manganese	1600	10,000	175	345	287	389	163	229	290	253	183 J	454 J	406	92.2	286	366	190	155	195	409	228	581
Mercury	0.18	2.8	0.058 U	0.91	1.2	0.053 U	0.32	0.49	0.61	0.19	0.13 J	0.88 J	0.2	0.46	0.7	1.2	0.74 J	0.012 J	0.0068 J	0.57 J	0.01 J	0.022
Nickel	30	310	9.3	13.8	11.4	5.2	47.4	41.7	13.9	19.5	18.3	17.3	19.6	16	20.6	11.6	11.4 J	13	15.4	17.3 J	15.2	170
Potassium	NE	NE	830 J	1010	927	282	743 J	659 J	961 J	1350 J	367 J	621 J	973 J	576 J	1220 J	1040 J	844 J	1120 J	1770 J	720 J	643 J	1030 J
Selenium	3.9	1500	10.9 U	11 UJ	11.1 UJ	10.7 UJ	10.4 U	10.4 UJ	12.6 U	R	R	R	11.2 UJ	10.3 J	9.8 UJ	12.8 UJ	11 UJ	10.5 U	12.6 U	10.7 UJ	11.2 UJ	11.5 U
Silver	2	1500	1.4 U	1.5 U	1.5 U	1.4 UJ	0.31 J	0.22 J	0.21 J	0.92 J	0.43 J	1.5 UJ	0.24 J	0.85 J	0.37 J	1.7 UJ	0.21 J	1.4 U	1.7 U	0.38 J	1.5 UJ	0.14 J
Sodium	NE	NE	117 UJ	358	362	48.9 J	2200 U	2020 U	1240 U	1770	1370	1420	1030 U	1550 U	828 U	1560 U	401 J	70.2 U	393 U	1020 J	82.6 U	86.9 U
Thallium	NE	NE	1.7 J	1.7 J	1.7 J	4.3 U	4.1 U	4.2 U	5.0 U	3.8 UJ	4.8 UJ	4.5 UJ	4.5 U	5.1 U	3.9 U	5.1 U	4.4 U	4.2 U	5.1 U	4.3 U	4.5 UJ	4.6 U
Vanadium	NE	NE	14.5	22.3	20.4	23.7	14.7	15.8	19.5	19.4 J	11.3 J	12.8 J	17.5	10.5	30	13.3	16.2 J	24.2	22.5	17.1 J	42.7	29.3
Zinc	109	10,000	23.4 J	81.2	55.4	27.8	928	954	112	94.84												

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWSB-11 (1-2) 6/25/2009	WWSB-11 (50-51) 7/14/2009	WWSB-11 (63-64) 7/14/2009	WWSB-13 (4-5) 8/21/2009	WWSB-13 (12-15) 8/24/2009	WWSB-13 (37-38) 8/24/2009	WWSB-14 (1-5) 9/11/2009	Duplicate of: WWSB-14 (1-5) 9/11/2009	WWSB-14 (10-11) 9/11/2009	WWSB-15 (3-5) 9/17/2009	WWSB-15 (7-9) 9/17/2009	WWSB-16 (0.5-5) 9/22/2009	WWSB-16 (12-13) 9/23/2009	WWSB-17 (2-4) 8/12/2009	WWSB-17 (32-33) 8/12/2009	WWSB-17 (45-46) 8/13/2009	WWSB-18 (3.5-4.5) 7/27/2009	WWSB-18 (9-10) 8/7/2009	Duplicate of: WWSB-18 (9-10) 8/7/2009
BTEX (mg/kg)																					
Benzene	0.06	44	0.00096 J	0.25	0.0029 J	0.006 U	54	0.00086 J	0.03 U	0.03 U	12 U	0.017 J	0.061 J	0.046 J	0.22 J	0.0063 U	140	6.9 U	0.0058 U	0.61 U	0.03 U
Toluene	0.7	500	0.0058 U	0.032 U	0.0061 U	0.0061 U	12 U	0.006 U	0.03 U	0.03 U	12 U	0.0061 U	0.037 U	0.028 UJ	0.1 U	0.0063 U	330 U	20 U	0.026 U	0.61 U	0.03 U
Ethylbenzene	1	390	0.0058 U	0.028 J	0.0061 U	0.006 U	430	0.006 U	0.1 J	0.3 J	270	0.0061 U	0.037 U	0.018 J	0.11 J	0.0063 U	220	20	0.0034 J	0.61 U	0.034 U
Xylene, total	0.26	500	0.0058 U	0.027 J	0.0061 U	0.02 U	110 U	0.0069 U	0.083 U	0.2 U	140 U	0.012 UJ	0.22 UJ	0.018 UJ	0.13 UJ	0.0063 U	340	27 U	0.019	0.61 U	0.18 U
Total BTEX	NE	NE	0.00096	0.305	0.0029	ND	484	0.00086	0.1	0.3	270	0.017	0.061	0.064	0.33	ND	700	20	0.0224	ND	ND
Other VOCs (mg/kg)																					
Acetone	0.05	500	0.023 U	0.13 UJ	0.024 UJ	0.024 UJ	30 U	0.025 UJ	0.12 U	0.12 U	31 U	0.024 U	0.15 U	0.065 J	0.24 UJ	0.025 UJ	31 U	R	0.023 U	1.5 U	0.12 U
Butanone, 2-	0.12	500	0.012 U	0.063 U	0.012 U	0.012 U	12 U	0.012 U	0.061 U	0.061 U	12 U	0.012 U	0.074 U	0.011 J	0.063 U	0.013 UJ	12 U	6.9 U	0.012 U	0.61 U	0.061 U
Carbon disulfide	NE	NE	0.0058 U	0.032 U	0.0061 U	0.006 UJ	12 U	0.006 UJ	0.03 U	0.03 U	12 U	0.0061 U	0.037 U	0.012 J	0.025 J	0.0063 U	12 U	6.9 U	0.0058 U	0.61 U	0.03 U
Chloroform	0.37	350	0.0058 U	0.032 U	0.0061 U	0.006 U	12 U	0.006 U	0.03 U	0.03 U	12 U	0.0061 U	0.037 U	R	0.031 U	0.0063 U	12 U	6.9 U	0.0058 U	0.61 U	0.03 U
Chloromethane	NE	NE	0.0058 U	0.032 U	0.0061 UJ	0.006 U	12 U	0.006 U	0.03 U	0.03 U	12 U	0.0061 U	0.037 U	R	0.031 U	0.0063 U	12 U	6.9 U	0.0058 U	0.61 U	0.03 U
Dichloroethene, cis-1,2-	0.25	500	0.0058 U	0.032 U	0.0061 U	0.006 U	12 U	0.006 U	0.03 U	0.03 U	12 U	0.0061 U	0.037 U	R	0.031 U	0.0063 U	12 U	6.9 U	0.0058 U	0.61 U	0.03 U
Methylene chloride	0.05	500	0.023 U	0.13 U	0.024 U	0.024 U	1.2 U	0.024 U	0.12 U	0.12 U	12 U	0.024 U	0.15 U	0.0095 UJ	0.13 U	0.025 U	12 U	6.9 U	0.023 U	0.61 U	0.12 U
Styrene	NE	NE	0.0058 U	0.032 U	0.0061 U	0.00051 J	12 U	0.006 U	0.03 U	0.003 J	12 U	0.0061 U	0.037 U	R	0.031 U	0.0063 U	59	3.3 J	0.0058 U	0.61 U	0.03 U
Tetrachloroethene	1.3	150	0.001 J	0.032 U	0.0061 U	0.006 U	12 U	0.006 U	0.03 U	0.03 U	12 U	0.0061 U	0.037 U	R	0.031 U	0.0063 U	12 U	6.9 U	0.0058 U	0.61 U	0.03 U
Trichloroethane, 1,1,2-	NE	NE	0.0058 U	0.032 U	0.0061 U	0.006 U	12 U	0.006 U	0.03 U	0.03 U	12 U	0.0061 U	0.037 U	0.074 J	0.031 U	0.0063 U	12 U	6.9 U	0.0058 U	0.61 U	0.03 U
Trichloroethene	0.47	200	0.0058 U	0.032 U	0.0061 U	0.006 U	12 U	0.006 U	0.03 U	0.03 U	12 U	0.0061 U	0.037 U	R	0.031 U	0.0063 U	12 U	6.9 U	0.0058 U	0.61 U	0.03 U
Total Other VOCs	NE	NE	0.001	ND	ND	0.00051	ND	ND	ND	0.003	ND	ND	ND	0.162	0.025	ND	59	3.3	ND	ND	ND
Total VOCs	NE	NE	0.00196	0.305	0.0029	0.00051	484	0.00086	0.1	0.303	270	0.017	0.061	0.226	0.355	ND	759	23.3	0.0224	ND	ND
Noncarcinogenic PAHs (mg/kg)																					
Acenaphthene	20	500	0.068 J	0.055 J	0.32 U	5.6 J	350	0.12 J	89	92	200	16	120	6.9	23	0.34 U	3.5 J	0.64 J	0.31 U	0.33 U	0.022 J
Acenaphthylene	100	500	1.6	0.34 U	0.32 U	4.4 J	150 U	0.32 U	15 J	23	19 J	2.4 J	7 J	1.2 J	3.2 J	0.34 U	34	0.61 J	0.31 U	0.33 U	0.32 U
Anthracene	100	500	0.9	0.34 U	0.32 U	14 J	120 J	0.06 J	55	83	54 J	11	57	5.5 J	24	0.34 U	13 J	0.58 J	0.31 U	0.052 J	0.061 J
Benzo[g,h,i]perylene	100	500	4.2	0.34 U	0.32 U	78 J	150 U	0.32 U	8 J	14 J	66 U	47	47 J	4.5 J	11	0.34 U	16 U	0.74 UJ	0.31 U	0.33 U	0.032 J
Fluoranthene	100	500	4.5	0.34 U	0.32 U	60	130 J	0.088 J	55	89	61 J	32	62	9.3	51	0.046 J	13 J	0.61 J	0.31 U	0.055 J	0.055 J
Fluorene	30	500	0.17 J	0.34 U	0.32 U	8.6 J	160	0.064 J	67	100	96	8.8	56	4.3 J	7.4	0.34 U	18	0.73 J	0.31 U	0.033 J	0.044 J
Methylnaphthalene,2-	NE	NE	0.14 J	0.14 J	0.32 U	16 U	930	0.32 U	16 U	16 U	410	22	31	5.6 U	6.7 U	0.34 U	83	3.5	0.31 U	0.33 U	0.024 J
Naphthalene	12	500	0.25 J	0.74	0.32 U	63 U	2300	0.32 U	40 U	17 U	930	39	72	5.6 U	22	0.34 U	190	7.5	0.31 U	0.017 J	0.027 J
Phenanthrene	100	500	1.8	0.34 U	0.32 U	46	390	0.23 J	190	280	200	32	150	15	33	0.027 J	51	2.2	0.31 U	0.15 J	0.15 J
Pyrene	100	500	6	0.34 U	0.32 U	90	140 J	0.17 J	87	140	87	52	130	12	61	0.034 J	19	0.86	0.31 U	0.21 J	0.23 J
Total Noncarcinogenic PAHs	NE	NE	19.628	0.935	ND	306.6	4520	0.732	566	821	2057	262.2	732	58.7	235.6	0.107	424.5	17.23	ND	0.517	0.645
Carcinogenic PAHs (mg/kg)																					
Benzo[a]anthracene	1	5.6	3.2	0.34 U	0.32 U	76	57 J	0.05 J	37	68	32 J	26	52	5.1 J	19	0.023 J	16 U	0.74 U	0.31 U	0.091 J	0.1 J
Benzo[a]pyrene	1	1	4.2	0.34 U	0.32 U	130 J	43 J	0.038 J	32	60	28 J	39	72 J	6.3	17	0.34 U	16 U	0.74 U	0.31 U	0.33 U	0.32 U
Benzo[b]fluoranthene	1	5.6	3.9	0.34 U	0.32 U	150 J	34 J	0.32 U	27	50	21 J	34	60 J	5.6	16	0.027 J	16 U	0.74 U	0.31 U	0.33 U	0.32 U
Benzo[k]fluoranthene	0.8	56	1.4	0.34 U	0.32 U	57 J	15 J	0.32 U	10 J	21	9.5 J	15	30 J	2.3 J	5.6 J	0.34 U	16 U	0.74 U	0.31 U	0.33 U	0.32 U
Chrysene	1	56	3.5	0.34 U	0.32 U	73	55 J	0.049 J	37	67	31 J	25	47	5.1 J	16	0.34 U	16 U	0.74 U	0.31 U	0.083 J	0.11 J
Dibenz[a,h]anthracene	0.33	0.56	1.1	0.34 U	0.32 U	22 J	150 U	0.32 U	2.5 J	4.3 J	66 U	7.9	9.1 J	5.6 U	2.1 J	0.34 U	16 U	0.74 U	0.31 U	0.33 U	0.32 U
Indeno[1,2,3-cd]pyrene	0.5	5.6	4.2	0.34 U	0.32 U	90 J	150 U	0.32 U	9.4 J	17	6.5 J	47	49 J	3.8 J	11	0.34 U	3.5 J	0.74 U	0.31 U	0.33 U	0.32 U
Total Carcinogenic PAHs	NE	NE	21.5	ND	ND	598	204	0.137	154.9	287.3	128	193.9	319.1	28.2	86.7	0.05	3.5	ND	ND	0.174	0.21
Total PAHs	NE	NE	41.128	0.935	ND	904.6	4724	0.869	720.9	1108.3	2185	456.1	1051.1	86.9	322.3	0.157	428	17.23	ND	0.691	0.855
Other SVOCs (mg/kg)																					
Bis(2-ethylhexyl)phthalate	NE	NE	0.073 J	0.34 U	0.042 J	16 U	150 U	0.32 U	16 U	16 U	66 U	0.75 J	20 U	5.6 U	6.7 U	0.34 U	16 U	0.74 U	0.31 U	0.33 U	0.32 U
Butyl benzyl phthalate	NE	NE	0.62 U	0.34 U	0.32 U	16 U	150 U	0.32 U	16 U	16 U	66 U	3.3 U	20 U	5.6 U	6.7 U	0.34 U	16 U	0.74 U	0.31 U	0.33 U	0.32 U
Carbazole	NE	NE																			

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWSB-11 (1-2) 6/25/2009	WWSB-11 (50-51) 7/14/2009	WWSB-11 (63-64) 7/14/2009	WWSB-13 (4-5) 8/21/2009	WWSB-13 (12-15) 8/24/2009	WWSB-13 (37-38) 8/24/2009	WWSB-14 (1-5) 9/11/2009	Duplicate of: WWSB-14 (1-5) 9/11/2009	WWSB-14 (10-11) 9/11/2009	WWSB-15 (3-5) 9/17/2009	WWSB-15 (7-9) 9/17/2009	WWSB-16 (0.5-5) 9/22/2009	WWSB-16 (12-13) 9/23/2009	WWSB-17 (2-4) 8/12/2009	WWSB-17 (32-33) 8/12/2009	WWSB-17 (45-46) 8/13/2009	WWSB-18 (3.5-4.5) 7/27/2009	WWSB-18 (9-10) 8/7/2009	Duplicate of: WWSB-18 (9-10) 8/7/2009
Pesticides (mg/kg)																					
Aldrin	0.005	0.68	0.0019 U	NA	NA	0.002 UJ	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 UJ	NA	0.0021 U	NA	NA	0.002 U	NA	NA
Alpha-bhc	0.02	3.4	0.0019 U	NA	NA	0.002 UJ	NA	NA	0.21 UJ	0.42 U	NA	0.045 UJ	NA	0.038 UJ	NA	0.0021 U	NA	NA	0.002 U	NA	NA
Alpha-chlordane	0.094	24	0.0019 U	NA	NA	0.0025	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 UJ	NA	0.0021 U	NA	NA	0.002 U	NA	NA
Beta-BHC	0.036	3	0.0019 U	NA	NA	0.002 UJ	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 UJ	NA	0.0021 U	NA	NA	0.002 U	NA	NA
Chlordane, gamma	NE	NE	0.0019 U	NA	NA	0.002 U	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 UJ	NA	0.0021 U	NA	NA	0.002 U	NA	NA
DDD,4,4-	0.0033	92	0.0038 UJ	NA	NA	0.0039 UJ	NA	NA	0.21 U	0.42 UJ	NA	0.045 UJ	NA	0.038 UJ	NA	0.0042 U	NA	NA	0.0038 U	NA	NA
DDE,4,4-	0.0033	62	0.0038 U	NA	NA	0.0039 U	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 U	NA	0.0042 U	NA	NA	0.0038 U	NA	NA
DDT,4,4-	0.0033	47	0.015 JN	NA	NA	0.0039 U	NA	NA	0.21 U	0.42 UJ	NA	0.045 UJ	NA	0.038 U	NA	0.0042 U	NA	NA	0.0038 UJ	NA	NA
Delta-BHC	0.04	500	0.0019 UJ	NA	NA	0.00089 J	NA	NA	0.21 UJ	0.42 U	NA	0.045 UJ	NA	0.038 UJ	NA	0.0021 U	NA	NA	0.002 U	NA	NA
Dieldrin	0.005	1.4	0.0038 UJ	NA	NA	0.0039 UJ	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 UJ	NA	0.0042 U	NA	NA	0.0038 U	NA	NA
Endosulfan I	2.4	200	0.0019 U	NA	NA	0.002 UJ	NA	NA	0.21 U	0.42 U	NA	0.045 UJ	NA	0.038 UJ	NA	0.0021 U	NA	NA	0.002 U	NA	NA
Endosulfan II	2.4	200	0.0038 UJ	NA	NA	0.014 J	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 U	NA	0.0042 U	NA	NA	0.0038 U	NA	NA
Endosulfan sulfate	2.4	200	0.0051 JN	NA	NA	0.0039 U	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 U	NA	0.0042 U	NA	NA	0.0028 U	NA	NA
Endrin	0.014	89	0.0046 J	NA	NA	0.0039 UJ	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 UJ	NA	0.0042 U	NA	NA	0.0038 U	NA	NA
Endrin aldehyde	NE	NE	0.0038 U	NA	NA	0.03 J	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 U	NA	0.0042 U	NA	NA	0.0038 U	NA	NA
Endrin ketone	NE	NE	0.011 JN	NA	NA	0.0016 J	NA	NA	0.21 U	0.42 U	NA	0.043 J	NA	0.038 U	NA	0.0042 U	NA	NA	0.0038 U	NA	NA
Gamma-BHC	0.1	9.2	0.0019 U	NA	NA	0.0021 J	NA	NA	0.21 UJ	0.42 U	NA	0.045 UJ	NA	0.038 UJ	NA	0.0021 U	NA	NA	0.002 U	NA	NA
Heptachlor	0.042	15	0.0019 U	NA	NA	0.002 UJ	NA	NA	0.21 U	0.42 U	NA	0.045 U	NA	0.038 UJ	NA	0.0021 U	NA	NA	0.002 U	NA	NA
Heptachlor epoxide	NE	NE	0.0019 U	NA	NA	0.002 UJ	NA	NA	0.21 U	0.42 U	NA	0.045 UJ	NA	0.038 UJ	NA	0.0021 U	NA	NA	0.002 U	NA	NA
Methoxychlor	NE	NE	0.019 U	NA	NA	0.02 UJ	NA	NA	0.4 U	0.81 UJ	NA	0.088 U	NA	0.073 UJ	NA	0.021 U	NA	NA	0.02 UJ	NA	NA
Herbicides (mg/kg)																					
Silvex	3.8	500	0.022 U	NA	NA	0.026 UJ	NA	NA	0.12 UJ	0.025 U	NA	0.027 UJ	NA	0.022 U	NA	0.026 UJ	NA	NA	0.024 U	NA	NA
Metals (mg/kg)																					
Aluminum	NE	NE	7050	3340	4090	2790	4000	2700	6820	6650	8110	1370	3960	5160	2620	10100	2120	9880	10400	9540	10900
Antimony	NE	NE	2.3 J	5.1 UJ	4.9 UJ	4.7 UJ	4.9 UJ	4.7 UJ	5 UJ	4.8 UJ	5.1 UJ	5 UJ	5.9 UJ	4.3 UJ	5 UJ	5.1 UJ	4.8 UJ	5.7 UJ	4.7 UJ	5 UJ	5 UJ
Arsenic	13	16	20.5 J	6.4 J	6.2 UJ	3.9 J	31.9	6 U	8.9 UJ	9.1 U	6.5 U	6.6	16.9	14.4 J	17.7 J	6.5 U	2.1 J	7.3 U	6.0 U	6.4 U	6.3 U
Barium	350	400	168 J	24.8	20.2	21.4	56.5 J	15.1 J	46.6	52.3	30.7	36.6 J	64.8 J	44.5	30.6	27.4	17.3	79.3	35.6	34.5	38.6
Beryllium	7.2	590	0.42 J	0.27 J	0.65 J	1.4 U	0.36 J	0.64 J	1.5 UJ	1.5 U	1.5 U	1.5 U	0.31 J	0.27 J	0.14 J	0.53 J	0.26 J	0.99 J	0.49 J	0.46 J	0.52 J
Cadmium	2.5	9.3	0.8 J	1.5 U	1.5 UJ	1.4 UJ	1.5 U	1.4 UJ	1.6 J	0.87 J	0.79 J	1.5 U	1.8 UJ	1.3 U	1.5 U	1.6 U	1.5 UJ	1.7 UJ	1.4 UJ	1.5 UJ	1.5 UJ
Calcium	NE	NE	6690 J	699 U	73.8 U	1010 UJ	12100 J	384 J	3230 J	2910 J	743 J	1380	4040	18700 J	21700 J	2530 J	525 J	1810 J	1340 J	1220	1410
Chromium	NE	NE	18.3 J	8.8	16.1	4.2 J	12.9 J	17.9 J	13 J	11.1 J	15.5 J	6.2	11	15 J	20.2 J	13.1 J	7.4 J	29.4 J	13.4 J	13.6 J	16.3 J
Cobalt	NE	NE	7.4	4.2	7.5 J	1.3 J	3.8 J	5.2 J	5.8	5.7	6.9	2.2 J	8.4 J	5.7	3.2	9.8	3.4	9.9	5.5	7.8	8.5
Copper	50	270	102 J	7.2	15.9 J	7.9	64.2 J	17.1 J	36.4	36.6	13	54.1	123	50.6	57.8	22.1 J	8.9 J	22.6 J	11	14 J	14.7 J
Iron	NE	NE	20100	8490 J	51400 J	5830 J	14500 J	44200 J	32300 J	15800 J	20200	6470 J	25600 J	11400	9200	19000	11200	25000	16900	20200	22600
Lead	63	1000	2140 J	4.6 U	4.6 UJ	25.3 J	99 J	6 J	219 J	243 J	10.3 J	353	320	90.7 J	369 J	16.4	7.2 U	13.3 J	17.2	8.1	10.7
Magnesium	NE	NE	3340	1660	385 U	517 J	1700 J	535 J	1830	1830	2160	550	1310	3260	2120	3210 J	723 J	3120 J	2330 J	2680	2880
Manganese	1600	10,000	413	130	359	24.8 J	178 J	348 J	268	180	230	25.3	174	111	103	218	154	583	272	1370 J	1540 J
Mercury	0.18	2.8	1.3 J	0.063 U	0.0078 J	0.12	0.81 J	0.0065 J	0.18	0.19	0.014 J	0.84 J	8.6 J	0.41 J	6.9 J	0.032	0.06 U	0.014 J	0.036	0.03	0.035
Nickel	30	310	18.7 J	7.2	8.4	4.1	9.9	6.7	14.5	13.3	12.7	6.6 J	18.8 J	22.9	14.3	17.6	5.7	18.4	11.5	13.1	14.3
Potassium	NE	NE	1540 J	825 J	200 UJ	153 UJ	655 J	255 J	793 J	796 J	868 J	359 J	635 J	914 J	640 J	810 J	397 J	1520 J	597 J	616	641
Selenium	3.9	1500	10.5 U	11.5 U	11.1 UJ	10.7 U	11.1 U	10.7 U	R	R	R	11.3 UJ	13.5 UJ	9.8 U	11.4 U	11.7 U	11 U	13 UJ	4.1 J	11.4 UJ	11.3 UJ
Silver	2	1500	0.61 J	1.5 U	0.15 J	1.4 U	0.11 J	1.4 U	1.5 UJ	1.5 U	1.5 U	1.5 U	0.43 J	0.87 J	0.29 J	1.6 U	1.5 U	1.7 UJ	1.4 U	1.5 U	1.5 U
Sodium	NE	NE	363 J	140 U	73.8 U	179 U	510 J	67.8 J	177 J	178	296	104 UJ	1270 J	391	2410	255 U	235 U	257 UJ	176 UJ	204	223
Thallium	NE	NE	4.2 UJ	4.6 U	4.4 U	4.3 UJ	4.5 U	4.3 U	4.5 UJ	4.4 UJ	4.6 UJ	4.5 U	5.4 UJ	1 J	4.6 U	4.7 UJ	4.4 UJ	5.2 UJ	4.3 UJ	4.5 U	4.5 U
Vanadium	NE	NE	24.2 J	12.2	31.6	7.9 J	15.7 J	28.9 J	21.5	19	24.5	5.2	16.4	36.7 J	10.3 J	17.2	14.6	33.7	19.1	20.4	22.8
Zinc	109	10,000	458 J	21.1	40.8	26.9	89.8	35.5	317	345	31.1	6.6 J	216	93.2	84.9	52.9 J	15.5 J	52.7 J	36.2	33.4	39.9
Other (mg/kg)																					
Free Cyanide	27	27	0.228 U	0.253 U	0.243 U	0.237 U	0.234 UJ	0.238 U	0.242 UJ	0.24 UJ	0.238 UJ	0.24 UJ	0.296 UJ	0.218 UJ	0.249 UJ	0.252 U	0.244 U	0.276 U	0.231 U	0.239 U	0.243 U

Table 3
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Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWSB-18 (51-53) 8/7/2009	WWSB-23 (1-4) 7/16/2009	WWSB-23 (31-33) 7/17/2009	WWSB-23 (62-63) 7/17/2009	WWSB-24 (4-5) 7/16/2009	WWSB-24 (38-40) 7/16/2009	WWSB-24 (53-55) 7/16/2009	WWSB-25 (1-3) 7/28/2009	WWSB-25 (34-35) 7/28/2009	WWSB-25 (52-53) 7/29/2009	WWSB-26 (1-4) 7/29/2009	Duplicate of: WWSB-26 (1-4) 7/29/2009	WWSB-26 (12-13) 7/29/2009	WWSB-27 (4-5) 8/3/2009	WWSB-27 (14-15) 8/4/2009	WWSB-28 (3-5) 8/14/2009	WWSB-28 (22-23) 8/14/2009	WWSB-29 (2-5) 8/18/2009	Duplicate of: WWSB-29 (2-5) 8/18/2009
BTEX (mg/kg)																					
Benzene	0.06	44	0.0058 U	0.0031 J	1100	13	0.00073 J	840	0.063	0.013 U	450	0.03	0.029 U	0.0067 U	0.032 U	0.006 U	1.2 U	0.006 U	950	0.046	0.038 U
Toluene	0.7	500	0.0058 U	0.0064 U	1800	32	0.0059 U	1300	0.0033 J	0.15	630	0.12	0.31 J	0.06 UJ	0.12 UJ	0.019 U	1.2 U	0.006 U	1500 U	0.03 U	0.031 U
Ethylbenzene	1	390	0.0058 U	0.018	200	35	0.0059 U	120	0.014	0.026	1400	0.052	0.066 J	0.016 J	0.025 J	0.006 U	1.2 U	0.006 U	440	0.03 U	0.031 U
Xylene, total	0.26	500	0.0066 U	0.0028 J	1700	69	0.0059 U	1200	0.014	0.14	1700	0.11	0.26 J	0.094 J	0.1 J	0.022 U	1.2 U	0.006 U	1600	0.03 U	0.031 U
Total BTEX	NE	NE	ND	0.0239	4800	149	0.00073	3460	0.0943	0.316	4180	0.312	0.636	0.11	0.125	ND	ND	ND	2990	0.046	ND
Other VOCs (mg/kg)																					
Acetone	0.05	500	0.023 U	0.04 UJ	270 U	3 U	0.01 UJ	81 U	0.024 UJ	0.0041 J	150 U	0.016 J	0.16 J	0.025 J	0.4 J	0.024 U	3.1 U	0.024 U	170 U	0.12 U	0.12 U
Butanone, 2-	0.12	500	0.012 U	0.013 U	110 U	1.2 U	0.012 U	33 U	0.012 U	0.012 U	58 U	0.013 U	0.059 U	0.013 U	0.065 U	0.012 U	1.2 U	0.012 U	67 U	0.061 U	0.062 U
Carbon disulfide	NE	NE	0.0058 U	0.0038 J	110 U	1.2 U	0.0059 U	33 U	0.0061 U	0.0058 U	58 U	0.0063 U	0.029 U	0.0067 U	0.0081 J	0.006 U	1.2 U	0.006 U	67 U	0.03 UJ	0.031 UJ
Chloroform	0.37	350	0.0058 U	0.0064 U	110 U	1.2 U	0.0059 U	33 U	0.0061 U	0.0058 U	58 U	0.0063 U	0.029 U	0.0067 U	0.032 U	0.006 U	1.2 U	0.006 U	67 U	0.03 U	0.031 U
Chloromethane	NE	NE	0.0058 U	0.0064 U	110 U	1.2 U	0.0059 U	33 U	0.0061 U	0.0058 U	58 U	0.0063 U	0.029 U	0.0067 U	0.032 U	0.006 U	1.2 U	0.006 U	67 U	0.03 U	0.031 U
Dichloroethene, cis-1,2-	0.25	500	0.0058 U	0.0064 U	110 U	1.2 U	0.0059 U	33 U	0.0061 U	0.0058 U	58 U	0.0063 U	0.029 U	0.0067 U	0.032 U	0.006 U	1.2 U	0.006 U	67 U	0.03 U	0.031 U
Methylene chloride	0.05	500	0.023 U	0.026 U	110 U	1.2 U	0.024 U	33 U	0.024 U	0.023 U	58 U	0.025 U	0.12 U	0.027 U	0.13 U	0.024 U	1.2 U	0.024 U	67 U	0.12 U	0.12 U
Styrene	NE	NE	0.0058 U	0.0064 U	1100	21	0.0059 U	1000	0.00019 J	0.0058 U	77	0.00045 J	0.029 U	0.0067 U	0.032 U	0.006 U	1.2 U	0.006 U	860	0.03 U	0.031 U
Tetrachloroethene	1.3	150	0.0058 U	0.0064 U	110 U	1.2 U	0.0059 U	33 U	0.0061 U	0.0058 U	58 U	0.0063 U	0.029 U	0.0067 U	0.032 U	0.006 U	1.2 U	0.006 U	67 U	0.03 U	0.031 U
Trichloroethane, 1,1,2-	NE	NE	0.0058 U	0.0064 U	110 U	1.2 U	0.0059 U	33 U	0.0061 U	0.0058 U	58 U	0.0063 U	0.029 U	0.0067 U	0.032 U	0.006 U	1.2 U	0.006 U	67 U	0.03 U	0.031 U
Trichloroethene	0.47	200	0.0058 U	0.0064 U	110 U	1.2 U	0.0059 U	33 U	0.0061 U	0.0058 U	22 J	0.0063 U	0.029 U	0.0067 U	0.032 U	0.006 U	1.2 U	0.006 U	67 U	0.03 U	0.031 U
Total Other VOCs	NE	NE	ND	0.0038	1100	21	ND	1000	0.00019	0.0041	99	0.01645	0.16	0.025	0.4081	ND	ND	ND	860	ND	ND
Total VOCs	NE	NE	ND	0.0277	5900	170	0.00073	4460	0.09449	0.3201	4279	0.32845	0.796	0.135	0.5331	ND	ND	ND	3850	0.046	ND
Noncarcinogenic PAHs (mg/kg)																					
Acenaphthene	20	500	0.075 J	2.1	400 J	5.1 J	0.16 J	44 J	0.33 U	0.24 J	26 J	0.042 J	0.12 J	0.16 J	0.16 J	0.32 U	0.056 J	0.32 U	49 J	1.3 U	0.095 J
Acenaphthylene	100	500	0.3 U	8.6	3200	32	2.1	470	0.33 U	0.066 J	190	0.027 J	0.32 U	0.36 U	0.35 U	0.065 J	0.33 U	0.32 U	670	1.3 U	0.25 J
Anthracene	100	500	0.3 U	4.4	1300	14	0.74	140 J	0.33 U	0.53	69 J	0.029 J	0.32	0.44	0.22 J	0.036 J	0.33 U	0.32 U	230 J	0.057 J	0.14 J
Benzo[g,h,i]perylene	100	500	0.3 U	10	620 J	4.3 J	3.1	23 J	0.33 U	1.6	160 U	0.34 U	2	2.4	0.49	0.65	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Fluoranthene	100	500	0.3 U	13	1600	14	2.7	140 J	0.33 U	3.2	69 J	0.03 J	1.3	1.7	0.48	0.13 J	0.034 J	0.028 J	230 J	0.16 J	0.17 J
Fluorene	30	500	0.3 U	4.2	2000	19	0.3 J	220	0.33 U	0.16 J	97 J	0.034 J	0.1 J	0.15 J	0.22 J	0.32 U	0.061 J	0.32 U	360 J	1.3 U	0.19 J
Methylnaphthalene,2-	NE	NE	0.16 J	3.7	7800	64	0.36	1200	0.33 U	0.067 J	640	0.17 J	0.15 J	0.23 J	2.6	0.021 J	2.1	0.32 U	1600	1.3 U	1.3 U
Naphthalene	12	500	0.79	6.3	17000	120	0.7 U	3100	0.33 U	0.31 U	1500	0.33 J	0.32 U	0.36 U	0.35 U	0.32 U	1.2	0.32 U	3600	1.3 U	1.3 U
Phenanthrene	100	500	0.3 U	10	4800	50	1.9	540	0.33 U	2.6	260	0.12 J	0.75	1	0.52	0.056 J	0.093 J	0.028 J	850	0.24 J	0.5 J
Pyrene	100	500	0.3 U	22	1700	19	3.1	220	0.33 U	3.1	95 J	0.048 J	1.3	1.6	0.55	0.15 J	0.069 J	0.03 J	370	0.16 J	0.32 J
Total Noncarcinogenic PAHs	NE	NE	1.025	84.3	40420	341.4	14.46	6097	ND	11.563	2946	0.83	6.04	7.68	5.24	1.108	3.613	0.086	7959	0.617	1.665
Carcinogenic PAHs (mg/kg)																					
Benz[a]anthracene	1	5.6	0.3 U	11	710 J	7.5	2.4	82 J	0.33 U	2.1	39 J	0.025 J	2	2.6	0.57	0.24 J	0.035 J	0.32 U	110 J	0.084 J	0.18 J
Benzo[a]pyrene	1	1	0.3 U	9.6	530 J	5.5 J	4	64 J	0.33 U	2.9	160 U	0.34 U	3.6	3.9	0.95	0.48	0.33 U	0.32 U	71 J	1.3 U	1.3 U
Benzo[b]fluoranthene	1	5.6	0.3 U	10	430 J	3.5 J	3.7	40 J	0.33 U	2.7	160 U	0.34 U	3	3.4	0.78	0.48	0.33 U	0.32 U	71 J	1.3 U	1.3 U
Benzo[k]fluoranthene	0.8	56	0.3 U	4.3	140 J	1.1 J	1.3	21 J	0.33 U	1	160 U	0.34 U	1.2	1.4	0.32 J	0.2 J	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Chrysene	1	56	0.3 U	11	700 J	6.9	2.4	78 J	0.33 U	2.2	33 J	0.34 U	1.9	2.4	0.55	0.22 J	0.33 U	0.32 U	100 J	1.3 U	0.15 J
Dibenz[a,h]anthracene	0.33	0.56	0.3 U	3.7	1200 U	2.9 J	0.93	180 U	0.33 U	0.49	160 U	0.34 U	0.73	1.1	0.17 J	0.3 J	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Indeno[1,2,3-cd]pyrene	0.5	5.6	0.3 U	10	1200 U	4.2 J	3.4	24 J	0.33 U	1.7	160 U	0.34 U	2.1	2.9	0.51	0.6	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Total Carcinogenic PAHs	NE	NE	ND	59.6	2510	31.6	18.13	309	ND	13.09	72	0.025	14.53	17.7	3.85	2.52	0.035	ND	352	0.084	0.33
Total PAHs	NE	NE	1.025	143.9	42930	373	32.59	6406	ND	24.653	3018	0.855	20.57	25.38	9.09	3.628	3.648	0.086	8311	0.701	1.995
Other SVOCs (mg/kg)																					
Bis(2-ethylhexyl)phthalate	NE	NE	0.3 U	1.7	1200 U	6.5 U	0.076 J	180 U	0.038 J	1.8	160 U	0.058 J	0.12 J	0.52	0.6	0.21 J	0.26 J	0.32 U	360 U	0.15 J	0.18 J
Butyl benzyl phthalate	NE	NE	0.3 U	1.7 U	1200 U	6.5 U	0.31 U	180 U	0.33 U	0.31 U	160 U	0.34 U	0.32 U	0.36 U	0.35 U	0.32 U	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Carbazole	NE	NE	0.3 U	0.51 J	1200 U	0.77 J	0.23 J	180 U	0.33 U	0.25 J	160 U	0.34 U	0.18 J	0.25 J	0.045 J	0.32 U	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Dibenzofuran	7	350	0.3 U	0.97 J	400 J	2.8 J	0.18 J	31 J	0.33 U	0.11 J	160 U	0.34 U	0.063 J	0.086 J	0.12 J	0.32 U	0.33 U	0.32 U	41 J	1.3 U	1.3 U
Dimethylphenol, 2,4-	NE	NE	0.3 U	1.7 U	1200 U	6.5 U	0.31 U	180 U	0.33 U	0.31 U	160 U	0.34 U	0.32 U	0.36 U	0.35 U	0.32 U	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Di-n-octyl phthalate	NE	NE	0.3 U	1.7 U	1200 U	6.5 U	0.31 U	180 U	0.33 U	0.31 U	160 U	0.34 U	0.32 U	0.36 U	0.35 U	0.32 U	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Methylphenol, 4-	0.33	500	0.3 U	1.7 U	1200 U	6.5 U	0.31 U	180 U	0.33 U	0.31 U	160 U	0.34 U	0.32 U	0.36 U	0.35 U	0.32 U	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Methylphenol,2-	0.33	500	0.3 U	1.7 U	1200 U	6.5 U	0.31 U	180 U	0.33 U	0.31 U	160 U	0.34 U	0.32 U	0.36 U	0.35 U	0.32 U	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Pentachlorophenol	0.8	6.7	1.9 U	11 U	7300 U	41 U	2 U	1100 U	2.1 U	1.9 U	990 U	2.1 U	2 U	2.3 U	2.2 U	2 U	2.1 U	2 U	2300 U	8.1 U	8.3 U
Phenol	0.33	500	0.046 J	1.7 U	1200 U	6.5 U	0.31 U	180 U	0.23 J	0.31 U	160 U	0.34 U	0.32 U	0.36 U	0.35 U	0.32 U	0.33 U	0.32 U	360 U	1.3 U	1.3 U
Total Other SVOCs	NE	NE	0.046	3.18	400	3.57	0.486	31	0.268	2.16	ND	0.058	0.363	0.856	0.765	0.21	0.26	ND	41	0.15	0.18
Total SVOCs	NE	NE	1.071	147.08	43330	376.57	33.076	6437	0.268	26.813	3018	0.913	20.933	26.236	9.855	3.838	3.908	0.086	8352	0.851	2.175
PCBs (mg/kg)																					
Aroclor 1254	NE	NE	NA	0.11 U	NA	NA	0.02 U	NA	NA	0.02 U	NA	NA	0.02 UJ	0.023 UJ	NA	0.02 U	NA	0.02 U	NA	0.02 U	0.021 U
Aroclor 1260	NE	NE	NA	0.11 U	NA	NA	0.02 U	NA	NA	0.029 J	NA	NA	0.02 UJ	0.023 UJ	NA	0.02 U	NA	0.02 U	NA	0.02 U	0.021 U
Aroclor 1268	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.1	1	NA	ND	NA	NA	ND	NA	NA	0.029	NA	NA	ND	ND	NA	ND	NA	ND	NA	ND	ND

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWSB-18 (51-53) 8/7/2009	WWSB-23 (1-4) 7/16/2009	WWSB-23 (31-33) 7/17/2009	WWSB-23 (62-63) 7/17/2009	WWSB-24 (4-5) 7/16/2009	WWSB-24 (38-40) 7/16/2009	WWSB-24 (53-55) 7/16/2009	WWSB-25 (1-3) 7/28/2009	WWSB-25 (34-35) 7/28/2009	WWSB-25 (52-53) 7/29/2009	WWSB-26 (1-4) 7/29/2009	Duplicate of: WWSB-26 (1-4) 7/29/2009	WWSB-26 (12-13) 7/29/2009	WWSB-27 (4-5) 8/3/2009	WWSB-27 (14-15) 8/4/2009	WWSB-28 (3-5) 8/14/2009	WWSB-28 (22-23) 8/14/2009	WWSB-29 (2-5) 8/18/2009	Duplicate of: WWSB-29 (2-5) 8/18/2009
Pesticides (mg/kg)																					
Aldrin	0.005	0.68	NA	0.012 J	NA	NA	0.002 UJ	NA	NA	0.002 U	NA	NA	0.002 U	0.0023 U	NA	0.002 UJ	NA	0.002 U	NA	0.002 UJ	0.0021 U
Alpha-bhc	0.02	3.4	NA	0.022 UJ	NA	NA	0.002 UJ	NA	NA	0.002 U	NA	NA	0.002 U	0.0023 U	NA	0.002 UJ	NA	0.002 U	NA	0.002 UJ	0.0021 UJ
Alpha-chlordane	0.094	24	NA	0.022 UJ	NA	NA	0.002 UJ	NA	NA	0.002 U	NA	NA	0.002 U	0.0023 U	NA	0.002 UJ	NA	0.002 U	NA	0.002 U	0.0021 U
Beta-BHC	0.036	3	NA	0.042 J	NA	NA	0.002 UJ	NA	NA	0.0023 JN	NA	NA	0.002 U	0.0023 U	NA	0.002 UJ	NA	0.002 U	NA	0.002 UJ	0.0021 U
Chlordane, gamma	NE	NE	NA	0.022 UJ	NA	NA	0.002 UJ	NA	NA	0.002 U	NA	NA	0.002 U	0.0023 U	NA	0.002 UJ	NA	0.002 U	NA	0.002 U	0.0021 U
DDD,4,4-	0.0033	92	NA	0.29 JN	NA	NA	0.0038 UJ	NA	NA	0.0041 JN	NA	NA	0.0038 U	0.0044 U	NA	0.004 UJ	NA	0.004 U	NA	0.004 UJ	0.0041 UJ
DDE,4,4-	0.0033	62	NA	0.32 JN	NA	NA	0.0038 U	NA	NA	0.0038 U	NA	NA	0.0038 U	0.0044 U	NA	0.004 UJ	NA	0.004 U	NA	0.004 U	0.0041 U
DDT,4,4-	0.0033	47	NA	0.24 J	NA	NA	0.0038 UJ	NA	NA	0.0077 J	NA	NA	0.0038 UJ	0.0044 UJ	NA	0.004 UJ	NA	0.004 U	NA	0.004 U	0.0041 U
Delta-BHC	0.04	500	NA	0.012 J	NA	NA	0.002 UJ	NA	NA	0.002 U	NA	NA	0.002 U	0.0023 U	NA	0.002 UJ	NA	0.002 U	NA	0.002 UJ	0.0021 UJ
Dieldrin	0.005	1.4	NA	0.15 JN	NA	NA	0.0038 U	NA	NA	0.0038 U	NA	NA	0.0038 U	0.0044 U	NA	0.004 UJ	NA	0.004 U	NA	0.004 UJ	0.0041 UJ
Endosulfan I	2.4	200	NA	0.15 JN	NA	NA	0.002 UJ	NA	NA	0.002 U	NA	NA	0.002 U	0.0023 U	NA	0.002 UJ	NA	0.002 U	NA	0.002 UJ	0.0021 UJ
Endosulfan II	2.4	200	NA	0.15 JN	NA	NA	0.0038 UJ	NA	NA	0.0038 U	NA	NA	0.0038 U	0.0044 U	NA	0.004 UJ	NA	0.004 U	NA	0.004 UJ	0.0041 U
Endosulfan sulfate	2.4	200	NA	0.042 UJ	NA	NA	0.0038 UJ	NA	NA	0.0038 U	NA	NA	0.0038 U	0.0044 U	NA	0.004 UJ	NA	0.004 U	NA	0.004 UJ	0.0041 U
Endrin	0.014	89	NA	0.16 J	NA	NA	0.0038 UJ	NA	NA	0.0038 U	NA	NA	0.0038 U	0.0044 U	NA	0.004 UJ	NA	0.004 U	NA	0.004 UJ	0.0041 U
Endrin aldehyde	NE	NE	NA	0.021 U	NA	NA	0.029 J	NA	NA	0.0038 U	NA	NA	0.0038 U	0.0044 U	NA	0.004 U	NA	0.004 UJ	NA	0.004 UJ	0.0041 U
Endrin ketone	NE	NE	NA	0.042 UJ	NA	NA	0.0038 UJ	NA	NA	0.017 J	NA	NA	0.0038 U	0.0065 U	NA	0.004 U	NA	0.004 U	NA	0.004 UJ	0.0041 U
Gamma-BHC	0.1	9.2	NA	0.022 UJ	NA	NA	0.002 UJ	NA	NA	0.002 U	NA	NA	0.002 U	0.0023 U	NA	0.002 UJ	NA	0.002 U	NA	0.002 UJ	0.0021 UJ
Heptachlor	0.042	15	NA	0.022 UJ	NA	NA	0.002 UJ	NA	NA	0.002 U	NA	NA	0.002 U	0.0023 U	NA	0.002 U	NA	0.002 U	NA	0.002 UJ	0.0021 UJ
Heptachlor epoxide	NE	NE	NA	0.022 UJ	NA	NA	0.002 UJ	NA	NA	0.002 U	NA	NA	0.002 U	0.0023 U	NA	0.00087 J	NA	0.002 U	NA	0.002 UJ	0.0021 UJ
Methoxychlor	NE	NE	NA	0.29 JN	NA	NA	0.02 UJ	NA	NA	0.02 UJ	NA	NA	0.02 UJ	0.023 UJ	NA	0.02 UJ	NA	0.02 U	NA	0.02 UJ	0.021 U
Herbicides (mg/kg)																					
Silvex	3.8	500	NA	0.13 U	NA	NA	0.025 U	NA	NA	0.025 U	NA	NA	0.025 U	0.026 U	NA	0.026 UJ	NA	0.025 UJ	NA	0.025 UJ	0.024 UJ
Metals (mg/kg)																					
Aluminum	NE	NE	2530	6510	2310	2770	7930	3910	3710	6640	2660	2700	8570	8540	10700	8830	9520	9160	2940	12500	8560
Antimony	NE	NE	4.7 UJ	5 UJ	4.3 UJ	4.8 UJ	4.8 UJ	5.4 UJ	4.9 UJ	4.6 UJ	4.7 UJ	5.2 UJ	4.7 UJ	5.5 UJ	5.3 UJ	5.1 UJ	5.1 UJ	4.9 UJ	5.3 UJ	4.9 UJ	5 UJ
Arsenic	13	16	5.9 U	6.9 J	2.4 J	6.1 UJ	7.9 J	6.8 UJ	6.2 UJ	273	2 J	6.6 U	3.7	3.3 J	3.6	10.9	2.8 J	3.1 J	6.8 U	6.8 J	4.5 J
Barium	350	400	19.7	83.1	15.6	19.7	122	22.3	37.6	67.9	15.8	17.8	71.5	85.8	46.2	109	54	37.6	26	113	75.1
Beryllium	7.2	590	1.4 U	0.34 J	0.17 J	0.51 J	0.49 J	0.43 J	0.66 J	0.5 J	0.34 J	0.35 J	0.63 J	0.61 J	0.6 J	0.65 J	0.73 J	0.53 J	0.41 J	1.1 J	0.46 J
Cadmium	2.5	9.3	1.4 U	1.5 U	1.3 U	1.4 UJ	1.5 U	1.6 U	1.5 UJ	1.4 UJ	1.4 UJ	1.6 UJ	1.4 UJ	1.7 UJ	1.6 UJ	1.5 UJ	1.5 U	1.5 UJ	1.6 UJ	1.5 UJ	1.5 UJ
Calcium	NE	NE	1340	15900	1550 U	529 U	19700	704 U	1130 U	8940 J	772 J	788 J	2070 J	2840 J	1880 J	2950	1600	1360 J	594 J	4960 J	10800 J
Chromium	NE	NE	7.6 J	15.3	5.3	14.7	16.4	15.9	16.7	14.1 J	9.5 J	9.7 J	20.7 J	20.1 J	19.4 J	21.9 J	17 J	12.9 J	10.5 J	55.3 J	17.2 J
Cobalt	NE	NE	3.7	4.6	2.9	6 J	7.4	7.5	4.4 J	6.6	4.9	5.1	8.2	8	8.5	5.6	6.5	5.7	3.8	7.5	6.4
Copper	50	270	6.7 J	43.8	6.8	13.7	50.9	14.8	17.4 J	57.6	10.1	11.2	29.2	31.4	18.1	51 J	16.8 J	26.8 J	9.3 J	36.2	39.8
Iron	NE	NE	10100	21500 J	6430 J	31400 J	17800 J	19900 J	49200 J	16300	17300	17500	25300	20300	22900	21600	19500	18400	15600	45000 J	20900 J
Lead	63	1000	5 U	198	3.9 U	6.7 UJ	503	4.9 U	9.4 UJ	373	4.2 U	4.7 U	89	101	22	211	23.1	38.5	7.7 U	131 J	153 J
Magnesium	NE	NE	1530	2860	1520	549 U	3850	1480	501 U	2500 J	1210 J	1330 J	2680 J	2570	2990 J	2110	2580	1940 J	1170 J	1880 J	5400 J
Manganese	1600	10,000	140 J	203	108	352	351	217	421	409	84.8	102	370	327 J	356	142 J	311 J	300	136	423 J	495
Mercury	0.18	2.8	0.0047 J	0.26	0.051 U	0.061 U	0.43	0.0074 J	0.022	0.26	0.055 U	0.0056 J	0.47 J	0.19 J	0.24	0.36	0.035	0.21	0.061 U	0.17	0.23
Nickel	30	310	5.5	14	6.2	8.2	20.7	12.1	7.6	14.9	6.9	7.2	16.4	15.8	15.8	14.7	12.7	11.6	9.2	17.3	14.2
Potassium	NE	NE	517	1070 J	409 J	358 UJ	1420 J	627 J	607 J	855 J	486 J	541 J	1160 J	1120 J	878 J	1100	929	762 J	746 J	1100 J	744 J
Selenium	3.9	1500	10.6 UJ	11.5 U	9.8 U	10.9 UJ	11 U	12.2 U	11.1 UJ	10.4 UJ	10.6 UJ	11.8 UJ	10.6 UJ	12.6 UJ	12 UJ	11.6 UJ	11.5 UJ	11 U	12.1 UJ	11.2 UJ	11.3 UJ
Silver	2	1500	1.4 U	0.12 J	1.3 U	0.3 J	0.21 J	0.12 J	0.22 J	0.084 J	1.4 U	1.6 U	1.4 UJ	1.7 U	1.6 UJ	0.17 J	1.5 U	1.5 U	1.6 U	1.5 UJ	1.5 UJ
Sodium	NE	NE	251 U	1090 U	85.7 U	72.5 U	1690 U	265 U	73.8 U	172 J	181 J	190 J	156 J	195 J	142 J	199	76.9 U	168 U	324 U	1180 U	891 U
Thallium	NE	NE	4.2 U	4.6 U	3.9 U	4.3 U	4.4 U	4.9 U	4.4 U	4.2 UJ	1.1 J	1.2 J	4.2 UJ	5 UJ	4.8 UJ	4.6 U	4.6 U	4.4 UJ	4.8 UJ	1.5 J	4.5 UJ
Vanadium	NE	NE	12.6	23	8.9	25.8	21.5	25.5	20.6	23	16	15.7	33.1	29.5	28.2	32.1	23.4	20.5	14.8	59.1 J	30.2 J
Zinc	109	10,000	15.8	135	13.4	34.6	158	31	35.1	433	23	23.4	62	68.2	44.6	122	36.2	36.6 J	21.9 J	189 J	80.1 J
Other (mg/kg)																					
Free Cyanide	27	27	0.231 U	0.153 J	0.213 U	0.243 U	0.231 U	0.257 U	0.243 U	0.233 U	0.228 U	0.251 U	0.235 U	0.266 U	0.259 U	0.238 U	0.249 U	0.239 U	0.263 U	0.239 U	0.248 U

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWSB-29 (20-22) 8/18/2009	WWSB-30 (2-5) 8/18/2009	WWSB-30 (7-9) 8/18/2009	WWSB-30 (45-50) 8/20/2009	WWSB-31 (1-5) 8/26/2009	WWSB-31 (15-17) 8/26/2009	WWSB-31 (52-54) 8/27/2009	Duplicate of: WWSB-31 (52-54) 8/27/2009	WWSB-32 (4-5) 8/27/2009	WWSB-32 (10-11) 8/27/2009	WWSB-32 (43-44) 8/28/2009	WWSB-34 (2-5) 9/16/2009	WWSB-34 (10-13) 9/16/2009	WWSB-35 (1-4.5) 9/24/2009	WWSB-35 (8-10) 9/30/2009	WWSB-36 (3-5) 9/30/2009	WWSB-36 (9-10) 9/30/2009	WWSB-37 (96-97) 12/28/2009	WWSB-38 (96.5-97) 12/29/2009
BTEX (mg/kg)																					
Benzene	0.06	44	42	0.22 J	0.041 UJ	0.0062 U	0.03 J	0.00069	0.0065	0.0066 U	0.04 U	0.5 J	0.0011 J	0.0026 J	0.28 J	0.0065 U	0.0013 J	0.0058 UJ	7.6 UJ	0.0058 U	0.0058 U
Toluene	0.7	500	16 U	0.029 UJ	0.03 U	0.0062 U	0.03 U	0.00061 U	0.0061 U	0.0066 U	0.04 U	0.7 U	0.0058 U	0.0059 UJ	1.3 U	0.0065 U	0.0062 U	0.0058 UJ	7.6 UJ	0.0058 U	0.00019 J
Ethylbenzene	1	390	130	0.029 UJ	0.03 U	0.0062 U	0.03 U	0.013 U	0.0094 U	0.0066 U	0.04 U	6.8	0.011 U	0.0059 UJ	1.3 U	0.0065 U	0.0011 J	0.0058 UJ	1.2 J	0.0058 U	0.0058 U
Xylene, total	0.26	500	140 U	0.029 UJ	0.039 UJ	0.0062 U	0.03 U	0.0019 U	0.0061 U	0.0066 U	0.04 U	0.83 U	0.0058 U	0.0061 UJ	1.3 U	0.0065 U	0.0063 J	0.0058 UJ	7.6 UJ	0.0058 U	0.0058 U
Total BTEX	NE	NE	172	0.22	ND	ND	0.03	0.00069	0.0065	ND	ND	7.3	0.0011	0.0026	0.28	ND	0.0087	ND	1.2	ND	0.00019
Other VOCs (mg/kg)																					
Acetone	0.05	500	15 U	0.12 U	0.12 U	0.025 UJ	0.12 U	R	0.029 U	0.03 U	0.16 U	R	0.027 U	0.024 UJ	3.2 U	0.015 UJ	0.058 J	0.0038 J	19 UJ	0.023 UJ	0.023 UJ
Butanone, 2-	0.12	500	6.2 U	0.059 UJ	0.059 U	0.012 U	0.061 U	0.00061 U	0.012 U	0.013 U	0.08 U	12 J	0.012 U	0.012 U	1.3 U	0.013 U	0.012 U	0.012 UJ	7.6 UJ	0.012 U	0.012 U
Carbon disulfide	NE	NE	6.2 U	0.029 UJ	0.03 UJ	0.0062 UJ	0.03 UJ	0.00061 U	0.0061 U	0.0066 U	0.04 U	0.7 U	0.0058 U	0.0059 UJ	1.3 U	0.0025 J	0.0018 J	0.0058 UJ	7.6 UJ	0.0058 U	0.0058 U
Chloroform	0.37	350	6.2 U	0.029 UJ	0.03 U	0.0062 U	0.03 U	0.00061 U	0.0061 U	0.0066 U	0.04 U	0.7 U	0.0058 U	0.0059 UJ	1.3 U	0.0065 U	0.0062 U	0.0058 U	7.6 UJ	0.0058 U	0.0058 U
Chloromethane	NE	NE	6.2 U	0.029 UJ	0.03 U	0.0062 U	0.03 U	0.00061 U	0.0061 U	0.0066 U	0.04 U	0.7 U	0.0058 U	0.0059 UJ	1.3 U	0.0065 U	0.0062 U	0.0058 U	7.6 UJ	0.0058 U	0.0058 U
Dichloroethene, cis-1,2-	0.25	500	6.2 U	0.029 UJ	0.03 U	0.0062 U	0.03 U	0.00061 U	0.0061 U	0.0066 U	0.04 U	0.7 U	0.0058 U	0.0059 UJ	1.3 U	0.0065 U	0.0062 U	0.0058 UJ	7.6 UJ	0.0058 U	0.0058 U
Methylene chloride	0.05	500	6.2 U	0.12 UJ	0.12 U	0.025 U	0.12 U	0.00064 U	0.024 U	0.026 U	0.16 U	0.7 U	0.023 U	0.024 UJ	1.3 U	0.0063 U	0.025 U	0.023 UJ	7.6 UJ	0.023 U	0.023 U
Styrene	NE	NE	6.2 U	0.029 UJ	0.03 U	0.0062 U	0.03 U	0.00061 U	0.0061 U	0.0066 U	0.04 U	0.7 U	0.0058 U	0.0059 UJ	1.3 U	0.0065 U	0.0062 U	0.0058 UJ	7.6 UJ	0.0058 U	0.0058 U
Tetrachloroethene	1.3	150	6.2 U	0.029 UJ	0.03 U	0.0062 U	0.03 U	0.00061 U	0.0061 U	0.0066 U	0.04 U	0.7 U	0.0058 U	0.0059 UJ	1.3 U	0.0065 U	0.0062 U	0.0058 UJ	7.6 UJ	0.0058 U	0.0058 U
Trichloroethane, 1,1,2-	NE	NE	6.2 U	0.029 UJ	0.03 U	0.0062 U	0.028 J	0.00061 U	0.0061 U	0.0066 U	0.04 U	0.7 U	0.0058 U	0.0059 U	1.3 U	0.0065 U	0.0062 U	0.0058 U	7.6 UJ	0.0058 U	0.0058 U
Trichloroethene	0.47	200	6.2 U	0.029 UJ	0.03 U	0.0062 U	0.03 U	0.00061 U	0.0061 U	0.0066 U	0.04 U	0.7 U	0.0058 U	0.0059 UJ	1.3 U	0.0065 U	0.0062 U	0.0058 UJ	7.6 UJ	0.0058 U	0.0058 U
Total Other VOCs	NE	NE	ND	ND	ND	ND	0.028	ND	ND	ND	ND	12	ND	ND	ND	0.0025	0.0598	0.0038	ND	ND	ND
Total VOCs	NE	NE	172	0.22	ND	ND	0.058	0.00069	0.0065	ND	ND	19.3	0.0011	0.0026	0.28	0.0025	0.0685	0.0038	1.2	ND	0.00019
Noncarcinogenic PAHs (mg/kg)																					
Acenaphthene	20	500	140	0.31 U	0.61	0.33 U	0.5 J	33	0.09 J	0.052 J	4.2 U	20	0.059 J	1 J	0.24 J	0.47 J	3.7	8 J	72 J	0.3 U	0.3 U
Acenaphthylene	100	500	29 J	0.31 U	0.32 U	0.33 UJ	0.26 J	6.5 U	0.33 U	0.35 U	4.2 U	3.7 U	0.31 U	0.62 J	0.66 J	6.8 U	0.47 J	5.2 J	31 J	0.3 U	0.3 U
Anthracene	100	500	58 J	0.19 J	0.31 J	0.33 U	1.4 J	12	0.037 J	0.029 J	4.2 U	7.2	0.018 J	0.67 J	1.1 J	0.5 J	2.2	26	60 J	0.3 U	0.3 U
Benzo[g,h,i]perylene	100	500	65 U	0.35	0.064 J	0.33 U	10 J	2 J	0.33 U	0.35 U	0.46 J	1.7 J	0.31 U	2.1 J	2.7 J	6.8 U	3.4 J	67	97 J	0.3 U	0.3 U
Fluoranthene	100	500	48 J	0.62	0.41	0.33 U	10	12	0.061 J	0.045 J	0.38 J	9.8	0.034 J	1.3 J	3.8 J	0.87 J	2.6	150	140 J	0.3 U	0.3 U
Fluorene	30	500	81	0.27 J	0.39	0.33 U	0.47 J	14	0.05 J	0.35 U	0.35 J	8.4	0.024 J	1.3 U	1.7 U	6.8 U	0.8	9.2 J	20 U	0.3 U	0.3 U
Methylnaphthalene,2-	NE	NE	410	2.6	4.7	0.33 UJ	3.2 U	78	0.33 U	0.35 U	4.2 U	3.7 U	0.31 U	1.3 U	1.7 U	6.8 U	1.1	9.5 J	3.4 J	0.3 U	0.3 U
Naphthalene	12	500	780	0.31 U	1.7 U	0.33 UJ	3.2 U	86	0.33 U	0.35 U	4.2 U	6.7 U	0.31 U	1.3 U	1.7 U	6.8 U	1.7	15 J	20 U	0.3 U	0.3 U
Phenanthrene	100	500	200	0.86	1.1	0.33 U	4.5	40	0.17 J	0.11 J	4.2 U	26	0.074 J	0.74 J	0.25 J	6.8 U	1.2	100	34 J	0.3 U	0.3 U
Pyrene	100	500	110	0.91	0.53	0.33 U	12	22	0.064 J	0.044 J	0.77 J	18	0.036 J	3.3 J	11	1.7 J	7.1	140	200 J	0.3 U	0.3 U
Total Noncarcinogenic PAHs	NE	NE	1856	5.8	8.114	ND	39.13	299	0.472	0.28	1.96	91.1	0.245	9.73	19.75	3.54	24.27	529.9	637.4	ND	ND
Carcinogenic PAHs (mg/kg)																					
Benzo[a]anthracene	1	5.6	27 J	0.35	0.19 J	0.33 U	10	6.5	0.031 J	0.021 J	4.2 UJ	5.2	0.02 J	0.96 J	3.2 J	0.81 J	2.3	89	120 J	0.3 U	0.3 U
Benzo[a]pyrene	1	1	19 J	0.32	0.15 J	0.33 U	18 J	5 J	0.02 J	0.35 U	0.44 J	4.4 J	0.31 U	1.4 J	3.9 J	6.8 U	2.7 J	95	140 J	0.3 U	0.3 U
Benzo[b]fluoranthene	1	5.6	14 J	0.44	0.15 J	0.33 U	23 J	5.5 J	0.33 U	0.35 U	0.49 J	5.3 J	0.31 U	1.6 J	3.5 J	0.84 J	2.2 J	100	120 J	0.3 U	0.3 U
Benzo[k]fluoranthene	0.8	56	7.1 J	0.19 J	0.058 J	0.33 U	9.7 J	2.1 J	0.33 U	0.35 U	4.2 UJ	1.7 J	0.31 U	0.56 J	1.3 J	6.8 U	0.88 J	49	46 J	0.3 U	0.3 U
Chrysene	1	56	26 J	0.36	0.19 J	0.33 U	10	6.2 J	0.33 U	0.35 U	4.2 UJ	5.4	0.31 U	1.1 J	2.6 J	0.78 J	2.2	95	110 J	0.3 U	0.3 U
Dibenzo[a,h]anthracene	0.33	0.56	65 U	0.044 J	0.32 U	0.33 U	3 J	6.5 UJ	0.33 U	0.35 U	4.2 UJ	0.44 J	0.31 U	1.3 UJ	1.7 UJ	6.8 U	0.91 J	17	27 J	0.3 U	0.3 U
Indeno[1,2,3-cd]pyrene	0.5	5.6	65 U	0.34	0.32 U	0.33 U	11 J	2 J	0.33 U	0.35 U	0.41 J	1.7 J	0.31 U	1.5 J	2.4 J	6.8 U	3.5 J	74	110 J	0.3 U	0.3 U
Total Carcinogenic PAHs	NE	NE	93.1	2.044	0.738	ND	84.7	27.3	0.051	0.021	1.34	24.14	0.02	7.12	16.9	2.43	14.69	519	673	ND	ND
Total PAHs	NE	NE	1949.1	7.844	8.852	ND	123.83	326.3	0.523	0.301	3.3	115.24	0.265	16.85	36.65	5.97	38.96	1048.9	1310.4	ND	ND
Other SVOCs (mg/kg)																					
Bis(2-ethylhexyl)phthalate	NE	NE	65 U	0.17 J	0.04 J	0.066 J	3.2 U	6.5 U	0.33 U	0.35 U	4.2 UJ	3.7 U	0.31 U	0.87 J	1.7 U	6.8 U	1.1 U	16 U	20 U	0.044 J	0.3 U
Butyl benzyl phthalate	NE	NE	65 U	0.31 U	0.32 U	0.33 U	3.2 U	6.5 U	0.33 U	0.35 U	4.2 UJ	3.7 U	0.31 U	1.3 U	1.7 U	6.8 U	0.67 U	16 U	20 U	0.3 U	0.3 U
Carbazole	NE	NE	65 U	0.064 J	0.019 J	0.33 U	0.46 J	0.64 J	0.33 U	0.35 U	4.2 U	0.44 J	0.31 U	1.3 U	1.7 U	6.8 U	0.1 J	14 J	2.3 J	0.3 U	0.3 U
Dibenzofuran	7	350	9.1 J	0.15 J	0.12 J	0.33 UJ	0.37 J	2.3 J	0.33 U	0.35 U	0.46 J	3.7 U	0.31 U	0.18 J	1.7 U	6.8 U	0.39 J	5.2 J	20 U	0.3 U	0.3 U
Dimethylphenol, 2,4-	NE	NE	65 U	0.31 U	0.32 U	0.33 U	3.2 U	6.5 U	0.33 U	0.35 U	4.2 U	3.7 U	0.31 U	1.3 UJ	1.7 UJ	6.8 U	0.67 U	16 U	20 U	0.3 U	0.3 U
Di-n-octyl phthalate	NE	NE	65 U	0.31 U	0.32 U	0.33 U	3.2 UJ	6.5 UJ	0.33 U	0.35 U	4.2 UJ	3.7 UJ	0.31 U	1.3 UJ	1.7 UJ	6.8 U	0.67 UJ	16 U	20 U	0.3 U	0.3 U
Methylphenol, 4-	0.33	500	65 U	0.31 U	0.32 U	0.33 U	3.2 U	6.5 U	0.33 U	0.35 U	4.2 U	3.7 U	0.31 U	1.3 U	1.7 U	6.8 U	R	16 U	20 U	0.3 U	0.3 U
Methylphenol,2-	0.33	500	65 U	0.31 U	0.32 U	0.33 U	3.2 U	6.5 U	0.33 U	0.35 U	4.2 U	3.7 U	0.31 U	1.3 U	1.7 U	6.8 U	R	16 U	20 U	0.3 U	0.3 U
Pentachlorophenol	0.8	6.7	410 U	2 U	2 U	2.1 U	20 UJ	41 UJ	2.1 UJ	2.2 UJ	27 UJ	23 UJ	2 UJ	8 UJ	11 U	43 U	4.2 U	99 U	130 U	0.74 U	0.74 U
Phenol	0.33	500	65 U	0.31 U	0.32 U	0.33 U	3.2 U	6.5 U	0.33 U	0.35 U	4.2 U	3.7 U	0.31 U	1.3 U	1.7 U	6.8 U	R	16 U	20 U	0.3 U	0.3 U
Total Other SVOCs	NE	NE	9.1	0.384	0.179	0.066	0.83	2.94	ND	ND	0.46	0.44	ND	1.05	ND	ND	0.49	19.2	2.3	0.044	ND
Total SVOCs	NE	NE	1958.2	8.228	9.031	0.066	124.66	329.24	0.523	0.301	3.76	115.68	0.265	17.9	36.65	5.97	39.45	1068.1	1312.7	0.044	ND
PCBs (mg/kg)																					
Aroclor 1254	NE	NE	NA	0.02 U	NA	NA	0.02 U	NA	NA	NA	0.027 UJ	NA	NA	0.38 U	NA	0.044 U	NA	0.02 U	NA	NA	NA
Aroclor 1260	NE	NE	NA	0.02 U	NA	NA	0.02 UJ	NA	NA	NA	0.027 UJ	NA	NA	0.38 U	NA	0.044 U	NA	0.02 UJ	NA	NA	NA
Aroclor 1268	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.1	1	NA	ND	NA	NA	ND	NA	NA	NA	ND	NA	NA	ND	NA	ND	NA	ND	NA	NA	NA

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWSB-29 (20-22) 8/18/2009	WWSB-30 (2-5) 8/18/2009	WWSB-30 (7-9) 8/18/2009	WWSB-30 (45-50) 8/20/2009	WWSB-31 (1-5) 8/26/2009	WWSB-31 (15-17) 8/26/2009	WWSB-31 (52-54) 8/27/2009	Duplicate of: WWSB-31 (52-54) 8/27/2009	WWSB-32 (4-5) 8/27/2009	WWSB-32 (10-11) 8/27/2009	WWSB-32 (43-44) 8/28/2009	WWSB-34 (2-5) 9/16/2009	WWSB-34 (10-13) 9/16/2009	WWSB-35 (1-4.5) 9/24/2009	WWSB-35 (8-10) 9/30/2009	WWSB-36 (3-5) 9/30/2009	WWSB-36 (9-10) 9/30/2009	WWSB-37 (96-97) 12/28/2009	WWSB-38 (96.5-97) 12/29/2009
Pesticides (mg/kg)																					
Aldrin	0.005	0.68	NA	0.002 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 U	NA	0.023 UJ	NA	0.002 UJ	NA	NA	NA
Alpha-bhc	0.02	3.4	NA	0.002 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 UJ	NA	0.023 UJ	NA	0.002 U	NA	NA	NA
Alpha-chlordane	0.094	24	NA	0.002 U	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 U	NA	0.023 UJ	NA	0.002 UJ	NA	NA	NA
Beta-BHC	0.036	3	NA	0.002 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 U	NA	0.023 UJ	NA	0.002 UJ	NA	NA	NA
Chlordane, gamma	NE	NE	NA	0.002 U	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 U	NA	0.023 UJ	NA	0.0043 J	NA	NA	NA
DDD,4,4-	0.0033	92	NA	0.0039 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 UJ	NA	0.023 UJ	NA	0.0038 U	NA	NA	NA
DDE,4,4-	0.0033	62	NA	0.0039 U	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 U	NA	0.023 U	NA	0.0038 UJ	NA	NA	NA
DDT,4,4-	0.0033	47	NA	0.0039 U	NA	NA	0.021 U	NA	NA	NA	0.03 U	NA	NA	0.099 U	NA	0.023 UJ	NA	0.0092 JN	NA	NA	NA
Delta-BHC	0.04	500	NA	0.002 U	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 UJ	NA	0.023 UJ	NA	0.002 U	NA	NA	NA
Dieldrin	0.005	1.4	NA	0.0039 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 U	NA	0.023 UJ	NA	0.0038 U	NA	NA	NA
Endosulfan I	2.4	200	NA	0.002 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 UJ	NA	0.023 UJ	NA	0.002 UJ	NA	NA	NA
Endosulfan II	2.4	200	NA	0.0039 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 U	NA	0.023 U	NA	0.0038 U	NA	NA	NA
Endosulfan sulfate	2.4	200	NA	0.0039 U	NA	NA	0.021 U	NA	NA	NA	0.03 U	NA	NA	0.099 U	NA	0.023 U	NA	0.0038 U	NA	NA	NA
Endrin	0.014	89	NA	0.0039 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 U	NA	0.023 UJ	NA	0.022 J	NA	NA	NA
Endrin aldehyde	NE	NE	NA	0.0039 U	NA	NA	0.021 U	NA	NA	NA	0.03 U	NA	NA	0.099 U	NA	0.023 U	NA	0.019 UJ	NA	NA	NA
Endrin ketone	NE	NE	NA	0.0039 U	NA	NA	0.021 U	NA	NA	NA	0.03 U	NA	NA	0.099 U	NA	0.023 U	NA	0.0038 UJ	NA	NA	NA
Gamma-BHC	0.1	9.2	NA	0.002 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 UJ	NA	0.023 UJ	NA	0.002 U	NA	NA	NA
Heptachlor	0.042	15	NA	0.002 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 U	NA	0.023 UJ	NA	0.002 U	NA	NA	NA
Heptachlor epoxide	NE	NE	NA	0.002 UJ	NA	NA	0.021 UJ	NA	NA	NA	0.03 UJ	NA	NA	0.099 UJ	NA	0.023 UJ	NA	0.002 UJ	NA	NA	NA
Methoxychlor	NE	NE	NA	0.02 UJ	NA	NA	0.041 UJ	NA	NA	NA	0.058 UJ	NA	NA	0.19 U	NA	0.044 UJ	NA	0.023 JN	NA	NA	NA
Herbicides (mg/kg)																					
Silvex	3.8	500	NA	0.026 UJ	NA	NA	0.025 U	NA	NA	NA	0.035 U	NA	NA	0.0068	NA	0.027 U	NA	0.022 U	NA	NA	NA
Metals (mg/kg)																					
Aluminum	NE	NE	4550	9490	10900	1000	4500	1290	2610	1960	4230	1650	5880	5520	5840	5700	4020	5490	15300 J	915	845
Antimony	NE	NE	4.9 UJ	4.7 UJ	4.8 UJ	5 UJ	5 UJ	3.5 J	4.8 UJ	5.4 UJ	12.5 UJ	5.6 UJ	4.6 UJ	4.8 UJ	5.3 UJ	6.7 J	5 UJ	4.6 UJ	5.3 J	22.7 UJ	4.7 UJ
Arsenic	13	16	6.3 UJ	4.7 J	10.9 J	6.3 UJ	9.2	9.9	6.1 U	6.9 U	15.9 U	9.3	2.6 J	23.1	20	32.8 J	20.5	24.8	300 J	28.9 U	2.1 J
Barium	350	400	36.4	86.3	60.2	21.6	51	20.9 J	14 J	12.6 J	27.1 J	28.1 J	31.4 J	124 J	60.4 J	80.1	46.5 J	74.9 J	88.8 J	14.9	11.3
Beryllium	7.2	590	0.29 J	0.49 J	0.53 J	0.26 J	0.41 J	0.17 J	0.46 J	0.43 J	0.36 J	0.24 J	0.76 J	1.5 UJ	1.6 U	0.31 J	0.37 J	0.42 J	1.2 J	0.97 J	0.56 J
Cadmium	2.5	9.3	1.5 UJ	1.4 UJ	1.4 UJ	1.5 UJ	1.5 U	1.5 U	1.5 UJ	1.6 UJ	3.8 UJ	1.7 U	1.4 U	0.57 J	1.6 U	1.6 U	1.4 J	0.44 J	9.8 J	6.9 U	1.4 U
Calcium	NE	NE	927 UJ	7250 J	1250 UJ	1160 UJ	4540 J	1960 J	397 J	344 J	321000 J	3350 J	4630 J	43700	1580	3660 J	6310	3180	3310 J	332 J	268 J
Chromium	NE	NE	14.4 J	17.8 J	29.5 J	9.5 J	9.6 J	8 J	12.2 J	10.9 J	4.7 J	9.5 J	16.9 J	12.5	24.9	15.4 J	10 J	15.5 J	435 J	6.7 J	4.8
Cobalt	NE	NE	5.5	7.2	4.5	0.54 J	4.9	8.2 J	4.2 J	4.2 J	0.8 J	2.4 J	12 J	6.1 J	5.4 J	8.3	8.1	6.1	15.5 J	1.2 J	9.6 J
Copper	50	270	8.9	26.2	21.5	7.7	28.2 J	194 J	14.2 J	13.6 J	9.1 J	35.1 J	22.3	53.1	19.9	236	79.3	143	1180 J	7.1	5.8
Iron	NE	NE	9620 J	21000 J	31000 J	36300 J	13200	18700 J	29100 J	29800 J	1980 J	6180 J	17300 J	10600 J	11800 J	20300	21900	16600	98000 J	439	3260
Lead	63	1000	4.5 U	86.7 J	13.3 J	6.2 UJ	98.8 J	51.9 J	4.6 J	4.5 J	47 J	36.2 J	13	273	23.2	872 J	271 J	524	3980 J	20.6 U	3.8 J
Magnesium	NE	NE	1970 J	2390 J	3370 J	662 J	1190 J	365 J	420 J	429 J	2150 J	161 J	3210	2450	2890	2720	1810	2490	6720 J	62.9 J	83.5
Manganese	1600	10,000	112 J	493 J	172 J	280 J	90.6	274 J	296 J	330 J	237 J	29.6 J	309 J	117	216	196	139	122	878 J	4.1 J	6.2
Mercury	0.18	2.8	0.0062 J	0.18	0.015 J	0.015 J	0.39 J	0.065 J	0.0061 J	0.0061 J	0.22 J	0.26 J	0.015 J	0.45 J	0.75 J	0.69 J	1.2	1.7	14.4 J	0.056 U	0.055 U
Nickel	30	310	12.3	13.4	13.9	1.4 J	12.3	17	5	4.7	2.7 J	7.5	18.6	16.4 J	11.3 J	15	18.8 J	15.4	91.6 J	6.9 U	6.3 J
Potassium	NE	NE	1210 J	1050 J	1570 J	371 J	473 J	173 J	232 J	220 J	358 J	244 J	1150 J	950 J	4610 J	1020 J	641 J	864 J	2940 J	688 UJ	32.4 J
Selenium	3.9	1500	11.2 UJ	10.8 UJ	10.8 UJ	11.3 UJ	11.3 U	11 U	10.9 U	12.3 U	28.3 U	12.7 U	10.5 U	10.9 UJ	4.9 J	11.7 U	11.3 UJ	10.5 UJ	12.3 J	51.6 U	10.7 U
Silver	2	1500	1.5 U	1.4 UJ	1.4 UJ	1.5 U	0.1 J	0.15 J	1.5 U	1.6 U	3.8 U	1.7 U	1.4 U	1.5 U	1.6 U	0.19 J	1.5 UJ	1.4 U	10.1 J	6.9 U	1.4 U
Sodium	NE	NE	612 U	775 U	1080 U	75 U	298 J	332 J	84.2 J	85.5 J	2140 J	248 J	812 J	511 J	976 J	310	353	810	13000 J	688 U	142 U
Thallium	NE	NE	4.5 UJ	1.1 J	1.1 J	4.5 UJ	4.5 U	4.4 U	4.4 U	4.9 U	11.3 U	5.1 U	4.2 U	4.4 U	4.8 U	1.6 J	4.5 UJ	4.2 UJ	13.7 UJ	20.6 U	4.3 U
Vanadium	NE	NE	16.1 J	27.6 J	40.2 J	9.4 J	16.1 J	17.2 J	26.9 J	24.2 J	7.6 J	16.1 J	25.9	15.4	17.6	22.3 J	15.3 J	20.9	66.3 J	3.5 J	4.6
Zinc	109	10,000	28.3	60.5	39.5	4.5 UJ	496	105	26.2	25.5	21.5 J	39.2	54.7	230	66.3	897	517 J	303 J	2470 J	34.4 U	6.8
Other (mg/kg)																					
Free Cyanide	27	27	0.247 U	0.233 U	0.237 U	0.247 U	0.0478 J	0.24 UJ	0.244 UJ	0.259 UJ	0.318 UJ	0.14 J	0.23 UJ	0.23 UJ	0.256 UJ	0.257 UJ	0.24 UJ	0.231 U	0.301 J	0.231 U	0.229 U

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWSB-39 (96-97) 12/30/2009	WWSB-40 (95-95.5) 12/23/2009	Duplicate of: WWSB-40 (95-95.5) 12/23/2009	WWSB-41 (96-97) 12/22/2009	WWSB-42 (62-62.5) 12/22/2009	WWSB-42 (96.5-97) 12/22/2009	WWTP-01 (2-2.5) 10/29/2009	Duplicate of: WWTP-01 (2-2.5) 1/29/2009	WWTP-02 (2-2.5) 10/29/2009	WWTP-03 (3.5-4) 10/29/2009	WWTP-04 (4.5-5) 10/27/2009	WWTP-05 (6-6.5) 10/28/2009	WWTP-06 (6-6.5) 10/26/2009
BTEX (mg/kg)															
Benzene	0.06	44	0.0059 U	0.0059 U	0.006 U	0.0058 U	0.33 J	0.0062 U	0.041	0.013 J	0.0059 UJ	0.48 J	0.033	0.098	0.0074 U
Toluene	0.7	500	0.0059 U	0.0059 U	0.006 U	0.0058 U	5	0.0062 U	0.0062 U	0.006 U	0.0059 U	0.031 U	0.0063 U	0.032 U	0.0074 U
Ethylbenzene	1	390	0.0059 U	0.0059 U	0.006 U	0.0058 U	2.5	0.0062 U	0.016	0.002 J	0.0059 U	0.09 J	0.023	1.1	0.0074 U
Xylene, total	0.26	500	0.0059 U	0.0019 J	0.00069 J	0.0058 U	18	0.0062 U	0.016	0.0033 J	0.0013 J	0.51 J	0.0076	0.45	0.0074 U
Total BTEX	NE	NE	ND	0.0019	0.00069	ND	25.83	ND	0.073	0.0183	0.0013	1.08	0.0636	1.648	ND
Other VOCs (mg/kg)															
Acetone	0.05	500	0.024 UJ	0.0062 J	0.005 J	0.023 U	2.8 UJ	0.025 U	0.035 UJ	0.052 UJ	0.027 U	0.14 UJ	0.025 UJ	0.13 U	0.03 U
Butanone, 2-	0.12	500	0.012 U	0.012 U	0.012 U	0.012 U	1.1 UJ	0.012 U	0.012 UJ	0.012 UJ	0.012 UJ	0.063 UJ	0.013 U	0.065 UJ	0.015 U
Carbon disulfide	NE	NE	0.0059 U	0.0059 U	0.006 U	0.0058 UJ	1.1 U	0.0062 UJ	0.0062 UJ	0.006 U	0.0059 UJ	0.031 U	0.0063 U	0.032 UJ	0.0074 U
Chloroform	0.37	350	0.0059 U	0.0016 J	0.0017 J	0.0058 U	1.1 U	0.0062 U	0.0062 U	0.006 U	0.0059 U	0.031 U	0.0063 U	0.032 U	0.0074 U
Chloromethane	NE	NE	0.0059 U	0.0059 U	0.006 U	0.0058 U	1.1 U	0.0062 U	0.0062 U	0.006 U	0.0059 U	0.031 U	0.0063 U	0.032 U	0.0074 U
Dichloroethene, cis-1,2-	0.25	500	0.0059 U	0.0059 U	0.006 U	0.0058 U	1.1 U	0.0062 U	0.0062 U	0.006 U	0.0059 U	0.031 U	0.0063 U	0.032 U	0.0074 U
Methylene chloride	0.05	500	0.024 U	0.024 U	0.024 U	0.0022 J	1.1 U	0.0031 J	0.025 U	0.024 UJ	0.024 U	0.13 U	0.025 U	0.13 U	0.03 U
Styrene	NE	NE	0.0059 U	0.0009 J	0.006 U	0.0058 U	7.3	0.0062 U	0.00047 J	0.006 U	0.0059 U	0.031 U	0.0063 U	0.0062 J	0.0074 U
Tetrachloroethene	1.3	150	0.0059 U	0.0059 U	0.006 U	0.0058 U	1.1 U	0.0062 U	0.0062 U	0.006 U	0.0059 U	0.031 U	0.0063 U	0.032 U	0.0074 U
Trichloroethane, 1,1,2-	NE	NE	0.0059 U	0.0059 U	0.006 U	0.0058 U	1.1 U	0.0062 U	0.0062 U	0.006 U	0.0059 U	0.031 U	0.0063 U	0.032 U	0.0074 U
Trichloroethene	0.47	200	0.0059 U	0.0059 U	0.006 U	0.0058 U	1.1 U	0.0062 U	0.0062 U	0.006 U	0.0059 U	0.031 U	0.0063 U	0.032 U	0.0074 U
Total Other VOCs	NE	NE	ND	0.0087	0.0067	0.0022	7.3	0.0031	0.00047	ND	ND	ND	ND	0.0062	ND
Total VOCs	NE	NE	ND	0.0106	0.00739	0.0022	33.13	0.0031	0.07347	0.0183	0.0013	1.08	0.0636	1.6542	ND
Noncarcinogenic PAHs (mg/kg)															
Acenaphthene	20	500	0.32 U	0.32 U	0.32 U	0.31 U	1.5 J	0.33 U	0.83	4.8 J	1.6 UJ	7.4	5.9	25	0.4 U
Acenaphthylene	100	500	0.32 U	0.32 U	0.32 U	0.31 U	14	0.33 U	0.85	2 J	1.6 U	0.37 J	2.2	5.4 J	0.4 U
Anthracene	100	500	0.32 U	0.32 U	0.32 U	0.31 U	6.1	0.33 U	1.3	14 J	1.6 UJ	9.3	2.6	6.5 J	0.4 U
Benzo[g,h,i]perylene	100	500	0.32 U	0.32 U	0.32 U	0.31 U	0.45 J	0.33 U	2	12 J	1.6 UJ	12	3.8	10	0.045 J
Fluoranthene	100	500	0.32 U	0.32 U	0.32 U	0.31 U	6.4	0.33 U	3.2 J	48 J	0.17 J	30	4	8.3	0.056 J
Fluorene	30	500	0.32 U	0.32 U	0.32 U	0.31 U	9.5	0.33 U	0.89	6.9 J	1.6 UJ	5.2	2.6	11	0.4 U
Methylnaphthalene,2-	NE	NE	0.32 U	0.32 U	0.32 U	0.31 U	45	0.33 U	0.75	1.4 J	0.11 J	1.6 J	0.31 J	35	0.017 J
Naphthalene	12	500	0.32 U	0.32 U	0.32 U	0.31 U	90	0.33 U	2.7 J	3.1 J	1.6 U	5.6	1.7	100	0.4 U
Phenanthrene	100	500	0.32 U	0.019 J	0.035 J	0.31 U	22	0.33 U	4.3 J	50 J	1.6 UJ	29	6.9	23	0.4 U
Pyrene	100	500	0.32 U	0.32 U	0.32 U	0.31 U	8.9	0.33 U	5.7	39 J	0.3 J	37	9.1	16	0.084 J
Total Noncarcinogenic PAHs	NE	NE	ND	0.019	0.035	ND	203.85	ND	22.52	181.2	0.58	137.47	39.11	240.2	0.202
Carcinogenic PAHs (mg/kg)															
Benz[a]anthracene	1	5.6	0.32 U	0.32 U	0.32 U	0.31 U	3.6 J	0.33 U	1.8	20 J	0.11 J	16	3.4	5.9 J	0.043 J
Benzo[a]pyrene	1	1	0.32 U	0.32 U	0.32 U	0.31 U	2.5 J	0.33 U	2.6	22 J	1.6 UJ	17	6	11	0.055 J
Benzo[b]fluoranthene	1	5.6	0.32 U	0.32 U	0.32 U	0.31 U	1.9 J	0.33 U	2.1	23 J	1.6 UJ	17	4.4	8.9	0.4 U
Benzo[k]fluoranthene	0.8	56	0.32 U	0.32 U	0.32 U	0.31 U	0.81 J	0.33 U	0.7	9.1 J	1.6 UJ	6.2	1.7	2.9 J	0.4 U
Chrysene	1	56	0.32 U	0.32 U	0.32 U	0.31 U	3.6 J	0.33 U	2	19 J	0.26 J	15	4.3	8.4	0.064 J
Dibenz[a,h]anthracene	0.33	0.56	0.32 U	0.32 U	0.32 U	0.31 U	5.9 U	0.33 U	0.44 J	3 J	1.6 U	3 J	1.1	2.3 J	0.4 U
Indeno[1,2,3-cd]pyrene	0.5	5.6	0.32 U	0.32 U	0.32 U	0.31 U	0.54 J	0.33 U	2 J	12 J	1.6 UJ	13	4	9.7	0.035 J
Total Carcinogenic PAHs	NE	NE	ND	ND	ND	ND	12.95	ND	11.64	108.1	0.37	87.2	24.9	49.1	0.197
Total PAHs	NE	NE	ND	0.019	0.035	ND	216.8	ND	34.16	289.3	0.95	224.67	64.01	289.3	0.399
Other SVOCs (mg/kg)															
Bis(2-ethylhexyl)phthalate	NE	NE	0.32 U	0.32 U	0.32 U	0.31 U	5.9 U	0.33 U	0.67 U	3.2 U	1.6 U	3.4 U	0.68 U	7 U	0.4 U
Butyl benzyl phthalate	NE	NE	0.32 U	0.32 U	0.32 U	0.31 U	5.9 U	0.33 U	0.67 U	3.2 U	1.6 U	3.4 U	0.68 U	7 U	0.4 U
Carbazole	NE	NE	0.32 U	0.32 U	0.32 U	0.31 U	5.9 U	0.33 U	0.27 J	2.6 J	1.6 U	4.3	0.21 J	0.82 J	0.4 U
Dibenzofuran	7	350	0.32 U	0.32 U	0.32 U	0.31 U	1.1 J	0.33 U	0.32 J	2.8 J	1.6 U	2.9 J	0.4 J	1.3 J	0.4 U
Dimethylphenol, 2,4-	NE	NE	0.32 U	0.32 U	0.32 U	0.31 U	5.9 U	0.33 U	0.67 U	3.2 U	1.6 U	3.4 U	0.68 U	7 U	0.4 U
Di-n-octyl phthalate	NE	NE	0.32 U	0.32 U	0.32 U	0.31 U	5.9 U	0.33 U	0.67 U	3.2 U	1.6 U	3.4 U	0.68 U	7 U	0.4 U
Methylphenol, 4-	0.33	500	0.32 U	0.32 U	0.32 U	0.31 U	5.9 U	0.33 U	0.67 U	3.2 U	1.6 U	3.4 U	0.68 U	7 U	0.4 U
Methylphenol,2-	0.33	500	0.32 U	0.32 U	0.32 U	0.31 U	5.9 U	0.33 U	0.67 U	3.2 U	1.6 U	3.4 U	0.68 U	7 U	0.4 U
Pentachlorophenol	0.8	6.7	0.79 U	0.79 U	0.8 U	0.76 U	15 U	0.83 U	1.7 UJ	8 U	4 U	8.4 U	1.7 U	17 U	0.99 U
Phenol	0.33	500	0.32 U	0.32 U	0.32 U	0.31 U	5.9 U	0.33 U	0.67 U	3.2 U	1.6 U	3.4 U	0.68 U	7 U	0.4 U
Total Other SVOCs	NE	NE	ND	ND	ND	ND	1.1	ND	0.59	5.4	ND	7.2	0.61	2.12	ND
Total SVOCs	NE	NE	ND	0.019	0.035	ND	217.9	ND							
PCBs (mg/kg)															
Aroclor 1254	NE	NE	NA	NA	NA	NA	NA	NA	0.021 U	0.02 U	0.02 UJ	0.02 J	0.021 U	0.022 U	0.025 U
Aroclor 1260	NE	NE	NA	NA	NA	NA	NA	NA	0.021 UJ	0.03 J	0.0037 J	0.015 J	0.021 U	0.022 U	0.025 U
Aroclor 1268	NE	NE	NA	NA	NA	NA	NA	NA	NA	0.034	NA	NA	NA	NA	NA
Total PCBs	0.1	1	NA	NA	NA	NA	NA	NA	ND	0.064	0.0037	0.059	ND	ND	ND

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Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	COMMERCIAL USE SCO	WWSB-39 (96-97) 12/30/2009	WWSB-40 (95-95.5) 12/23/2009	Duplicate of: WWSB-40 (95-95.5) 12/23/2009	WWSB-41 (96-97) 12/22/2009	WWSB-42 (62-62.5) 12/22/2009	WWSB-42 (96.5-97) 12/22/2009	WWTP-01 (2-2.5) 10/29/2009	Duplicate of: WWTP-01 (2-2.5) 1/29/2009	WWTP-02 (2-2.5) 10/29/2009	WWTP-03 (3.5-4) 10/29/2009	WWTP-04 (4.5-5) 10/27/2009	WWTP-05 (6-6.5) 10/28/2009	WWTP-06 (6-6.5) 10/26/2009
Pesticides (mg/kg)															
Aldrin	0.005	0.68	NA	NA	NA	NA	NA	NA	0.01 U	0.002 U	0.0099 U	0.01 U	0.011 U	0.011 U	0.0025 U
Alpha-bhc	0.02	3.4	NA	NA	NA	NA	NA	NA	0.01 U	0.002 U	0.0099 U	0.01 U	0.011 U	0.011 U	0.0025 U
Alpha-chlordane	0.094	24	NA	NA	NA	NA	NA	NA	0.01 U	0.0044 J	0.0099 U	0.01 U	0.011 U	0.011 U	0.0025 U
Beta-BHC	0.036	3	NA	NA	NA	NA	NA	NA	0.01 U	0.002 U	0.0099 U	0.012 JN	0.011 U	0.011	0.0025 U
Chlordane, gamma	NE	NE	NA	NA	NA	NA	NA	NA	0.01 U	0.0037 J	0.0099 U	0.01 U	0.011 U	0.011 U	0.0025 U
DDD,4,4-	0.0033	92	NA	NA	NA	NA	NA	NA	0.02 U	0.0018 J	0.019 U	0.02 U	0.021 U	0.021 U	0.0049 UJ
DDE,4,4-	0.0033	62	NA	NA	NA	NA	NA	NA	0.02 U	0.005 J	0.019 U	0.02 U	0.021 U	0.021 U	0.0049 U
DDT,4,4-	0.0033	47	NA	NA	NA	NA	NA	NA	0.02 U	0.0033 J	0.019 U	0.02 U	0.021 U	0.02 J	0.0049 U
Delta-BHC	0.04	500	NA	NA	NA	NA	NA	NA	0.01 U	0.002 U	0.0099 U	0.0056 J	0.011 U	0.011 U	0.0025 U
Dieldrin	0.005	1.4	NA	NA	NA	NA	NA	NA	0.02 U	0.0012 J	0.019 U	0.02 U	0.021 U	0.021 U	0.0049 U
Endosulfan I	2.4	200	NA	NA	NA	NA	NA	NA	0.01 U	0.002 U	0.0099 U	0.01 U	0.011 U	0.011 U	0.0025 U
Endosulfan II	2.4	200	NA	NA	NA	NA	NA	NA	0.02 U	0.0039 U	0.019 U	0.02 U	0.021 U	0.021 U	0.0049 U
Endosulfan sulfate	2.4	200	NA	NA	NA	NA	NA	NA	0.018 J	0.0039 UJ	0.019 U	0.02 U	0.021 U	0.022 J	0.0049 UJ
Endrin	0.014	89	NA	NA	NA	NA	NA	NA	0.02 U	0.0039 U	0.019 U	0.02 U	0.021 U	0.021	0.0049 U
Endrin aldehyde	NE	NE	NA	NA	NA	NA	NA	NA	0.02 UJ	0.019 UJ	0.019 UJ	0.02 UJ	0.021 U	0.021 UJ	0.0049 UJ
Endrin ketone	NE	NE	NA	NA	NA	NA	NA	NA	0.02 U	0.0039 U	0.019 U	0.02 U	0.021 U	0.021 U	0.0049 U
Gamma-BHC	0.1	9.2	NA	NA	NA	NA	NA	NA	0.01 U	0.002 U	0.0099 U	0.01 U	0.011 U	0.011 U	0.0025 U
Heptachlor	0.042	15	NA	NA	NA	NA	NA	NA	0.01 U	0.002 U	0.0099 U	0.01 U	0.011 U	0.011 U	0.0025 U
Heptachlor epoxide	NE	NE	NA	NA	NA	NA	NA	NA	0.01 U	0.002 U	0.0099 U	0.01 U	0.011 U	0.011 U	0.0025 U
Methoxychlor	NE	NE	NA	NA	NA	NA	NA	NA	0.1 U	0.02 U	0.099 U	0.1 U	0.11 U	0.11 U	0.025 U
Herbicides (mg/kg)															
Silvex	3.8	500	NA	NA	NA	NA	NA	NA	0.018	0.023 U	0.022 U	0.12 U	0.025 U	0.0065	0.028 U
Metals (mg/kg)															
Aluminum	NE	NE	13500	29700	26300	22000	3830	3400	8680	9630 J	5440 J	8050	6570	4110	2100
Antimony	NE	NE	4.9 UJ	4.7 UJ	4.9 UJ	4.8 UJ	22.7 UJ	4.9 UJ	4.9 UJ	4.7 UJ	4.7 UJ	5.2 UJ	5.1 UJ	5.3 UJ	6.0 UJ
Arsenic	13	16	6.2 UJ	6.0 U	6.2 U	6.1 UJ	28.8 U	3.4	5.6 J	9.7 J	3.3 J	5.4 J	9.3 J	8.4 J	7.6 UJ
Barium	350	400	22.5	531	474	320	35.3 J	34.4	125	157 J	34.0 J	361	194	63.8	394
Beryllium	7.2	590	0.80 J	1.5	1.2 J	1.5	0.73 J	0.56 J	0.54 J	0.49 J	0.23 J	0.48 J	0.32 J	0.25 J	0.10 J
Cadmium	2.5	9.3	1.5 UJ	1.4 UJ	1.5 UJ	1.4 UJ	6.9 UJ	0.49 J	1.5 U	1.4 U	1.4 UJ	1.6 UJ	1.6 UJ	1.6 U	1.8 UJ
Calcium	NE	NE	540 J	5010 J	5800 J	579 J	3060 J	469 J	14100 J	15800 J	89200 J	59100 J	57700 J	9760 J	103000 J
Chromium	NE	NE	17.6	27.7	20.2	74.0	10.3 J	4.9	15.4	17.5 J	9.1 J	11.0	9.3	21.7	5.7
Cobalt	NE	NE	16.3 J	17.4 J	15.5 J	26.7 J	1.2 J	185 J	8.1	8.0 J	4.1 J	4.0	3.6	5.7	14.9
Copper	50	270	28.4	50.3	58.9	68.9	5.8 J	264	46.5	67.0	61.0	87.9	256	47.0	84.3
Iron	NE	NE	27800	41900	33400	42900	247000	19100	15500	19200	13700	10900	11000	15900	24400
Lead	63	1000	7.0 J	4.9	1.5 J	7.3	7.1 J	11.4	401	450 J	79.9 J	280	904	203	2980
Magnesium	NE	NE	5600	10600	9350	10300	3850	265	8310 J	5530 J	41500 J	4990 J	6390 J	6040 J	1990 J
Manganese	1600	10,000	288	593	441	338	4820	11.3	245	335 J	179 J	258	470	158	84.8
Mercury	0.18	2.8	0.058 U	0.055 U	0.059 U	0.055 U	0.053 U	0.058 U	1.2 J	0.49 J	0.099 J	0.47 J	0.32 J	0.93 J	0.23 J
Nickel	30	310	18.8 J	17.7 J	13.7 J	57.3 J	4.3 J	231 J	26.4	28.7 J	8.9 J	12.1	11.7	51.3	12.3
Potassium	NE	NE	2980	13400	10500	9740	492	43.7 J	1350 J	1380 J	882 J	1390 J	1210 J	518 J	593 J
Selenium	3.9	1500	11.0 UJ	10.7 UJ	11.1 UJ	10.8 UJ	51.5 UJ	11.2 U	11.1 UJ	10.7 UJ	10.7 UJ	11.7 UJ	11.6 UJ	11.9 UJ	13.5 UJ
Silver	2	1500	1.5 UJ	1.4 UJ	1.5 UJ	1.4 UJ	6.9 UJ	1.5 U	0.11 J	0.094 J	1.4 UJ	1.6 UJ	1.6 UJ	1.6 U	0.16 J
Sodium	NE	NE	1110	549 J	1030 J	232 J	687 U	46.3 J	828 J	1110 J	606 J	2440 J	1940 J	1350 J	4760 J
Thallium	NE	NE	4.4 UJ	4.3 UJ	4.4 UJ	4.3 UJ	20.6 UJ	1.8 J	4.4 UJ	4.3 UJ	4.3 UJ	4.7 UJ	4.7 UJ	4.8 UJ	5.4 UJ
Vanadium	NE	NE	65.7	94.8	84.1	90.0	19.4 J	25.2	22.8	24.6	28.4	21.2	16.6	17.0	6.4 J
Zinc	109	10,000	96.4	89.5	58.5	102	22.8 J	161	175 J	205 J	83.5 J	307 J	171 J	97.4 J	570 J
Other (mg/kg)															
Free Cyanide	27	27	0.234 U	0.236 U	0.239 U	0.231 U	0.222 U	0.247 U	0.245 U	0.235 U	0.231 U	0.245 U	0.247 U	0.257 U	0.297 U

Table 3
Detected Subsurface Soil Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Notes:

mg/kg - milligrams/kilogram or parts per million (ppm)

BTEX - benzene, toluene, ethylbenzene, and xylenes

VOCs - volatile organic compounds

PAHs - polycyclic aromatic hydrocarbons

SVOCs - semivolatile organic compounds

PCBs - polychlorinated biphenyls

Total BTEX, Total VOCs, Total PAHs, Total SVOCs, and Total PCBs are calculated using detects only.

6 NYCRR - New York State Register and Official Compilation of Codes, Rules and Regulations of the State of New York

UNRESTRICTED USE SCO - regulatory comparison against 6 NYCRR, Chapter IV, Part 375-6 Unrestricted Use Soil Cleanup Objectives

COMMERCIAL USE SCO - regulatory comparison against 6 NYCRR, Chapter IV, Part 375-6 Restricted Use Commercial Soil Cleanup Objectives

NE - not established

NA - not analyzed

ND - not detected; total concentration is listed as ND because no compounds were detected in the group

Bolding indicates a detected concentration

Yellow shading and bolding indicates that the detected result value exceeds established UNRESTRICTED USE SCO and COMMERCIAL USE SCO

Validation Qualifiers:

J - estimated value

JN - analyte is presumptively present at an approximated quantity

U - indicates not detected to the reporting limit for organic analysis and the method detection limit for inorganic analysis

UJ - not detected at or above the reporting limit shown and the reporting limit is estimated

R - rejected

Table 4
Detected Subsurface Soil Analytical Results
35 Kent Avenue
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	INDUSTRIAL USE SCO	WWMW-01 (0.5-5) 6/16/2009	WWMW-01 (16-17) 6/16/2009	WWMW-01 (63-64) 6/16/2009	WWMW-02 (2-5) 7/10/2009	Duplicate of: WWMW-02 (2-5) 7/10/2009	WWMW-02 (15-17) 7/10/2009	WWMW-02 (50-53) 7/13/2009	WWMW-03 (2-5) 6/23/2009	WWMW-03 (28-30) 6/24/2009	WWMW-03 (60-63) 6/26/2009	Duplicate of: WWMW-03 (60-63) 6/26/2009	WWSB-01 (1-5) 7/10/2009	WWSB-01 (14-15) 7/10/2009	WWSB-02 (2-5) 7/8/2009	WWSB-02 (10.5-11.5) 7/8/2009	WWSB-19 (2-3) 7/27/2009
BTEX (mg/kg)																		
Benzene	0.06	89	0.0012 J	0.00098 J	0.00072 J	0.0058 U	0.0059 U	0.0059 U	0.0061 U	0.0069	17	0.0097	0.0092	0.0058 U	0.0055 U	0.0014 J	0.012 J	0.006 U
Toluene	0.7	1,000	0.0051 U	0.0051 U	0.0055 U	0.0058 U	0.0059 U	0.00033 J	0.0061 U	0.0057 U	160	0.026 J	0.012 U	0.0058 U	0.0055 U	0.0012 J	0.03 U	0.037
Ethylbenzene	1	780	0.0051 U	0.0051 U	0.0055 U	0.0058 U	0.0059 U	0.0059 U	0.0061 U	0.0057 U	290	0.033 J	0.011 J	0.0058 U	0.0055 U	0.006 U	0.11 J	0.0091
Xylene, total	0.26	1,000	0.0051 U	0.0051 U	0.0055 U	0.0058 U	0.0059 U	0.0059 U	0.0061 U	0.0057 U	420	0.046 J	0.015 U	0.0058 U	0.001 J	0.006 U	0.02 J	0.055
Total BTEX	NE	NE	0.0012	0.00098	0.00072	ND	ND	0.00033	ND	0.0069	887	0.1147	0.0202	ND	0.001	0.0026	0.142	0.1011
Other VOCs (mg/kg)																		
Acetone	0.05	1,000	0.043 J	0.065 J	0.059 J	0.005 J	0.024 UJ	0.024 UJ	0.0081 UJ	0.023 U	31 U	0.025 U	0.021 U	0.023 UJ	0.064 J	0.038 UJ	0.12 UJ	0.046 U
Carbon disulfide	NE	NE	0.0051 U	0.0051 U	0.0055 U	0.0058 U	0.0059 U	0.0014 J	0.0061 UJ	0.0057 U	13 U	0.0018 J	0.0053 U	0.0058 U	0.0016 J	0.006 U	0.03 U	0.006 U
Chloroform	0.37	700	0.0051 U	0.0051 U	0.0055 U	0.0058 U	0.0059 U	0.0059 U	0.0061 U	0.0057 U	13 U	0.0062 U	0.0053 U	0.0058 U	0.0055 U	0.006 U	0.03 U	0.006 U
Dichloroethene, cis-1,2-	0.25	1,000	0.0051 U	0.0051 U	0.0055 U	0.0058 U	0.0059 U	0.0059 U	0.0061 U	0.0057 U	13 U	0.0062 U	0.0053 U	0.0058 U	0.0055 U	0.006 U	0.03 U	0.006 U
Styrene	NE	NE	0.0051 U	0.0051 U	0.0055 U	0.0058 U	0.0059 U	0.0059 U	0.0061 U	0.0057 U	13 U	0.0062 U	0.0053 U	0.0058 U	0.0055 U	0.006 U	0.03 U	0.006 U
Tetrachloroethane,1,1,2,2-	NE	NE	0.0051 U	0.0051 U	0.0055 U	0.0058 U	0.0059 U	0.0059 U	0.0061 U	0.0057 U	13 U	0.0062 U	0.0053 U	0.0058 U	0.03 J	0.006 U	0.2 J	0.006 U
Trans-1,2-dichloroethene	0.19	1,000	0.0051 U	0.0051 U	0.0055 U	0.0058 U	0.0059 U	0.0059 U	0.0061 U	0.0057 U	13 U	0.0062 U	0.0053 U	0.0058 U	0.0055 U	0.006 U	0.03 U	0.006 U
Trichloroethene	0.47	400	0.0051 U	0.0051 U	0.0055 U	0.0058 U	0.0059 U	0.0059 U	0.0061 U	0.0057 U	13 U	0.0062 U	0.0053 U	0.0058 U	0.0055 U	0.006 U	0.03 U	0.006 U
Total Other VOCs	NE	NE	0.043	0.065	0.059	0.005	ND	0.0014	ND	ND	ND	0.0018	ND	ND	0.0956	ND	0.2	ND
Total VOCs	NE	NE	0.0442	0.06598	0.05972	0.005	ND	0.00173	ND	0.0069	887	0.1165	0.0202	ND	0.0966	0.0026	0.342	0.1011
Noncarcinogenic PAHs (mg/kg)																		
Acenaphthene	20	1,000	0.27 U	0.27 U	0.3 U	0.25 J	0.29 J	0.89 J	0.33 U	0.18 J	72	0.33 U	0.046 J	0.31 U	0.69 J	0.32 U	1.1 J	0.27 J
Acenaphthylene	100	1,000	0.27 U	0.27 U	0.3 U	5.9	7.2	0.18 J	0.33 U	0.42	17 J	0.33 U	0.018 J	0.31 U	0.3 UJ	0.027 J	0.32 UJ	3.6
Anthracene	100	1,000	0.27 U	0.27 U	0.3 U	2.7	2.9	0.27 J	0.33 U	0.59	38 J	0.33 U	0.027 J	0.31 U	1.1 J	0.051 J	0.87 J	2.4
Benzo[g,h,i]perylene	100	1,000	0.27 U	0.27 U	0.3 U	3.2	3.2	0.18 J	0.33 U	1	4.5 J	0.33 U	0.28 U	0.31 U	0.31 J	0.61	0.18 J	1.1
Fluoranthene	100	1,000	0.022 J	0.27 U	0.3 U	5.8 J	4 J	9.9 J	0.33 U	2.5	32 J	0.33 U	0.021 J	0.31 U	0.29 J	0.28 J	0.86 J	2.8
Fluorene	30	1,000	0.27 U	0.27 U	0.3 U	0.82	0.88	0.74 J	0.33 U	0.22 J	43 J	0.33 U	0.035 J	0.31 U	0.8 J	0.32 U	0.93 J	0.8
Methylnaphthalene,2-	NE	NE	0.27 U	0.0094 J	0.017 J	0.36 J	0.27 J	0.64 UJ	0.33 U	0.14 J	270	0.044 J	0.24 J	0.31 U	0.3 UJ	0.049 J	2.1 J	0.15 J
Naphthalene	12	1,000	0.27 U	0.024 J	0.029 J	0.51 J	0.4 J	0.64 UJ	0.33 U	0.38	1000	0.19 J	1.2 J	0.31 U	0.3 UJ	0.082 J	1.1 J	0.32 U
Phenanthrene	100	1,000	0.025 J	0.023 J	0.022 J	4.4 J	2.1 J	0.05 J	0.33 U	2.6	130	0.023 J	0.11 J	0.31 U	2.8 J	0.18 J	2.4 J	2.5
Pyrene	100	1,000	0.033 J	0.013 J	0.015 J	7.8	5.9	6.6 J	0.33 U	3.8	55 J	0.33 U	0.034 J	0.31 U	1 J	0.34	1.5 J	5
Total Noncarcinogenic PAHs	NE	NE	0.08	0.0694	0.083	31.74	27.14	18.81	ND	11.83	1661.5	0.257	1.731	ND	6.99	1.619	11.04	18.62
Carcinogenic PAHs (mg/kg)																		
Benz[a]anthracene	1	11	0.02 J	0.011 J	0.017 J	4.4	3.7	2 J	0.33 U	1.7	19 J	0.33 U	0.015 J	0.31 U	0.34 J	0.26 J	0.51 J	2.4
Benzo[a]pyrene	1	1.1	0.27 U	0.27 U	0.3 U	6.5	8.8	0.76 J	0.33 U	1.9	14 J	0.33 U	0.0081 J	0.31 U	0.14 J	0.43	0.37 J	4.5
Benzo[b]fluoranthene	1	11	0.27 U	0.27 U	0.3 U	6.2	7.3	0.84 J	0.33 U	1.7	8.7 J	0.33 U	0.28 U	0.31 U	0.069 J	0.34	0.27 J	3.2
Benzo[k]fluoranthene	0.8	110	0.27 U	0.27 U	0.3 U	2.3	2.6	0.29 J	0.33 U	0.64	66 U	0.33 U	0.28 U	0.31 U	0.3 UJ	0.13 J	0.09 J	1.2
Chrysene	1	110	0.27 U	0.27 U	0.3 U	5.7	4.7	1.7 J	0.33 U	1.6	18 J	0.33 U	0.28 U	0.31 U	0.45 J	0.27 J	0.5 J	3.3
Dibenz[a,h]anthracene	0.33	1.1	0.27 U	0.27 U	0.3 U	1.4	1.4	0.21 J	0.33 U	0.52	66 U	0.33 U	0.28 U	0.31 U	0.21 J	0.46	0.12 J	0.63
Indeno[1,2,3-cd]pyrene	0.5	11	0.27 U	0.27 U	0.3 U	3.2	3.4	0.22 J	0.33 U	1.2	46 J	0.33 U	0.28 U	0.31 U	0.25 J	0.63	0.2 J	1.3
Total Carcinogenic PAHs	NE	NE	0.02	0.011	0.017	29.7	31.9	6.02	ND	9.26	105.7	ND	0.0231	ND	1.459	2.52	2.06	16.53
Total PAHs	NE	NE	0.1	0.0804	0.1	61.44	59.04	24.83	ND	21.09	1767.2	0.257	1.7541	ND	8.449	4.139	13.1	35.15
Other SVOCs (mg/kg)																		
Bis(2-ethylhexyl)phthalate	NE	NE	0.37	0.53	0.04 J	0.87 U	0.63 U	0.11 J	0.11 J	0.95	66 U	0.33 U	0.28 U	0.48 J	0.63 J	0.5	0.18 J	0.32 U
Butyl benzyl phthalate	NE	NE	0.27 U	0.27 U	0.3 U	0.61 U	0.63 U	0.64 UJ	0.33 U	0.31 U	66 U	0.33 U	0.28 U	0.12 J	0.3 UJ	0.13 J	0.32 UJ	0.32 U
Carbazole	NE	NE	0.27 U	0.27 U	0.3 U	0.37 J	0.43 J	0.64 UJ	0.33 U	0.2 J	66 U	0.33 U	0.28 U	0.31 U	0.3 UJ	0.32 U	0.32 UJ	0.31 J
Dibenzofuran	7	1,000	0.27 U	0.27 U	0.3 U	0.17 J	0.12 J	0.64 UJ	0.33 U	0.11 J	6 J	0.33 U	0.28 U	0.31 U	0.3 UJ	0.32 U	0.47 J	0.2 J
Nitroaniline,4-	NE	NE	0.27 U	0.27 U	0.3 U	0.61 U	0.63 U	0.64 UJ	0.33 U	0.31 U	66 U	0.33 U	0.28 U	0.31 U	0.3 UJ	0.32 U	0.32 UJ	0.38
Phenol	0.33	1,000	0.27 U	0.27 U	0.3 U	0.61 U	0.63 U	0.64 UJ	0.33 U	0.31 U	66 U	0.33 U	0.28 U	0.31 U	0.3 UJ	0.32 U	0.32 UJ	0.32 U
Total Other SVOCs	NE	NE	0.37	0.53	0.04	0.54	0.55	0.11	0.11	1.26	6	ND	ND	0.6	0.63	0.63	0.65	0.89
Total SVOCs	NE	NE	0.47	0.6104	0.14	61.98	59.59	24.94	0.11	22.35	1773.2	0.257	1.7541	0.6	9.079	4.769	13.75	36.04

Table 4
Detected Subsurface Soil Analytical Results
35 Kent Avenue
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	INDUSTRIAL USE SCO	WWMW-01 (0.5-5) 6/16/2009	WWMW-01 (16-17) 6/16/2009	WWMW-01 (63-64) 6/16/2009	WWMW-02 (2-5) 7/10/2009	Duplicate of: WWMW-02 (2-5) 7/10/2009	WWMW-02 (15-17) 7/10/2009	WWMW-02 (50-53) 7/13/2009	WWMW-03 (2-5) 6/23/2009	WWMW-03 (28-30) 6/24/2009	WWMW-03 (60-63) 6/26/2009	Duplicate of: WWMW-03 (60-63) 6/26/2009	WWSB-01 (1-5) 7/10/2009	WWSB-01 (14-15) 7/10/2009	WWSB-02 (2-5) 7/8/2009	WWSB-02 (10.5-11.5) 7/8/2009	WWSB-19 (2-3) 7/27/2009
PCBs (mg/kg)																		
Aroclor 1260	NE	NE	0.017 U	NA	NA	0.02 U	0.02 U	NA	NA	0.023 JN	NA	NA	NA	0.02 U	NA	0.0067 J	NA	0.02 UJ
Total PCBs	0.1	25	ND	NA	NA	ND	ND	NA	NA	0.023	NA	NA	NA	ND	NA	0.0067	NA	ND
Pesticides (mg/kg)																		
Chlordane, gamma	NE	NE	0.0017 U	NA	NA	0.002 U	0.002 U	NA	NA	0.0031 J	NA	NA	NA	0.002 U	NA	0.00088 J	NA	0.002 U
DDD,4,4-	0.0033	180	0.0033 U	NA	NA	0.037 J	0.034 J	NA	NA	0.0038 UJ	NA	NA	NA	0.0038 U	NA	0.0039 U	NA	0.004 UJ
DDT,4,4-	0.0033	94	0.0033 UJ	NA	NA	0.015 J	0.034 J	NA	NA	0.0099 JN	NA	NA	NA	0.0038 U	NA	0.002 J	NA	0.064 J
Dieldrin	0.005	2.8	0.0033 U	NA	NA	0.0038 U	0.0039 U	NA	NA	0.0057 J	NA	NA	NA	0.0038 U	NA	0.0039 U	NA	0.0054 J
Endosulfan I	2.4	920	0.0017 U	NA	NA	0.002 U	0.002 U	NA	NA	0.0084 J	NA	NA	NA	0.002 U	NA	0.002 UJ	NA	0.002 U
Endosulfan II	2.4	920	0.0033 U	NA	NA	0.01 J	0.0039 U	NA	NA	0.01 J	NA	NA	NA	0.0038 U	NA	0.0039 U	NA	0.011 JN
Endosulfan sulfate	2.4	920	0.0033 U	NA	NA	0.012 JN	0.011 J	NA	NA	0.0093 JN	NA	NA	NA	0.0038 U	NA	0.0039 UJ	NA	0.004 UJ
Endrin	0.014	410	0.0033 U	NA	NA	0.0038 U	0.0039 U	NA	NA	0.0046 JN	NA	NA	NA	0.0038 U	NA	0.0039 UJ	NA	0.011 JN
Endrin aldehyde	NE	NE	0.0033 U	NA	NA	0.01 JN	0.013 J	NA	NA	0.011 J	NA	NA	NA	0.0038 U	NA	0.0039 U	NA	0.017 JN
Endrin ketone	NE	NE	0.0033 U	NA	NA	0.024 J	0.036 J	NA	NA	0.015 J	NA	NA	NA	0.0038 U	NA	0.0039 UJ	NA	0.015 JN
Heptachlor	0.042	29	0.0017 UJ	NA	NA	0.002 U	0.002 U	NA	NA	0.0019 U	NA	NA	NA	0.002 U	NA	0.002 UJ	NA	0.002 UJ
Heptachlor epoxide	NE	NE	0.0017 U	NA	NA	0.0036 JN	0.0033 J	NA	NA	0.0019 U	NA	NA	NA	0.002 U	NA	0.00076 J	NA	0.002 U
Methoxychlor	NE	NE	0.017 U	NA	NA	0.02 U	0.02 U	NA	NA	0.017 J	NA	NA	NA	0.02 U	NA	0.02 UJ	NA	0.045 JN
Herbicides (mg/kg)																		
Total Herbicides	3.8	1,000	ND	NA	NA	ND	ND	NA	NA	ND	NA	NA	NA	ND	NA	ND	NA	ND
Metals (mg/kg)																		
Aluminum	NE	NE	10700 J	6330 J	3190 J	8230	9380	2990	5080	7820	3090	2600	2910	10000	7320	7350	3950	10100
Arsenic	13	16	2.3 J	2 J	5.5 UJ	8.9 J	7.2 J	5.9 UJ	4.3 J	7.8 J	2 J	3.4 J	2.7 J	2.7 J	5.6 UJ	5.9 J	6.2 UJ	7.4 UJ
Barium	350	10,000	51.2 J	46.8 J	27.9 J	193	189	15.4	40.4	159 J	20.8 J	17.1 J	16.2 J	32.6	152	83.7	32	102
Beryllium	7.2	2700	0.82 J	0.86 J	0.56 J	0.68 J	0.7 J	0.46 J	0.43 J	0.4 J	0.25 J	0.58 J	0.58 J	0.6 J	0.85 J	0.6 J	0.34 J	0.75 J
Cadmium	2.5	60	1.2 U	1.3 UJ	1.3 UJ	1.4 UJ	1.5 UJ	1.4 UJ	1.5 UJ	0.6 J	1.5 U	1.6 UJ	1.3 UJ	1.4 UJ	1.3 UJ	1.5 UJ	1.5 U	0.49 J
Calcium	NE	NE	1880 J	1020 J	960 J	16900 J	2860 J	647 J	1070 U	15100 J	1320 J	554 J	499 J	694 J	2420 J	22200 J	10900 J	3010 J
Chromium	NE	NE	21.7 J	17.8 J	11.1 J	18.9 J	33 J	14.2 J	16.1	14.8 J	9.4 J	14.1 J	16.5 J	16.5 J	14.9 J	19.9 J	11.6 J	16.1 J
Cobalt	NE	NE	5.8 J	7.7 J	3.1 J	7.4	9.1	6.4	3.4 J	5.2	4.7	4.8 J	4.6 J	8.8	7.8	8.4	3.2	7.1
Copper	50	10,000	18.6	26.6 J	23.4 J	59.7 J	62.7 J	11 J	11.3 J	50 J	7.6 J	10 J	9.6 J	12.9 J	6.8 J	31.7 J	12.3 J	49.6
Iron	NE	NE	16500 J	20800 J	31100 J	20100	21000	28600	38300 J	14000	8850	40300	38800	21200	24900	27500	13000	20900
Lead	63	3900	7.7	7.2	6.8	320	232	7.8 J	16 J	459 J	6.5 J	6.5 J	6.2 J	8.2	4.0 UJ	75.9	19.1	191
Magnesium	NE	NE	2910 J	2100 J	902 J	6580 J	2410 J	977	1510	3820	1140	540	475	2690	4720	5680	1640	2760 J
Manganese	1600	10,000	125 J	455 J	518 J	233	295	378	162	261	196	550	409	512	528	604	268	231
Mercury	0.18	5.7	0.018	0.0067 J	0.014 J	0.55	0.62	0.0059 J	0.012 J	0.65 J	0.0055 J	0.008 J	0.053 UJ	0.024	0.053 U	0.1	0.033	0.34
Nickel	30	10,000	16.3 J	12.8 J	5.3 J	18.6	16.3	13	5.6	13.2 J	8.6 J	5.8 J	5.5 J	14.9	9.6	15.4	7.2	15.5
Potassium	NE	NE	1250 J	1330 J	475 J	919 J	852 J	454 J	1190 J	1150 J	576 J	271 J	227 J	898 J	3710 J	1170 J	518 J	822 J
Selenium	3.9	6800	R	R	R	10.4 UJ	10.9 UJ	7.7 J	11.4 UJ	10.4 U	11.2 U	11.6 UJ	4.6 J	10.5 UJ	6.4 J	11 UJ	11 UJ	11 UJ
Silver	2	6800	1.2 U	1.3 UJ	1.3 UJ	1.4 UJ	1.5 UJ	0.14 J	1.5 UJ	0.27 J	1.5 U	0.53 J	0.38 J	1.4 UJ	0.11 J	1.5 UJ	1.5 UJ	1.5 UJ
Sodium	NE	NE	99.4	71.7	19.4 J	210	152	155 UJ	75.9 U	595 J	71 J	77.6 U	65.8 U	89.1	135 UJ	324	214 U	84.2 UJ
Thallium	NE	NE	3.7 U	3.8 U	1.9 J	4.2 U	4.4 U	4.2 U	4.6 U	4.2 U	4.5 U	4.7 UJ	3.9 UJ	4.2 U	4 U	4.4 U	4.4 U	4.4 UJ
Vanadium	NE	NE	23.7 J	28.2 J	21.1 J	22.6	21.1	19.9	24.3	21 J	16.5 J	27.4	25.5 J	23.7	41.5	32.5	15.1	37.2
Zinc	109	10,000	49.6 J	39.1 J	28.5 J	190	166	24.8	27.6	258 J	19.5 J	33	31.1 J	37.8	44.9	119	30.4	182
Other (mg/kg)																		
Free Cyanide	27	10,000	0.202 U	0.201 U	0.219 U	0.229 U	0.234 U	0.236 UJ	0.241 U	0.229 U	0.25 U	0.248 U	0.21 U	0.232 U	0.222 UJ	0.237 U	0.235 UJ	0.241 U
Nitrogen, Ammonia	NE	NE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.6 J

Table 4
Detected Subsurface Soil Analytical Results
35 Kent Avenue
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	INDUSTRIAL USE SCO	WWSB-19 (4-5) 7/6/2009	WWSB-19 (14-15) 7/28/2009	WWSB-19 (25-35) 7/29/2009	WWSB-19 (47-50) 7/29/2009	WWSB-20 (3-5) 6/29/2009	WWSB-20 (55-57) 7/21/2009	Duplicate of: WWSB-20 (55-57) 7/21/2009	WWSB-20 (62-63) 7/21/2009	WWSB-21 (1-2) 7/1/2009	WWSB-21 (33-34) 7/22/2009	WWSB-21 (68-69) 7/22/2009	WWSB-22 (3-4) 6/29/2009	WWSB-22 (13-15) 7/1/2009	WWSB-22 (37-38) 7/24/2009	WWSB-22 (65-65.5) 7/27/2009
BTEX (mg/kg)																	
Benzene	0.06	89	0.006 U	0.03 U	0.063 U	0.0061 U	0.0057 U	13	9	0.02	0.0057 U	23	0.0061 UJ	0.0055 U	0.0059 U	90	0.027
Toluene	0.7	1,000	0.006 U	0.033 U	0.045 U	0.042 U	0.00016 J	16	20	0.012 U	0.0057 U	17	0.0061 U	0.00058 J	0.0059 U	200	0.062
Ethylbenzene	1	780	0.006 U	0.0095 J	0.058	0.0071	0.0057 U	35	58	0.026	0.0057 U	160	0.0061 UJ	0.0055 U	0.0059 U	150	0.022
Xylene, total	0.26	1,000	0.006 U	0.058	0.049	0.042	0.0057 U	42 J	71 J	0.03	0.0057 U	170	0.0061 UJ	0.00086 J	0.0059 U	260	0.054
Total BTEX	NE	NE	ND	0.0675	0.107	0.0491	0.00016	106	158	0.076	ND	370	ND	0.00144	ND	700	0.165
Other VOCs (mg/kg)																	
Acetone	0.05	1,000	0.024 UJ	0.12 U	0.042 J	0.0064 J	0.023 UJ	3.3 UJ	6.2 UJ	0.026 UJ	0.023 UJ	16 U	0.024 UJ	0.022 UJ	0.028 UJ	30 U	0.026 U
Carbon disulfide	NE	NE	0.006 U	0.03 U	0.032 U	0.0061 U	0.0057 U	1.3 U	2.5 U	0.0064 U	0.0057 UJ	6.3 U	0.0061 UJ	0.0055 U	0.0011 J	12 U	0.0014 J
Chloroform	0.37	700	0.006 U	0.03 U	0.032 U	0.00047 J	0.0057 U	1.3 U	2.5 U	0.0064 U	0.0057 U	6.3 U	0.0061 U	0.0055 U	0.0059 U	12 U	0.0065 U
Dichloroethene, cis-1,2-	0.25	1,000	0.006 U	0.03 U	0.0045 J	0.0061 U	0.0057 U	1.3 U	2.5 U	0.0015 J	0.0057 U	6.3 U	0.0061 UJ	0.0055 U	0.0059 U	12 U	0.0065 U
Styrene	NE	NE	0.006 U	0.03 U	0.032 U	0.0061 U	0.0057 U	1.3 U	2.5 U	0.0064 U	0.0057 U	6.3 U	0.0061 UJ	0.0055 U	0.0059 U	26	0.0065 U
Tetrachloroethane,1,1,2,2-	NE	NE	0.006 U	0.03 U	0.032 U	0.0061 UJ	0.0057 U	1.3 U	2.5 U	0.0064 U	0.0057 U	6.3 U	0.0061 U	0.0055 U	0.0059 U	12 U	0.0065 U
Trans-1,2-dichloroethene	0.19	1,000	0.006 U	0.03 U	0.01 J	0.0061 U	0.0057 U	1.3 U	2.5 U	0.0064 U	0.0057 U	6.3 U	0.0061 U	0.00071 J	0.0059 U	12 U	0.0065 U
Trichloroethene	0.47	400	0.006 U	0.03 U	0.0053 J	0.0061 U	0.0057 U	1.3 U	2.5 U	0.0064 U	0.0057 U	6.3 U	0.0061 UJ	0.0055 U	0.0059 U	12 U	0.0065 U
Total Other VOCs	NE	NE	ND	ND	0.0618	0.00687	ND	ND	ND	0.0015	ND	ND	ND	0.00071	0.0011	26	0.0014
Total VOCs	NE	NE	ND	0.0675	0.1688	0.05597	0.00016	106	158	0.0775	ND	370	ND	0.00215	0.0011	726	0.1664
Noncarcinogenic PAHs (mg/kg)																	
Acenaphthene	20	1,000	0.96	0.32 U	0.57	0.33 U	3.9 U	27 J	130 J	0.054 J	0.062 J	33	0.32 U	0.3 J	0.31 U	9.5 J	0.35 U
Acenaphthylene	100	1,000	1.7	0.32 U	0.35 U	0.33 U	0.61 U	5.9 J	29 J	0.028 J	0.7	4.8 J	0.32 U	0.78	0.31 U	100	0.35 U
Anthracene	100	1,000	3.1	0.55	0.42	0.33 U	0.61 U	14 J	63 J	0.039 J	0.33	15	0.32 U	1.9	0.31 U	40 J	0.35 U
Benzo[g,h,i]perylene	100	1,000	3.6	0.048 J	0.35 U	0.33 U	0.61 U	1.9 J	8.1 J	0.42	0.93	1.4 J	0.32 U	5.2	0.31 U	65 U	0.35 U
Fluoranthene	100	1,000	9.1	0.21 J	0.12 J	0.33 U	0.049 J	11 J	50 J	0.035 J	0.86	13	0.32 U	9.4	0.31 U	38 J	0.35 U
Fluorene	30	1,000	1.5	0.64	0.27 J	0.33 U	0.61 U	15 J	73 J	0.035 J	0.073 J	17	0.32 U	0.57 J	0.31 U	52 J	0.35 U
Methylnaphthalene,2-	NE	NE	0.58 J	0.32 U	0.85	0.33 U	0.61 U	74 J	390 J	0.12 J	0.043 J	76	0.32 U	0.46 J	0.31 U	280	0.35 U
Naphthalene	12	1,000	0.89	0.32 U	2.4	0.33 U	0.61 U	120 J	760 J	0.34 U	0.068 J	120	0.32 U	1.1	0.31 U	840	0.35 U
Phenanthrene	100	1,000	9	2.1	0.89	0.33 U	3.9 U	47 J	220 J	0.12 J	0.51	50	0.32 U	7.5	0.31 U	130	0.35 U
Pyrene	100	1,000	8.9	0.64	0.36	0.33 U	0.054 J	18 J	84 J	0.051 J	1.2	20	0.32 U	9.2	0.31 U	36 J	0.35 U
Total Noncarcinogenic PAHs	NE	NE	39.33	4.188	5.88	ND	0.103	333.8	1807.1	0.902	4.776	350.2	ND	36.41	ND	1525.5	ND
Carcinogenic PAHs (mg/kg)																	
Benz[a]anthracene	1	11	4.7	0.21 J	0.13 J	0.33 U	0.61 U	6.8 J	32 J	0.028 J	0.67	7.7	0.32 U	5.7	0.31 U	20 J	0.35 U
Benzo[a]pyrene	1	1.1	5.4	0.11 J	0.061 J	0.33 U	0.61 U	4.9 J	22 J	0.02 J	0.93	5.2 J	0.32 U	7.3	0.31 U	15 J	0.35 U
Benzo[b]fluoranthene	1	11	4.6	0.061 J	0.033 J	0.33 U	0.61 U	2.8 J	14 J	0.34 U	0.92	3.1 J	0.32 U	6	0.31 U	13 J	0.35 U
Benzo[k]fluoranthene	0.8	110	1.4	0.32 U	0.35 U	0.33 U	0.61 U	1.2 J	67 U	0.34 U	0.3 J	1.6 J	0.32 U	2.3	0.31 U	65 U	0.35 U
Chrysene	1	110	5.1	0.26 J	0.18 J	0.33 U	0.61 U	6.6 J	29 J	0.34 U	0.81	7.5	0.32 U	5.9	0.31 U	19 J	0.35 U
Dibenz[a,h]anthracene	0.33	1.1	1.2	0.32 U	0.35 U	0.33 U	0.61 U	7 U	67 U	0.34 U	0.31	6.8 U	0.32 U	1.7	0.31 U	65 U	0.35 U
Indeno[1,2,3-cd]pyrene	0.5	11	3.8	0.037 J	0.35 U	0.33 U	0.61 U	1.5 J	6.6 J	0.39	0.95	1.2 J	0.32 U	6	0.31 U	65 U	0.35 U
Total Carcinogenic PAHs	NE	NE	26.2	0.678	0.404	ND	ND	23.8	103.6	0.438	4.89	26.3	ND	34.9	ND	67	ND
Total PAHs	NE	NE	65.53	4.866	6.284	ND	0.103	357.6	1910.7	1.34	9.666	376.5	ND	71.31	ND	1592.5	ND
Other SVOCs (mg/kg)																	
Bis(2-ethylhexyl)phthalate	NE	NE	0.12 J	0.32 U	0.35 U	0.33 U	8.9	7 U	67 U	0.34 U	3.7 J	6.8 U	0.048 J	4.7	0.11 J	65 U	0.35 U
Butyl benzyl phthalate	NE	NE	0.63 U	0.32 U	0.35 U	0.33 U	0.051 J	7 U	67 U	0.34 U	0.31 U	6.8 U	0.32 U	0.6 U	0.31 U	65 U	0.35 U
Carbazole	NE	NE	0.95	0.32 U	0.35 U	0.33 U	0.61 U	0.56 J	67 U	0.34 U	0.079 J	0.45 J	0.32 U	0.77	0.31 U	65 U	0.35 U
Dibenzofuran	7	1,000	0.93	0.32 U	0.073 J	0.33 U	0.61 U	1.7 J	9.4 J	0.34 U	0.031 J	2 J	0.32 U	0.56 J	0.31 U	8.3 J	0.35 U
Nitroaniline,4-	NE	NE	0.63 U	0.32 U	0.35 U	0.33 U	0.61 U	7 U	67 U	0.34 U	0.31 U	6.8 U	0.32 U	0.6 U	0.31 U	65 U	0.35 U
Phenol	0.33	1,000	0.63 U	0.32 U	0.35 U	0.33 U	0.61 U	7 U	67 U	0.34 U	0.31 U	6.8 U	0.32 U	0.043 J	0.31 U	65 U	0.35 U
Total Other SVOCs	NE	NE	2	ND	0.073	ND	8.951	2.26	9.4	ND	3.81	2.45	0.048	6.073	0.11	8.3	ND
Total SVOCs	NE	NE	67.53	4.866	6.357	ND	9.054	359.86	1920.1	1.34	13.476	378.95	0.048	77.383	0.11	1600.8	ND

Table 4
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Sample Name: Sample Depth (ft): Sample Date:	UNRESTRICTED USE SCO	INDUSTRIAL USE SCO	WWSB-19 (4-5) 7/6/2009	WWSB-19 (14-15) 7/28/2009	WWSB-19 (25-35) 7/29/2009	WWSB-19 (47-50) 7/29/2009	WWSB-20 (3-5) 6/29/2009	WWSB-20 (55-57) 7/21/2009	Duplicate of: WWSB-20 (55-57) 7/21/2009	WWSB-20 (62-63) 7/21/2009	WWSB-21 (1-2) 7/1/2009	WWSB-21 (33-34) 7/22/2009	WWSB-21 (68-69) 7/22/2009	WWSB-22 (3-4) 6/29/2009	WWSB-22 (13-15) 7/1/2009	WWSB-22 (37-38) 7/24/2009	WWSB-22 (65-65.5) 7/27/2009
PCBs (mg/kg)																	
Aroclor 1260	NE	NE	0.017 J	NA	NA	NA	0.019 U	NA	NA	NA	0.012 J	NA	NA	0.019 U	NA	NA	NA
Total PCBs	0.1	25	0.017	NA	NA	NA	ND	NA	NA	NA	0.012	NA	NA	ND	NA	NA	NA
Pesticides (mg/kg)																	
Chlordane, gamma	NE	NE	0.00084 J	NA	NA	NA	0.0019 U	NA	NA	NA	0.0021 J	NA	NA	0.0019 U	NA	NA	NA
DDD,4,4-	0.0033	180	0.004 U	NA	NA	NA	0.0038 U	NA	NA	NA	0.0037 U	NA	NA	0.0036 U	NA	NA	NA
DDT,4,4-	0.0033	94	0.004 UJ	NA	NA	NA	0.0038 UJ	NA	NA	NA	0.0037 UJ	NA	NA	0.0047 J	NA	NA	NA
Dieldrin	0.005	2.8	0.004 U	NA	NA	NA	0.0038 U	NA	NA	NA	0.002 J	NA	NA	0.0036 U	NA	NA	NA
Endosulfan I	2.4	920	0.002 U	NA	NA	NA	0.0019 UJ	NA	NA	NA	0.0019 UJ	NA	NA	0.0019 UJ	NA	NA	NA
Endosulfan II	2.4	920	0.004 UJ	NA	NA	NA	0.0038 UJ	NA	NA	NA	0.0064 JN	NA	NA	0.0035 J	NA	NA	NA
Endosulfan sulfate	2.4	920	0.004 UJ	NA	NA	NA	0.0038 U	NA	NA	NA	0.0037 UJ	NA	NA	0.0036 U	NA	NA	NA
Endrin	0.014	410	0.004 UJ	NA	NA	NA	0.0038 U	NA	NA	NA	0.0037 UJ	NA	NA	0.0036 U	NA	NA	NA
Endrin aldehyde	NE	NE	0.0023 J	NA	NA	NA	0.0038 UJ	NA	NA	NA	0.0082 J	NA	NA	0.0093 J	NA	NA	NA
Endrin ketone	NE	NE	0.004 UJ	NA	NA	NA	0.0038 U	NA	NA	NA	0.0037 UJ	NA	NA	0.0036 U	NA	NA	NA
Heptachlor	0.042	29	0.00045 J	NA	NA	NA	0.0019 U	NA	NA	NA	0.0015 J	NA	NA	0.0019 U	NA	NA	NA
Heptachlor epoxide	NE	NE	0.002 UJ	NA	NA	NA	0.0019 U	NA	NA	NA	0.0019 UJ	NA	NA	0.0019 U	NA	NA	NA
Methoxychlor	NE	NE	0.02 UJ	NA	NA	NA	0.019 U	NA	NA	NA	0.019 UJ	NA	NA	0.019 U	NA	NA	NA
Herbicides (mg/kg)																	
Total Herbicides	3.8	1,000	ND	NA	NA	NA	ND	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA
Metals (mg/kg)																	
Aluminum	NE	NE	8780	9390	3680	2980	9750	2350	1970	3570	6980	2820	1330	7350	10900	3570	3530
Arsenic	13	16	7.1 J	2.2 J	6.7 U	6.1 U	6.2 J	6.8 U	6.2 U	6.7 U	12.4 J	6.6 U	6.1 U	8.5 J	6 U	6.4 U	6.8 U
Barium	350	10,000	139	54.1	24.1	28.6	366 J	12.2	9	29.7	160 J	19.2	14.1	158 J	94.2 J	30.7	26.9
Beryllium	7.2	2700	0.76 J	0.52 J	0.34 J	0.5 J	0.39 J	0.22 J	0.18 J	0.45 J	0.41 J	0.38 J	0.41 J	0.49 J	0.9 J	0.43 J	0.64 J
Cadmium	2.5	60	1.5 UJ	1.4 UJ	1.6 UJ	1.4 UJ	1.4 U	1.1 J	0.94 J	0.6 J	0.64 J	0.55 J	1.5 UJ	0.56 J	1.4 UJ	0.53 J	1.6 UJ
Calcium	NE	NE	4550 J	4300 J	1000 J	951 J	40600	585 U	644 U	903 U	46200	669 U	602 U	4130	2220	948 U	843 J
Chromium	NE	NE	17.1 J	29.3 J	10.4 J	11.8 J	13.7 J	6.6 J	7.4 J	11.7 J	16 J	11.7 J	8.6 J	16.2 J	30.6 J	15.8 J	20.5 J
Cobalt	NE	NE	9.5	10.6	5.3	4.5 J	3 J	3.8	2.9	5.5	24.6 J	3.7	4.5 J	18.7 J	10.6 J	7.2	4.4 J
Copper	50	10,000	51.1 J	42.2	9.9	11.9	7.7	8.6	6	11.5	27.5 J	8.4	9.9	54.7 J	24.4 J	14.9	14.6
Iron	NE	NE	22700	25400	12800	38800	7780	12300	8930	19500	18600	12000	36200	20600	29500	13700	44700
Lead	63	3900	311	9.1	5	6.7	762 J	6.6 J	5.4 J	8.4 J	839 J	6.8 J	6.9 J	190 J	6.2 J	6.6 J	8.2 J
Magnesium	NE	NE	2290	2790 J	1200 J	630 J	14800	962 J	787 J	1150 J	5780	921 J	278 UJ	3030	5830	1220 J	564 J
Manganese	1600	10,000	600	765	193	445	387	245 J	120 J	481	375	82.6	935	458	715	331	483
Mercury	0.18	5.7	1.4	0.056 U	0.062 U	0.057 U	0.098 J	0.063 U	0.058 U	0.01 U	0.53 J	0.062 U	0.06 U	0.24 J	0.057 UJ	0.056 U	0.011 J
Nickel	30	10,000	17.5	17.7	6.7	6.3	11.4	5.7	5	7.5	15.7	6.7	3.9 J	19.3	18.9	8.9	7.1 J
Potassium	NE	NE	852 J	1520 J	561 J	411 J	1040	401 U	309 U	620	1220	476	149 U	1340	2910	603	523 J
Selenium	3.9	6800	11.1 UJ	10.7 UJ	12 UJ	10.9 UJ	R	12.1 UJ	11.1 UJ	12 UJ	R	11.7 UJ	10.5 J	R	R	11.4 UJ	8.1 J
Silver	2	6800	1.5 UJ	0.54 J	1.6 U	1.4 UJ	0.075 J	1.6 U	1.5 U	1.6 U	1.4 UJ	0.12 J	0.15 J	0.28 J	1.4 UJ	0.29 J	0.25 J
Sodium	NE	NE	73.7 J	1050 J	85.3 J	45.6 J	1110 J	80.9 UJ	74.1 UJ	79.7 UJ	833 J	78.2 UJ	73.1 UJ	213 J	92.3 J	114 UJ	81.2 UJ
Thallium	NE	NE	4.4 U	4.3 UJ	4.8 UJ	3.7 J	4.1 UJ	4.9 U	4.4 U	4.8 U	2.8 J	4.7 U	5.2 UJ	4.0 UJ	4.3 UJ	4.5 U	4.9 UJ
Vanadium	NE	NE	24.4	54.1	20.3	21.7	18.8	11 J	10 J	19.2 J	22.1	28.1 J	20.2 J	23.2	52.3	26.2 J	23.6 J
Zinc	109	10,000	232	38.2	24	25 J	142 J	14.5 J	11 J	28.8 J	262 J	18.7 J	24.2 J	270 J	63.4 J	21.1 J	30.8
Other (mg/kg)																	
Free Cyanide	27	10,000	0.238 U	0.231 U	0.257 U	0.241 U	0.227 U	0.26 U	0.246 U	0.254 U	0.0456 J	0.25 U	0.241 U	0.22 U	0.234 U	0.241 U	0.258 U
Nitrogen, Ammonia	NE	NE	4.7 U	20.2	5.4 J	2.4 U	1.5 J	NA	NA	NA	1.4 J	14.9	2.4 U	1.7 J	7.5	16.3	3.5 J

Table 4
Detected Subsurface Soil Analytical Results
35 Kent Avenue
Williamsburg Works MGP Site
Brooklyn, New York

Notes:

mg/kg - milligrams/kilogram or parts per million (ppm)

BTEX - benzene, toluene, ethylbenzene, and xylenes

VOCs - volatile organic compounds

PAHs - polycyclic aromatic hydrocarbons

SVOCs - semivolatile organic compounds

PCBs - polychlorinated biphenyls

Total BTEX, Total VOCs, Total PAHs, Total SVOCs, and Total PCBs are calculated using detects only.

6 NYCRR - New York State Register and Official Compilation of Codes, Rules and Regulations of the State of New York

UNRESTRICTED USE SCO - regulatory comparison against 6 NYCRR, Chapter IV, Part 375-6 Unrestricted Use Soil Cleanup Objectives

INDUSTRIAL USE SCO - regulatory comparison against 6 NYCRR, Chapter IV, Part 375-6 Restricted Use Industrial Soil Cleanup Objectives

NE - not established

NA - not analyzed

ND - not detected; total concentration is listed as ND because no compounds were detected in the group

Bolding indicates a detected concentration

Orange shading and bolding indicates that the detected result value exceeds established UNRESTRICTED USE SCO and INDUSTRIAL USE SCO

Validation Qualifiers:

J - estimated value

JN - analyte is presumptively present at an approximated quantity

U - indicates not detected to the reporting limit for organic analysis and the method detection limit for inorganic analysis

UJ - not detected at or above the reporting limit shown and the reporting limit is estimated

R - rejected

Table 5
Detected Sediment Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	NYSDEC ER-L	NYSDEC ER-M	WWSED-01 (0-0.5) 9/30/2009	WWSED-01 (1-2) 9/30/2009	WWSED-01 (19.5-20) 9/30/2009	WWSED-02 (0-0.5) 9/30/2009	WWSED-02 (4-5) 9/30/2009	WWSED-02 (11-12) 9/30/2009	WWSED-03 (0-0.5) 9/30/2009	WWSED-03 (9-10) 9/30/2009	WWSED-03 (16.5-17) 9/30/2009	WWSED-04 (0-0.5) 9/30/2009	WWSED-04 (3-4) 9/30/2009	WWSED-04 (16.75-17.3) 9/30/2009	WWSED-05 (0-0.5) 9/29/2009	WWSED-05 (4.5-5.0) 9/29/2009
BTEX (mg/kg)																
Benzene	0.34	NE	52 J	84 J	0.0061 J	10	250 J	7.6	110	130 J	0.0028 J	7.6 J	100	0.0049 J	8 J	210 J
Toluene	2.5	NE	240 J	410 J	0.0015 J	5.7	710 J	2.1 J	380	370 J	0.0028 J	0.58 J	470	0.0065 J	1.3 J	740 J
Ethylbenzene	1.4	NE	390 J	670 J	0.016 J	67	830 J	55	610	700 J	0.0039 J	29 J	700	0.0096 J	46 J	900 J
Xylene, total	0.12	NE	420 J	690 J	0.035 J	70	900 J	50	600	690 J	0.011 J	32 J	730	0.016 J	57 J	970 J
Total BTEX	NE	NE	1102	1854	0.0586	152.7	2690	114.7	1700	1890	0.0205	69.18	2000	0.037	112.3	2820
Other VOCs (mg/kg)																
Acetone	NE	NE	28 UJ	54 UJ	0.077 J	8.8 U	100 UJ	9.6 U	50 U	53 UJ	0.11 J	3.3 UJ	50 U	0.079 J	11 UJ	110 UJ
Butanone, 2-	NE	NE	11 UJ	22 UJ	0.024 UJ	3.5 U	42 UJ	3.8 U	20 U	21 UJ	0.027 J	1.3 UJ	20 U	0.026 UJ	4.3 UJ	45 UJ
Carbon disulfide	NE	NE	11 UJ	22 UJ	0.012 UJ	3.5 U	42 UJ	3.8 U	20 U	21 UJ	0.013 UJ	1.3 UJ	20 U	0.013 UJ	4.3 UJ	45 UJ
Chlorobenzene	NE	NE	11 UJ	22 UJ	0.0015 J	3.5 U	42 UJ	3.8 U	20 U	21 UJ	0.013 UJ	1.3 UJ	20 U	0.013 UJ	4.3 UJ	45 UJ
Total Other VOCs	NE	NE	ND	ND	0.0785	ND	ND	ND	ND	ND	0.137	ND	ND	0.079	ND	ND
Total VOCs	NE	NE	1102	1854	0.1371	152.7	2690	114.7	1700	1890	0.1575	69.18	2000	0.116	112.3	2820
Non-carcinogenic PAHs (mg/kg)																
Acenaphthene	0.016	0.500	1300 J	1800 J	11 J	180	110 J	190	1300	1200 J	0.54 J	170 J	2100	0.34 J	85 J	880 J
Acenaphthylene	0.044	0.640	57 J	230 J	2.1 J	10 J	1000 J	12 J	150 J	92 J	0.28 J	13 J	190 J	0.25 J	4.3 J	900 J
Anthracene	0.085	1.1	520 J	740 J	8.2 J	98	400 J	100	490 J	440 J	0.46 J	100 J	890	0.41 J	43 J	640 J
Benzo[g,h,i]perylene	0.17	NE	38 J	580 UJ	5.3 J	47 U	560 UJ	14 J	540 U	570 UJ	0.99 J	140 UJ	540 U	1.1 J	3.4 J	600 UJ
Fluoranthene	0.600	5.1	420 J	590 J	11 J	88	320 J	110	400 J	370 J	1.4 J	140 J	720	1.5 J	33 J	490 J
Fluorene	0.019	0.54	610 J	890 J	6.2 J	100	580 J	100	610	530 J	0.38 J	94 J	1000	0.3 J	39 J	890 J
Methylnaphthalene,2-	0.070	0.67	2600 J	4000 J	13 J	360	2700 J	360	2500	2300 J	0.87 J	320 J	3900	0.71 J	140 J	4100 J
Naphthalene	0.16	2.1	3800 J	6200 J	8.7 J	450	4800 J	510	4600	4100 J	0.84 J	1200 J	6100	0.87 J	220 J	6600 J
Phenanthrene	0.240	1.5	1500 J	2200 J	25 J	270	1300 J	300	1500	1400 J	1.6 J	320 J	2600	1.3 J	91 J	2100 J
Pyrene	0.665	2.6	590 J	860 J	24 J	120	510 J	150	630	550 J	4.4 J	160 J	1100	3.9 J	43 J	800 J
Total Non-carcinogenic PAHs	NE	NE	11435	17510	114.5	1676	11720	1846	12180	10982	11.76	2517	18600	10.68	701.7	17400
Carcinogenic PAHs (mg/kg)																
Benz[a]anthracene	0.261	1.6	210 J	300 J	6.7 J	44 J	150 J	55	200 J	180 J	0.94 J	65 J	380 J	0.86 J	17 J	250 J
Benzo[a]pyrene	0.430	1.6	150 J	220 J	6.3 J	36 J	120 J	50 J	150 J	140 J	1.1 J	54 J	290 J	0.97 J	14 J	200 J
Benzo[b]fluoranthene	NE	1.800	110 J	150 J	6.2 J	31 J	75 J	44 J	99 J	94 J	1.1 J	47 J	200 J	1.2 J	12 J	130 J
Benzo[k]fluoranthene	0.24	NE	38 J	66 J	1.6 J	11 J	560 UJ	16 J	53 J	52 J	0.26 J	20 J	75 J	0.23 J	3.7 J	55 J
Chrysene	0.384	2.8	190 J	290 J	6.9 J	46 J	160 J	59	200 J	170 J	1.1 J	70 J	360 J	1 J	17 J	260 J
Dibenz[a,h]anthracene	0.063	0.26	290 UJ	580 UJ	1.3 J	47 U	560 UJ	51 U	540 U	570 UJ	0.23 J	140 UJ	540 U	0.34 J	12 UJ	600 UJ
Indeno[1,2,3-cd]pyrene	0.2	NE	290 UJ	580 UJ	4.7 J	9.8 J	560 UJ	15 J	540 U	570 UJ	1.1 J	17 J	540 U	1.2 J	3.8 J	49 J
Total Carcinogenic PAHs	NE	NE	698	1026	33.7	177.8	505	239	702	636	5.83	273	1305	5.8	67.5	944
Total PAHs (mg/kg)																
Total PAHs	4	45	12133	18536	148.2	1853.8	12225	2085	12882	11618	17.59	2790	19905	16.48	769.2	18344

Table 5
Detected Sediment Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	NYSDEC ER-L	NYSDEC ER-M	WWSED-01 (0-0.5) 9/30/2009	WWSED-01 (1-2) 9/30/2009	WWSED-01 (19.5-20) 9/30/2009	WWSED-02 (0-0.5) 9/30/2009	WWSED-02 (4-5) 9/30/2009	WWSED-02 (11-12) 9/30/2009	WWSED-03 (0-0.5) 9/30/2009	WWSED-03 (9-10) 9/30/2009	WWSED-03 (16.5-17) 9/30/2009	WWSED-04 (0-0.5) 9/30/2009	WWSED-04 (3-4) 9/30/2009	WWSED-04 (16.75-17.3) 9/30/2009	WWSED-05 (0-0.5) 9/29/2009	WWSED-05 (4.5-5.0) 9/29/2009
Other SVOCs (mg/kg)																
Bis(2-ethylhexyl)phthalate	0.18216	2.64651	290 UJ	580 UJ	7.7 UJ	47 U	560 UJ	51 U	540 U	570 UJ	5.2 UJ	140 UJ	540 U	9.2 J	12 UJ	600 UJ
Butyl benzyl phthalate	NE	0.063	290 UJ	580 UJ	3.3 UJ	2.7 J	560 UJ	51 U	540 U	570 UJ	0.71 UJ	140 UJ	540 U	0.7 UJ	12 UJ	600 UJ
Carbazole	NE	NE	290 UJ	580 UJ	0.23 J	4.7 J	560 UJ	6.5 J	540 U	570 UJ	0.71 UJ	140 UJ	48 J	0.11 J	1.8 J	600 UJ
Chloroaniline, 4-	NE	NE	290 UJ	580 UJ	3.3 UJ	47 U	560 UJ	51 U	540 U	570 UJ	0.71 UJ	140 UJ	540 U	0.7 UJ	12 UJ	600 UJ
Dibenzofuran	NE	NE	62 J	83 J	0.72 J	11 J	55 J	13 J	59 J	53 J	0.13 J	31 J	130 J	0.12 J	4.5 J	92 J
Dichlorobenzene, 1,2-	NE	0.013	290 UJ	580 UJ	3.3 UJ	47 U	560 UJ	51 U	540 U	570 UJ	0.067 J	140 UJ	540 U	0.075 J	12 UJ	600 UJ
Dichlorobenzene, 1,3-	NE	NE	290 UJ	580 UJ	3.3 UJ	47 U	560 UJ	51 U	540 U	570 UJ	0.71 UJ	140 UJ	540 U	0.7 UJ	12 UJ	600 UJ
Dichlorobenzene, 1,4-	NE	0.110	290 UJ	580 UJ	3.3 UJ	47 U	560 UJ	51 U	540 U	570 UJ	0.12 J	140 UJ	540 U	0.14 J	12 UJ	600 UJ
Di-n-butyl phthalate	NE	0.058	290 UJ	580 UJ	3.3 UJ	47 U	560 UJ	51 U	540 U	570 UJ	0.13 J	140 UJ	540 U	0.45 J	12 UJ	600 UJ
Methylphenol, 4-	NE	NE	290 UJ	580 UJ	0.26 J	47 U	40 J	51 U	540 U	570 UJ	0.45 J	140 UJ	540 U	1.2 J	12 UJ	47 J
Nitroaniline, 3-	NE	NE	1800 UJ	3600 UJ	21 UJ	300 U	3500 UJ	320 U	3400 U	3600 UJ	4.4 UJ	890 UJ	3400 U	0.13 J	73 UJ	3800 UJ
Trichlorobenzene, 1,2,4-	NE	0.0048	290 UJ	580 UJ	3.3 UJ	47 U	560 UJ	51 U	540 U	570 UJ	0.71 UJ	140 UJ	540 U	0.7 UJ	12 UJ	600 UJ
Total Other SVOCs	NE	NE	62	83	1.21	18.4	95	19.5	59	53	0.897	31	178	11.425	6.3	139
PCBs (mg/kg)																
Aroclor 1242	NE	NE	0.58 JN	0.072 UJ	0.082 UJ	0.03 U	0.18 UJ	0.032 UJ	0.034 U	0.18 UJ	0.22 H	0.088 UJ	0.033 UJ	R	0.036 UJ	0.075 UJ
Aroclor 1248	0.03	NE	0.19 UJ	0.072 UJ	0.54 J	0.03 U	0.45 J	0.032 UJ	0.034 U	1.1 J	0.089 UJ	0.37 JN	0.033 UJ	0.41 J	0.057 J	0.075 UJ
Aroclor 1254	0.06	NE	0.19 UJ	0.072 UJ	0.63 JN	0.03 U	0.18 UJ	0.042 JN	0.034 U	0.18 UJ	0.28 J	0.43 JN	0.033 UJ	0.33 J	0.036 UJ	0.075 UJ
Aroclor 1260	0.005	NE	0.19 UJ	0.072 UJ	0.48 J	0.03 UJ	0.18 UJ	0.014 J	0.034 UJ	0.18 UJ	0.074 J	0.24 J	0.033 UJ	0.1 J	0.12 J	0.075 UJ
Total PCBs (mg/kg)																
Total PCBs	0.023	0.18	0.58	ND	1.65	ND	0.45	0.056	ND	1.1	0.354	1.04	ND	0.84	0.177	ND
Pesticides (mg/kg)																
Aldrin	0.002	NE	0.037 UJ	0.036 UJ	0.0082 UJ	0.062 JN	0.14 UJ	0.031 JN	0.068 U	0.073 UJ	0.022 UJ	0.044 UJ	0.066 UJ	0.022 UJ	0.036 UJ	0.075 UJ
Alpha-bhc	NE	NE	0.042 JN	0.037 JN	0.017 J	0.06 U	0.18 JN	0.013 U	0.43 JN	0.073 UJ	0.022 UJ	0.066 J	0.078 JN	0.014 J	0.036 UJ	0.088 JN
Alpha-chlordane	NE	NE	0.037 UJ	0.036 UJ	0.01 J	0.06 U	0.14 UJ	0.027 JN	0.13 JN	0.16 JN	0.022 UJ	0.044 UJ	0.066 U	0.031 J	0.036 UJ	0.075 UJ
Beta-BHC	NE	NE	0.21 J	0.036 UJ	0.0091 JN	0.099 J	1.4 J	0.032 JN	0.068 U	0.073 UJ	0.022 UJ	0.044 UJ	0.066 U	0.022 UJ	0.014 J	0.31 J
DDD, 4,4-	0.002	0.02	0.073 UJ	0.07 UJ	0.18 J	0.44 JN	0.27 UJ	0.025 U	0.13 U	0.19 JN	0.14 J	0.23 J	0.13 UJ	0.33 J	0.07 UJ	0.15 UJ
DDE, 4,4-	0.0022	0.027	0.073 UJ	0.07 UJ	0.27 JN	0.12 U	0.27 UJ	0.025 UJ	0.31 JN	0.36 JN	0.33 J	0.13 JN	0.13 UJ	0.32 J	0.07 UJ	0.15 UJ
DDT, 4,4-	0.001	0.007	0.88 J	0.24 J	0.024 JN	0.78 J	3.8 J	0.28 J	0.58 JN	0.59 JN	0.12 J	0.092 JN	1.3 J	0.28 J	0.09 J	1.3 J
Delta-BHC	NE	NE	0.037 UJ	0.036 UJ	0.0082 UJ	0.06 U	0.44 J	0.071 JN	0.22 J	0.21 J	0.022 UJ	0.044 UJ	0.066 UJ	0.022 UJ	0.036 UJ	0.25 JN
Dieldrin	0.002	NE	0.073 UJ	0.07 UJ	0.018 JN	0.12 U	0.27 UJ	0.045 J	0.13 U	0.14 UJ	0.046 J	0.085 UJ	0.13 U	0.26 J	0.07 UJ	0.15 UJ
Endosulfan I	NE	NE	0.037 UJ	0.036 UJ	0.0082 UJ	0.13 J	0.14 UJ	0.013 UJ	0.068 U	0.073 UJ	0.022 UJ	0.044 UJ	0.066 UJ	0.022 UJ	0.036 UJ	0.075 UJ
Endosulfan II	NE	NE	0.073 UJ	0.07 UJ	0.016 UJ	0.12 U	0.27 UJ	0.025 U	0.24 J	0.21 J	0.043 UJ	0.043 J	0.13 U	0.043 UJ	0.07 UJ	0.15 UJ
Endosulfan sulfate	NE	NE	0.3 JN	0.12 JN	0.05 J	0.12 U	1.3 JN	0.28 J	0.13 U	0.14 UJ	0.043 UJ	0.085 UJ	0.68 JN	0.043 UJ	0.07 UJ	0.45 JN
Endrin	0.003	NE	0.073 UJ	0.07 UJ	0.016 UJ	0.12 U	0.27 UJ	0.025 U	0.13 U	0.14 UJ	0.014 J	0.085 UJ	0.13 UJ	0.023 J	0.07 UJ	0.15 UJ
Endrin aldehyde	NE	NE	0.36 UJ	0.14 UJ	0.16 UJ	0.72 J	0.48 J	0.31 U	0.33 U	0.44 JN	0.17 UJ	0.17 UJ	0.55 JN	0.11 J	0.35 UJ	0.24 JN
Endrin ketone	NE	NE	0.088 JN	0.07 UJ	0.016 UJ	0.31 J	0.27 UJ	0.1 J	0.79	0.74 J	0.043 UJ	0.089 J	0.13 UJ	0.043 UJ	0.07 UJ	0.15 UJ
Gamma-Chlordane	NE	NE	0.37 J	0.041 JN	0.023 JN	0.06 U	0.24 JN	0.013 UJ	0.09 JN	0.46 JN	0.024 JN	0.052 JN	0.13 JN	0.035 JN	0.036 UJ	0.11 JN
Heptachlor	NE	0.0003	0.038 J	0.029 J	0.018 J	0.095 J	0.25 J	0.062 J	0.068 U	0.073 UJ	0.021 J	0.076 J	0.066 U	0.017 J	0.013 J	0.075 UJ
Heptachlor epoxide	0.005	NE	0.16 J	0.036 UJ	0.038 J	0.27 J	0.32 J	0.15 J	0.082 JN	0.074 J	0.036 J	0.038 J	0.24 J	0.034 J	0.036 UJ	0.075 UJ
Methoxychlor	NE	NE	0.74 J	0.36 UJ	0.082 UJ	1.5 J	2.8 J	0.64 J	0.68 U	0.73 UJ	0.22 UJ	0.31 J	1.3 J	0.22 UJ	0.36 UJ	0.92 J

Table 5
Detected Sediment Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	NYSDEC ER-L	NYSDEC ER-M	WWSED-01 (0-0.5) 9/30/2009	WWSED-01 (1-2) 9/30/2009	WWSED-01 (19.5-20) 9/30/2009	WWSED-02 (0-0.5) 9/30/2009	WWSED-02 (4-5) 9/30/2009	WWSED-02 (11-12) 9/30/2009	WWSED-03 (0-0.5) 9/30/2009	WWSED-03 (9-10) 9/30/2009	WWSED-03 (16.5-17) 9/30/2009	WWSED-04 (0-0.5) 9/30/2009	WWSED-04 (3-4) 9/30/2009	WWSED-04 (16.75-17.3) 9/30/2009	WWSED-05 (0-0.5) 9/29/2009	WWSED-05 (4.5-5.0) 9/29/2009
Herbicides (mg/kg)																
Total Herbicides	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)																
Aluminum	NE	1.8	12700 J	11600 J	17000 J	5880	13200 J	9820	9260	9390 J	17600 J	10600 J	5420	17800 J	15400 J	8400 J
Antimony	NE	9.3	9 UJ	8.6 UJ	9.7 UJ	12.1 J	8.3 UJ	9.5 J	4.2 J	8.8 J	10.3 UJ	4.3 J	5.9 J	10.6 UJ	8.9 UJ	9.6 J
Arsenic	8.2	70	162 J	175 J	32.6 J	326	173 J	198	278	276 J	28.9 J	117 J	382	28.4 J	72.2 J	305 J
Barium	NE	48	580 J	479 J	308 J	621 J	439 J	750 J	667 J	675 J	257 J	613 J	575 J	282 J	402 J	685 J
Beryllium	NE	NE	0.87 J	0.79 J	1.3 J	0.48 J	0.88 J	0.72 J	0.67 J	0.7 J	1.3 J	0.88 J	0.44 J	1.2 J	0.98 J	0.5 J
Cadmium	1.2	9.6	3.4 J	2.7 J	18 J	4 J	2.7 J	4.3 J	3.3 J	6.9 J	13.6 J	13.6 J	2.7 J	15.3 J	4.7 J	2.4 J
Calcium	NE	NE	8170 J	7170 J	5670 J	6500	8290 J	7450	6670	7480 J	5450 J	9710 J	4480	7160 J	6870 J	6390 J
Chromium	81	370	161 J	146 J	475 J	206 J	129 J	162 J	263 J	268 J	398 J	836 J	145 J	450 J	200 J	201 J
Cobalt	NE	10	9.1 J	8.8 J	12.4 J	6	10.1 J	7.6	7.1	8.8 J	12.8 J	11.5 J	4.3	13.5 J	12.5 J	7.4 J
Copper	34	270	603 J	549 J	518 J	1260	597 J	791	805	839 J	477 J	691 J	1170	524 J	449 J	1110 J
Iron	NE	NE	29500 J	27000 J	36300 J	23900	28200 J	28500	23600	29900 J	37300 J	30500 J	20000	38800 J	39100 J	28100 J
Lead	47	218	1040 J	1340 J	743 J	2140 J	953 J	1640 J	2040 J	1900 J	622 J	1600 J	2140 J	889 J	832 J	2180 J
Magnesium	NE	NE	7840 J	6980 J	8410 J	4140	7420 J	6280	5580	6120 J	8590 J	6900 J	3230	9480 J	8920 J	5590 J
Manganese	NE	260	360 J	360 J	382 J	179	386 J	259	260	256 J	364 J	287 J	147	437 J	516 J	264 J
Mercury	0.15	0.71	9.2 J	7 J	4 J	8.5	10.3 J	12.6	16	13.1 J	5 J	5.3 J	9	5 J	10.8 J	15.9 J
Nickel	21	52	51.3 J	44.4 J	76.2 J	43.7 J	46.9 J	40.5 J	46.8 J	53.2 J	65.9 J	68.9 J	37.7 J	118 J	50.3 J	38.6 J
Potassium	NE	NE	3130 J	2800 J	3830 J	1530 J	3090 J	2530 J	2270 J	2430 J	3830 J	2620 J	1330 J	4070 J	3850 J	2250 J
Silver	1.0	3.7	10.4 J	8.2 J	16.2 J	6.7	7.2 J	5.2	5.7	10 J	15.3 J	11.7 J	3.8	16.3 J	11.2 J	11.9 J
Sodium	NE	NE	9090 J	8390 J	11400 J	6040	7710 J	7910	7350	8500 J	12700 J	12100 J	6580	12600 J	10100 J	8610 J
Thallium	NE	NE	8.2 UJ	7.8 UJ	8.8 UJ	1.7 J	7.6 UJ	7 UJ	7.2 UJ	7.7 UJ	9.4 UJ	9.7 UJ	7.4 UJ	9.6 UJ	4.2 J	3.1 J
Vanadium	NE	57	42.8 J	36.8 J	76.1 J	22.7 J	43.1 J	32.9 J	31.2 J	37.8 J	80.9 J	41.1 J	21.7 J	96.5 J	47.4 J	34.9 J
Zinc	150	410	869 J	877 J	764 J	1400 J	835 J	1200 J	863 J	1120 J	614 J	1750 J	1070 J	762 J	713 J	1160 J
Other (mg/kg)																
Cyanide, Free	NE	NE	0.132 J	0.258 J	0.479 UJ	0.139 J	0.625 J	0.113 J	0.157 J	0.126 J	0.517 UJ	0.156 J	0.118 J	0.512 U	0.128 J	0.175 J

Table 5
Detected Sediment Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	NYSDEC ER-L	NYSDEC ER-M	WWSED-05 (19.5-20) 9/29/2009	Duplicate of: WWSED-05 (19.5-20) 9/29/2009	WWSED-06 (0-0.5) 9/29/2009	WWSED-06 (9-10) 9/29/2009	WWSED-06 (15-18.5) 9/29/2009	WWSED-07 (0-0.5) 9/29/2009	WWSED-07 (4-4.5) 9/29/2009	WWSED-07 (15-15.7) 9/29/2009
BTEX (mg/kg)										
Benzene	0.34	NE	0.0028 J	0.0028 J	22	28	0.017 J	0.0026 J	0.36 J	0.0023 J
Toluene	2.5	NE	0.013 UJ	0.00038 J	32	33	0.025 J	0.014 UJ	0.0068 J	0.014 UJ
Ethylbenzene	1.4	NE	0.0023 J	0.0031 J	170	190	0.082 J	0.014 UJ	0.23 J	0.014 UJ
Xylene, total	0.12	NE	0.014 J	0.018 J	180	200	0.094 J	0.0053 J	0.27 J	0.0018 J
Total BTEX	NE	NE	0.0191	0.02428	404	451	0.218	0.0079	0.8668	0.0041
Other VOCs (mg/kg)										
Acetone	NE	NE	0.13 UJ	0.13 J	16 U	21 U	0.054 UJ	0.086 UJ	0.11 UJ	0.077 UJ
Butanone, 2-	NE	NE	0.032 J	0.033 J	6.3 U	8.3 U	0.027 UJ	0.028 UJ	0.036 J	0.028 UJ
Carbon disulfide	NE	NE	0.013 UJ	0.0041 J	6.3 U	8.3 U	0.003 J	0.014 UJ	0.0046 J	0.0047 J
Chlorobenzene	NE	NE	0.013 UJ	0.011 UJ	6.3 U	8.3 U	0.013 UJ	0.014 UJ	0.0036 J	0.014 UJ
Total Other VOCs	NE	NE	0.032	0.1671	ND	ND	0.003	ND	0.0442	0.0047
Total VOCs	NE	NE	0.0511	0.19138	404	451	0.221	0.0079	0.911	0.0088
Non-carcinogenic PAHs (mg/kg)										
Acenaphthene	0.016	0.500	1.1 J	1.3 J	350	280	1.3 J	0.47 J	0.69 J	0.23 J
Acenaphthylene	0.044	0.640	0.51 J	1 J	28 J	24 J	0.41 J	0.24 J	0.4 J	0.29 J
Anthracene	0.085	1.1	1 J	1.5 J	140 J	110	0.96 J	0.76 J	0.75 J	0.54 J
Benzo[g,h,i]perylene	0.17	NE	2.1 J	4.1 J	170 U	89 U	1.6 J	2.3 J	1.4 J	1.6 J
Fluoranthene	0.600	5.1	3.3 J	5.1 J	110 J	97	2 J	2.8 J	2.1 J	1.5 J
Fluorene	0.019	0.54	0.79 J	0.96 J	160 J	140	0.93 J	0.43 J	0.55 J	0.21 J
Methylnaphthalene,2-	0.070	0.67	1.7 J	1.6 J	710	560	2.3 J	1.1 J	1.6 J	0.26 J
Naphthalene	0.16	2.1	1.6 J	1.4 J	1200	890	3.2 J	1.3 J	18 J	0.3 J
Phenanthrene	0.240	1.5	3.5 J	6 J	420	360	2.6 J	2.4 J	2.3 J	0.96 J
Pyrene	0.665	2.6	8.4 J	16 J	160 J	150	5.3 J	4.8 J	5.7 J	3.6 J
Total Non-carcinogenic PAHs	NE	NE	24	38.96	3278	2611	20.6	16.6	33.49	9.49
Carcinogenic PAHs (mg/kg)										
Benz[a]anthracene	0.261	1.6	2 J	4.4 J	53 J	49 J	1.5 J	1.6 J	1.3 J	1.1 J
Benzo[a]pyrene	0.430	1.6	2.2 J	4.6 J	43 J	40 J	1.6 J	1.8 J	1.2 J	1.3 J
Benzo[b]fluoranthene	NE	1.800	1.9 J	3.5 J	29 J	27 J	1.5 J	2.4 J	1.6 J	1.8 J
Benzo[k]fluoranthene	0.24	NE	0.54 J	0.93 J	170 U	13 J	0.49 J	0.62 J	0.37 J	0.34 J
Chrysene	0.384	2.8	2.2 J	4.6 J	53 J	52 J	1.6 J	1.8 J	1.4 J	1.2 J
Dibenz[a,h]anthracene	0.063	0.26	0.5 J	1.1 J	170 U	89 U	0.42 J	0.55 J	0.4 J	1.5 UJ
Indeno[1,2,3-cd]pyrene	0.2	NE	2.3 J	4.2 J	170 U	9.4 J	1.7 J	2.4 J	1.4 J	1.6 J
Total Carcinogenic PAHs	NE	NE	11.64	23.33	178	190.4	8.81	11.17	7.67	7.34
Total PAHs (mg/kg)										
Total PAHs	4	45	35.64	62.29	3456	2801.4	29.41	27.77	41.16	16.83

Table 5
Detected Sediment Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	NYSDEC ER-L	NYSDEC ER-M	WWSED-05 (19.5-20) 9/29/2009	Duplicate of: WWSED-05 (19.5-20) 9/29/2009	WWSED-06 (0-0.5) 9/29/2009	WWSED-06 (9-10) 9/29/2009	WWSED-06 (15-18.5) 9/29/2009	WWSED-07 (0-0.5) 9/29/2009	WWSED-07 (4-4.5) 9/29/2009	WWSED-07 (15-15.7) 9/29/2009
Other SVOCs (mg/kg)										
Bis(2-ethylhexyl)phthalate	0.18216	2.64651	9.8 J	12 UJ	170 U	89 U	13 J	14 UJ	10 J	20 J
Butyl benzyl phthalate	NE	0.063	0.7 UJ	1.2 UJ	170 U	89 U	0.4 J	0.25 J	1.2 UJ	0.38 J
Carbazole	NE	NE	0.19 J	0.18 J	170 U	89 U	0.095 J	0.26 J	0.22 J	1.5 UJ
Chloroaniline,4-	NE	NE	0.15 J	0.34 J	170 U	89 U	0.36 J	0.79 J	0.42 J	1.1 J
Dibenzofuran	NE	NE	0.23 J	0.24 J	19 J	16 J	0.25 J	0.18 J	0.25 J	1.5 UJ
Dichlorobenzene,1,2-	NE	0.013	0.11 J	0.086 J	170 U	89 U	0.048 J	1.5 UJ	1.2 UJ	1.5 UJ
Dichlorobenzene,1,3-	NE	NE	0.7 UJ	1.2 UJ	170 U	89 U	0.045 J	1.5 UJ	1.2 UJ	1.5 UJ
Dichlorobenzene,1,4-	NE	0.110	0.2 J	0.17 J	170 U	89 U	0.18 J	0.38 J	0.34 J	1.5 UJ
Di-n-butyl phthalate	NE	0.058	0.59 J	0.21 J	170 U	89 U	0.15 J	1.5 UJ	0.22 J	1.5 UJ
Methylphenol, 4-	NE	NE	1.4 J	0.89 J	170 U	89 U	0.27 J	0.4 J	1.2 J	0.19 J
Nitroaniline,3-	NE	NE	4.4 UJ	7.4 UJ	1100 U	560 U	4.6 UJ	0.094 J	7.6 UJ	9.4 UJ
Trichlorobenzene, 1,2,4-	NE	0.0048	0.7 UJ	1.2 UJ	170 U	89 U	0.065 J	1.5 UJ	1.2 UJ	1.5 UJ
Total Other SVOCs	NE	NE	12.67	2.116	19	16	14.863	2.354	12.65	21.67
PCBs (mg/kg)										
Aroclor 1242	NE	NE	0.044 UJ	R	0.021 U	0.027 U	1.6 J	3.3 J	0.19 UJ	0.24 J
Aroclor 1248	0.03	NE	0.35 J	0.078 J	0.035 J	0.068 J	0.23 UJ	0.23 UJ	0.75 JN	0.047 UJ
Aroclor 1254	0.06	NE	0.38 J	0.099 J	0.032 J	0.063 JN	1 J	1.1 J	1.2 J	0.15 JN
Aroclor 1260	0.005	NE	0.18 J	0.049 J	0.04 J	0.084 J	0.61 J	0.82 J	1.2 J	0.13 J
Total PCBs (mg/kg)										
Total PCBs	0.023	0.18	0.91	0.226	0.107	0.215	3.21	5.22	3.15	0.52
Pesticides (mg/kg)										
Aldrin	0.002	NE	0.044 UJ	0.037 UJ	0.021 U	0.055 U	0.023 UJ	0.046 UJ	0.019 UJ	0.023 UJ
Alpha-bhc	NE	NE	0.044 UJ	0.037 UJ	0.021 U	0.16	0.023 UJ	0.046 UJ	0.019 UJ	0.023 UJ
Alpha-chlordane	NE	NE	0.044 UJ	0.016 J	0.021 U	0.055 U	0.019 J	0.046 UJ	0.044 J	0.023 UJ
Beta-BHC	NE	NE	0.044 UJ	0.037 UJ	0.06 J	0.13 J	0.023 UJ	0.046 UJ	0.019 UJ	0.023 UJ
DDD,4,4-	0.002	0.02	0.17 J	0.16 J	0.055 JN	0.14 J	0.044 UJ	0.51 J	0.036 UJ	0.045 UJ
DDE,4,4-	0.0022	0.027	0.18 J	0.17 J	0.07 J	0.11 UJ	0.044 UJ	0.13 J	0.036 UJ	0.096 J
DDT,4,4-	0.001	0.007	0.15 JN	0.14 JN	0.36 J	1.1 J	0.044 UJ	1.3 J	0.12 JN	0.045 UJ
Delta-BHC	NE	NE	0.044 UJ	0.037 UJ	0.067 J	0.07 JN	0.03 JN	0.087 JN	0.019 UJ	0.023 UJ
Dieldrin	0.002	NE	0.085 UJ	0.11 J	0.031 J	0.11 U	0.016 J	0.09 UJ	0.044 JN	0.045 UJ
Endosulfan I	NE	NE	0.044 UJ	0.037 UJ	0.021 UJ	0.055 U	0.023 UJ	0.046 UJ	0.019 UJ	0.023 UJ
Endosulfan II	NE	NE	0.085 UJ	0.072 UJ	0.04 U	0.11 UJ	0.052 JN	0.09 UJ	0.036 UJ	0.045 UJ
Endosulfan sulfate	NE	NE	0.085 UJ	0.072 UJ	0.17 JN	1.1 J	0.062 JN	0.09 UJ	0.036 UJ	0.045 UJ
Endrin	0.003	NE	0.085 UJ	0.072 UJ	0.04 UJ	0.16 JN	0.044 UJ	0.051 J	0.036 UJ	0.045 UJ
Endrin aldehyde	NE	NE	0.43 UJ	0.14 UJ	0.16 U	0.11 U	0.13 J	0.079 JN	0.12 JN	0.18 UJ
Endrin ketone	NE	NE	0.085 UJ	0.072 UJ	0.04 UJ	0.11 UJ	0.044 UJ	0.09 UJ	0.036 UJ	0.045 UJ
Gamma-Chlordane	NE	NE	0.044 UJ	0.037 UJ	0.021 U	0.079 JN	0.032 J	0.054 JN	0.05 JN	0.039 J
Heptachlor	NE	0.0003	0.028 J	0.037 UJ	0.021 U	0.055 U	0.023 UJ	0.046 UJ	0.019 J	0.023 UJ
Heptachlor epoxide	0.005	NE	0.044 UJ	0.037 UJ	0.032 J	0.055 U	0.015 J	0.046 UJ	0.041 J	0.023 UJ
Methoxychlor	NE	NE	0.44 UJ	0.37 UJ	0.54	0.55 UJ	0.23 UJ	0.46 UJ	0.19 UJ	0.23 UJ

Table 5
Detected Sediment Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Sample Depth (ft): Sample Date:	NYSDEC ER-L	NYSDEC ER-M	WWSED-05 (19.5-20) 9/29/2009	Duplicate of: WWSED-05 (19.5-20) 9/29/2009	WWSED-06 (0-0.5) 9/29/2009	WWSED-06 (9-10) 9/29/2009	WWSED-06 (15-18.5) 9/29/2009	WWSED-07 (0-0.5) 9/29/2009	WWSED-07 (4-4.5) 9/29/2009	WWSED-07 (15-15.7) 9/29/2009
Herbicides (mg/kg)										
Total Herbicides	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND
Metals (mg/kg)										
Aluminum	NE	1.8	14700 J	12200 J	1380	3760	17500 J	20900 J	15900 J	18200 J
Antimony	NE	9.3	10.2 UJ	9 UJ	5 UJ	6.7 UJ	10.9 UJ	11 UJ	8.9 UJ	11 UJ
Arsenic	8.2	70	34.1 J	31.1 J	15.1	20.8	20.8 J	22.7 J	25.9 J	23 J
Barium	NE	48	291 J	306 J	78 J	116 J	186 J	209 J	276 J	160 J
Beryllium	NE	NE	1.1 J	0.94 J	1.5 U	2.0 U	1.1 J	1.4 J	1.2 J	1.1 J
Cadmium	1.2	9.6	22.8 J	18.7 J	1.9 J	4.5 J	10.3 J	8 J	24.2 J	6.2 J
Calcium	NE	NE	7070 J	6310 J	1730	2530	6860 J	7500 J	6350 J	6340 J
Chromium	81	370	676	486 J	52.3 J	134 J	388 J	366 J	554 J	383 J
Cobalt	NE	10	14.4 J	13.6 J	1.7	4.4	12.7 J	13.4 J	13.5 J	12.7 J
Copper	34	270	634 J	544 J	42.3	138	497 J	502 J	681 J	409 J
Iron	NE	NE	40400 J	38900 J	4380	10500	36000 J	43900 J	35700 J	37000 J
Lead	47	218	1550 J	1110 J	197 J	268 J	771 J	632 J	980 J	919 J
Magnesium	NE	NE	8590 J	7240 J	890	2280	9710 J	11000 J	8460 J	9420 J
Manganese	NE	260	380 J	336 J	41.4	98.5	436 J	545 J	372 J	532 J
Mercury	0.15	0.71	3.5 J	4.1 J	3.9	2	3.9 J	3.2 J	4.7 J	3.6 J
Nickel	21	52	116 J	99.5 J	9.3 J	27.2 J	66.6 J	67 J	122 J	69.7 J
Potassium	NE	NE	3910 J	3130 J	197 J	1010 J	4210 J	5570 J	3630 J	4060 J
Silver	1.0	3.7	21.1 J	18.3 J	0.59 J	2.4	15.6 J	18.1 J	19.7 J	13.9 J
Sodium	NE	NE	13800 J	10800 J	1080	3380	13400 J	14600 J	9310 J	11100 J
Thallium	NE	NE	3.7 J	3.7 J	4.6 UJ	6.1 UJ	9.9 UJ	10 UJ	8.1 UJ	10 UJ
Vanadium	NE	57	109 J	90.3 J	4.9 J	12.5 J	64.2 J	89.1 J	84.1 J	59 J
Zinc	150	410	1060 J	958 J	129 J	328 J	540 J	542 J	1010 J	475 J
Other (mg/kg)										
Cyanide, Free	NE	NE	0.509 UJ	0.431 UJ	0.249 UJ	0.324 UJ	0.528 UJ	0.545 UJ	0.131 J	0.552 U

Table 5
Detected Sediment Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Notes:

mg/kg - milligrams/kilogram or parts per million (ppm)

BTEX - benzene, toluene, ethylbenzene, and xylenes

VOCs - volatile organic compounds

PAHs - polycyclic aromatic hydrocarbons

SVOCs - semivolatile organic compounds

PCBs - polychlorinated biphenyls

Total BTEX, Total VOCs, Total PAHs, Total SVOCs, and Total PCBs are calculated using detects only.

NE - not established

Bolding indicates a detected result value

Gray shading and bolding indicates that the detected result value exceeds established ER-L

Yellow shading and bolding indicates that the detected result value exceeds established ER-M

NYSDEC - New York State Department of Environmental Conservation

ER-L - Effects Range Low

ER-M - Effects Range Medium

ER-L and ER-M from "NYSDEC Technical Guidance for Screening Contaminated Sediments, Division of Fish, Wildlife and Marine Resources [NYSDEC, Jan. 1999]."

Validation Qualifiers:

J - estimated value

JN - analyte is presumptively present at an approximated quantity

U - indicates not detected to the reporting limit for organic analysis and the method detection limit for inorganic analysis

UJ - not detected at or above the reporting limit shown and the reporting limit is estimated

R - rejected

Table 6
Detected Groundwater Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Screen Interval (feet): Sample Date:	NYS AWQS	WWSB-03 (5-10) 7/14/2009	WWSB-05 (3-8) 7/15/2009	WWSB-07 (2.5-7.5) 7/15/2009	WWSB-19 (5-15) 7/28/2009	WWSB-19 (25-35) 7/29/2009	Duplicate of: WWSB-19 (25-35) 7/29/2009	WWSB-19 (40-50) 7/29/2009	WWSB-21 (4-14) 7/8/2009	Duplicate of: WWSB-21 (4-14) 7/8/2009	WWSB-21 (15-25) 7/22/2009	WWSB-21 (40-50) 7/23/2009	WWSB-22 (6-16) 7/8/2009	WWSB-22 (35-45) 7/27/2009	WWSB-22 (55-65) 7/27/2009	WWMW-01 (13-23) 11/4/2009	WWMW-02 (7.4-17.4) 11/4/2009	WWMW-03 (4-14) 11/4/2009
BTEX (ug/L)																		
Benzene	1	3700	3000	19000	79	44	36	11 U	330	370	4000	8300	43	1300	9600	5.0 U	5.0 U	5.0 U
Toluene	5	110 J	1600	3300	170	91 J	59 J	64	3.7 J	4.5 J	2000	2700	5 U	360	1100	5.0 U	5.0 U	5.0 U
Ethylbenzene	5	3000	1300	2300	35	45	40	11	46	50	850	1600	1 J	160	1400	5.0 U	5.0 U	5.0 U
Xylene, total	5	1800	1600	2400	190	95	75	55	58	65	3200	1800	5 U	290	1500	5.0 U	5.0 U	5.0 U
Total BTEX	NE	8610	7500	27000	474	275	210	130	437.7	489.5	10050	14400	44	2110	13600	ND	ND	ND
Other VOCs (ug/L)																		
Acetone	50*	400 U	250 U	1000 U	10 U	10 U	10 U	10 U	40 U	40 U	500 U	1000 U	10 U	55 J	1000 U	10 U	10 U	10 UJ
Chloroform	7	200 U	120 U	500 U	7.9	7.6	7.1	3.1 J	20 U	20 U	250 U	500 U	5 U	50 U	500 U	5.0 U	5.0 U	5.0 U
Dichloroethene, cis-1,2-	5	200 U	120 U	500 U	1.1 J	21	19	4.9 J	20 U	20 U	250 U	130 J	5 U	97	500 U	5.0 U	14	5.0 U
Dichloroethene,1,1-	0.07	200 U	120 U	500 U	5 U	1.4 J	1.5 J	5 U	20 U	20 U	250 U	500 U	5 U	50 U	500 U	5.0 U	5.0 U	5.0 U
Styrene	5	200 U	120 U	240 J	5 U	5 U	5 U	5 U	20 U	20 U	400	500 U	5 U	16 J	500 U	5.0 U	5.0 U	5.0 U
Trans-1,2-dichloroethene	5	200 U	120 U	500 U	5 U	30 J	29 J	5 U	20 U	20 U	250 U	240 J	5 U	50 U	500 U	5.0 U	5.0 U	5.0 U
Trichloroethene	5	200 U	120 U	500 U	5 U	42	38	5 U	2.9 J	20 U	250 U	500 U	5 U	50 U	500 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	2	200 U	120 U	500 U	5 U	1.4 J	1.3 J	5 U	20 U	20 U	250 U	500 U	5 U	14 J	500 U	5.0 U	5.0 U	5.0 U
Total VOCs	NE	8610	7500	27240	483	378.4	305.9	138	440.6	489.5	10450	14770	44	2292	13600	0	14	0
Noncarcinogenic PAHs (ug/L)																		
Acenaphthene	20*	86 J	240 J	190 J	4.5	3 J	2 J	4.2 U	42	58	29 J	42 J	3.1 J	40 J	82 J	4.0 U	4.0 U	0.33 J
Acenaphthylene	NE	400 U	57 J	800 U	1.4 J	0.71 J	0.52 J	4.2 U	40 U	2 J	18 J	53 J	0.66 J	24 J	200 U	4.0 U	4.0 U	4.0 U
Anthracene	50*	400 U	400 U	800 U	2.5 J	4.2 U	4 UJ	4.2 U	3.3 J	4.3 J	210 U	200 U	0.59 J	210 U	200 U	4.0 U	4.0 U	4.0 U
Benzo[g,h,i]perylene	NE	400 U	400 U	800 U	4 U	4.2 U	4 UJ	4.2 U	40 U	20 U	210 U	200 U	5.5	210 U	200 U	4.0 U	4.0 U	4.0 U
Fluoranthene	50*	400 U	400 U	800 U	1.1 J	4.2 U	4 UJ	4.2 U	40 U	2.2 J	210 U	200 U	0.39 J	210 U	200 U	4.0 U	4.0 U	4.0 U
Fluorene	50*	400 U	86 J	800 U	5.3	0.65 J	0.53 J	4.2 U	8.1 J	11 J	210 U	21 J	1.2 J	210 U	200 U	4.0 U	4.0 U	4.0 U
Methylnaphthalene,2-	NE	380 J	840	940	17	3.6 J	2.5 J	4.2 U	35 J	28	180 J	280	4 U	220	220	4.0 U	4.0 U	4.0 U
Naphthalene	10*	5800	5200	8700	6.8	28	21 J	4.2 U	440 J	180 J	3400	2200	4 U	2000	2600	0.53 J	0.87 J	4.0 U
Phenanthrene	50*	400 U	110 J	800 U	12	1.2 J	0.89 J	4.2 U	15 J	21	24 J	21 J	1.7 J	210 U	200 U	4.0 U	4.0 U	4.0 U
Pyrene	50*	400 U	400 U	800 U	2.4 J	4.2 U	4 UJ	4.2 U	40 U	2 J	210 U	200 U	0.38 J	210 U	200 U	4.0 U	4.0 U	4.0 U
Total Noncarcinogenic PAHs	NE	6266	6533	9830	53	37.16	27.44	ND	543.4	308.5	3651	2617	13.52	2284	2902	0.53	0.87	0.33
Carcinogenic PAHs (ug/L)																		
Benz[a]anthracene	0.002*	400 U	400 U	800 U	0.8 J	4.2 U	4 UJ	4.2 U	40 U	20 U	210 U	200 U	4 U	210 U	200 U	4.0 U	4.0 U	4.0 U
Chrysene	0.002*	400 U	400 U	800 U	0.92 J	4.2 U	4 UJ	4.2 U	40 U	20 U	210 U	200 U	4 U	210 U	200 U	4.0 U	4.0 U	4.0 U
Indeno[1,2,3-cd]pyrene	0.002*	400 U	400 U	800 U	4 UJ	4.2 UJ	4 UJ	4.2 UJ	40 U	20 U	210 U	200 U	5.3	210 U	200 U	4.0 U	4.0 U	4.0 U
Total Carcinogenic PAHs	NE	ND	ND	ND	1.72	ND	ND	ND	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND
Total PAHs (ug/L)																		
Total PAHs	NE	6266	6533	9830	54.72	37.16	27.44	ND	543.4	308.5	3651	2617	18.82	2284	2902	0.53	0.87	0.33
Other SVOCs (ug/L)																		
Bis(2-ethylhexyl)phthalate	5	400 U	400 U	800 U	4 U	4.2 U	0.94 J	4.2 U	40 U	20 U	210 U	200 U	2.8 J	210 U	200 U	4.0 U	4.0 U	4.0 U
Butyl benzyl phthalate	50*	400 U	400 U	800 U	4 U	4.2 U	4 UJ	4.2 U	40 U	20 U	210 U	200 U	1.8 J	210 U	200 U	4.0 U	4.0 U	4.0 U
Carbazole	NE	400 U	400 U	800 U	3.1 J	0.49 J	0.36 J	4.2 U	6 J	7.8 J	210 U	200 U	0.74 J	210 U	200 U	4.0 U	4.0 U	4.0 U
Dibenzofuran	NE	400 U	400 U	800 U	2.3 J	4.2 U	4 UJ	4.2 U	40 U	5.8 J	210 U	200 U	4 U	210 U	200 U	4.0 U	4.0 U	4.0 U
Diethyl phthalate	50*	400 U	400 U	800 U	4 U	4.2 U	4 UJ	4.2 U	40 U	20 U	210 U	200 U	1.1 J	210 U	200 U	4.0 U	4.0 U	4.0 U
Di-n-butyl phthalate	50	400 U	400 U	800 U	0.4 J	4.2 U	4 UJ	4.2 U	40 U	20 U	210 U	200 U	0.82 J	210 U	200 U	4.0 U	4.0 U	4.0 U
Methylphenol, 4-	1	400 U	46 J	800 U	4 U	0.76 J	0.45 J	4.2 U	40 U	20 U	210 U	200 U	4 U	210 U	200 U	4.0 U	4.0 U	4.0 U
Methylphenol,2-	1	400 U	34 J	800 U	4 U	0.39 J	4 U	4.2 U	40 U	20 U	210 U	200 U	4 U	210 U	200 U	4.0 U	4.0 U	4.0 U
Phenol	1	400 U	400 U	800 U	4 U	4.2 U	0.33 J	4.2 U	22 J	9.9 J	210 U	200 U	4 U	210 U	200 U	4.0 U	4.0 U	4.0 U
Total SVOCs	NE	ND	80	ND	5.8	1.64	2.08	ND	28	23.5	ND	ND	7.26	ND	ND	ND	ND	ND

Table 6
Detected Groundwater Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Screen Interval (feet): Sample Date:	NYS AWQS	WWSB-03 (5-10) 7/14/2009	WWSB-05 (3-8) 7/15/2009	WWSB-07 (2.5-7.5) 7/15/2009	WWSB-19 (5-15) 7/28/2009	WWSB-19 (25-35) 7/29/2009	Duplicate of: WWSB-19 (25-35) 7/29/2009	WWSB-19 (40-50) 7/29/2009	WWSB-21 (4-14) 7/8/2009	Duplicate of: WWSB-21 (4-14) 7/8/2009	WWSB-21 (15-25) 7/22/2009	WWSB-21 (40-50) 7/23/2009	WWSB-22 (6-16) 7/8/2009	WWSB-22 (35-45) 7/27/2009	WWSB-22 (55-65) 7/27/2009	WWMW-01 (13-23) 11/4/2009	WWMW-02 (7.4-17.4) 11/4/2009	WWMW-03 (4-14) 11/4/2009
PCBs (ug/L)																		
Total PCBs	NE	ND	ND	ND	ND	NA	NA	NA	ND	ND	NA	NA	ND	NA	NA	ND	ND	ND
Pesticides (ug/L)																		
Aldrin	ND	0.050 UJ	0.05 U	0.05 UJ	0.052 UJ	NA	NA	NA	0.028 J	0.044 J	NA	NA	0.05 U	NA	NA	0.050 U	0.050 U	0.052 U
Alpha-bhc	0.01	0.050 UJ	0.050 U	0.050 UJ	0.052 UJ	NA	NA	NA	0.050 U	0.050 U	NA	NA	0.050 U	NA	NA	0.050 U	0.050 U	0.052 U
Alpha-chlordane	NE	0.05 UJ	0.05 U	0.05 UJ	0.052 UJ	NA	NA	NA	0.05 U	0.05 UJ	NA	NA	0.05 U	NA	NA	0.050 U	0.050 U	0.052 U
Beta-BHC	0.04	0.092 JN	0.05 U	0.050 UJ	0.021 J	NA	NA	NA	0.05 U	0.05 UJ	NA	NA	0.05 U	NA	NA	0.050 U	0.013 J	0.052 U
Chlordane, gamma	NE	0.069 JN	0.05 U	0.05 UJ	0.052 UJ	NA	NA	NA	0.05 U	0.05 UJ	NA	NA	0.05 U	NA	NA	0.050 U	0.050 U	0.052 U
DDT,4,4-	0.2	0.1 UJ	0.11 J	0.1 UJ	0.1 UJ	NA	NA	NA	0.10 U	0.10 UJ	NA	NA	0.1 U	NA	NA	0.10 U	0.10 U	0.10 U
Delta-BHC	0.04	0.084 J	0.050 U	0.050 UJ	0.052 UJ	NA	NA	NA	0.05 U	0.05 UJ	NA	NA	0.050 U	NA	NA	0.050 U	0.050 U	0.052 U
Endosulfan I	NE	0.050 UJ	0.050 U	0.050 UJ	0.052 UJ	NA	NA	NA	0.05 U	0.05 UJ	NA	NA	0.050 U	NA	NA	0.050 U	0.050 U	0.052 U
Endosulfan II	NE	0.1 UJ	0.1 U	0.1 UJ	0.1 UJ	NA	NA	NA	0.035 J	0.10 UJ	NA	NA	0.1 U	NA	NA	0.10 U	0.10 U	0.10 U
Heptachlor	0.04	0.050 UJ	0.033 J	0.050 UJ	0.052 UJ	NA	NA	NA	0.050 U	0.05 UJ	NA	NA	0.05 U	NA	NA	0.050 U	0.050 U	0.052 U
Heptachlor epoxide	0.03	0.04 J	0.05 U	0.050 UJ	0.052 UJ	NA	NA	NA	0.05 U	0.05 UJ	NA	NA	0.05 U	NA	NA	0.050 U	0.050 U	0.052 U
Herbicides (ug/L)																		
Total Herbicides	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Metals (ug/L)																		
Aluminum	NE	307 J	308 J	4430 J	14100 J	289 J	289 J	11700 J	250 U	250 U	3260	869	411 J	1010 J	4900 J	500 U	500 U	500 U
Arsenic	25	17.6 J	35.2	16.4	6.6	15 U	15 U	11.9	14.8 J	10.4 J	4.9 J	15 U	8.4 J	15 U	15 U	15.0 U	15.0 U	15.0 U
Barium	1000	3440	131	405	256	157	166	354	789	810	726	98.5	200	528	293	172	315	436
Beryllium	3*	5 UJ	5 U	5 U	1.1 J	5 U	5 U	1.2 J	5 U	5 U	0.29 J	5 U	5 U	5 U	0.64 J	5.0 U	5.0 U	5.0 U
Calcium	NE	182000	98500	58200	45700	109000	112000	99600	32300	33700	41000	66900	137000	296000	85400	132000	191000	181000
Chromium	50	5.0 UJ	5.0 U	12.1	33	5 U	5 U	31.7	0.50 UJ	5 UJ	7.6 J	1.1 J	5.0 U	4 J	20	0.55 J	1.2 J	0.73 J
Cobalt	NE	4.2 J	0.72 J	5.4	13	0.86 J	0.93 J	36.3	11.7 J	11.5 J	13.9 J	1.6 J	1.6 J	1 J	5.3	1.5 J	2.2 J	5.0 U
Copper	200	12.4 UJ	16.1 UJ	44.6 J	55.6 J	2.6 J	2.5 J	43.3 J	10.0 U	10.0 U	10.2 UJ	10 U	R	4.7 J	33.1 J	1.7 J	10.0 U	10.0 U
Iron	300	21100	1630	8010	34900	15800	16500	40400	2320	2390	8890	2420	3390	22400	21000	25500	9480	29100
Lead	25	189	133	479	24.4	15 U	15 U	23.1	15 UJ	15 UJ	16.6 UJ	15 U	15 U	15 U	9.9	15.0 U	15.0 U	15.0 U
Magnesium	35000*	208000	11100	11400	13200	39700	41100	38800	256000	267000	261000	29100	34100	62500	39300	36600	37300	31700
Manganese	300	331	211	1210	581	2800	2900	1080	135	139	332	452	1820	6270	466	2080	3480	1130
Mercury	0.7	0.40 U	0.40 U	0.52	0.4 U	0.4 U	0.4 U	0.4 U	0.40 U	0.40 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.40 U	0.40 U	0.40 U
Nickel	100	12 J	28.8	53.3	22.5	5 U	5 U	32.4	5 U	5 U	4.7 J	5 U	1.6 J	3.8 J	8.7	3.0 J	2.1 J	2.6 J
Potassium	NE	182000 J	21900 J	107000 J	18900 J	16700 J	17600 J	7600 J	123000 J	126000 J	115000	15500	16700 J	32000 J	14800 J	37600 J	15800 J	40000 J
Sodium	20000	3290000 J	562000 J	1600000 J	43400 J	118000 J	122000 J	41400 J	208000 J	217000 J	205000	56500	93500 J	842000 J	106000 J	294000	496000	735000
Vanadium	NE	7.1 J	12.3	52.3	52.7	5 U	5 U	52.9	3.4 J	3.7 J	14.8 J	4.2 J	3.8 J	3.1 J	15.8	3.8 J	3.6 J	3.4 J
Zinc	2000*	92.2	52.4	403	66	25 U	25 U	75.9	25.0 U	25.0 U	25.2 U	25 U	25.0 U	7.3 J	26.7	25.0 UJ	25.0 UJ	6.0 J
Other (ug/L)																		
Cyanide, Total	200	517	166	319	29.2	9.7 J	10	297	3540	3900	3140	58.6	60.9	40	95.4	10.0 U	3.8 J	8.0 J
Nitrogen, Ammonia	2000	NA	NA	NA	440	1300	1200	870	610	600	960	3800	960	7600	9200	NA	NA	NA

Table 6
Detected Groundwater Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Screen Interval (feet): Sample Date:	NYS AWQS	WWMW-04 (10-20) 11/4/2009	Duplicate of: WWMW-04 (10-20) 11/4/2009	WWMW-05 (4-14) 11/5/2009	WWMW-06 (0.3-10.3) 11/4/2009	WWMW-07 (0.3-10.3) 11/5/2009	WWMW-08 (0.3-10.3) 11/5/2009	WWMW-10 (4-14) 11/5/2009	WWMW-11 (4-14) 11/5/2009	WWMW-12 (5-15) 11/5/2009	WWMW-13 (4-14) 11/6/2009	WWMW-14 (4-14) 11/6/2009	WWMW-15 (4-14) 11/6/2009	WWMW-16 (4-14) 11/4/2009	WWMW-17 (4-14) 11/5/2009
BTEX (ug/L)															
Benzene	1	8.7	9.2	9200	270	23	570	29	320	180	540	5.0 U	1.7 J	5.0 U	5.0 U
Toluene	5	5.2	5.4	13000	13 J	9.0	64 J	3.1 J	38 J	0.99 J	7.0 J	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene	5	16	17	2700	940	8.4	2800	330	1600	3.1 J	190	5.0 U	5.0 U	5.0 U	5.0 U
Xylene, total	5	21	23	6200	690	60	3100	200	280	3.7 J	100	5.0 U	5.0 U	5.0 U	5.0 U
Total BTEX	NE	50.9	54.6	31100	1913	100.4	6534	562.1	2238	187.79	837	ND	1.7	ND	ND
Other VOCs (ug/L)															
Acetone	50*	10 UJ	10 UJ	1000 U	100 U	10 U	200 U	16 J	100 U	10 U	50 U	10 U	10 U	10 U	10 U
Chloroform	7	5.0 U	5.0 U	500 U	50 U	5.0 U	100 U	10 U	50 U	5.0 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichloroethene, cis-1,2-	5	4.4 J	4.9 J	500 U	50 U	5.0 U	100 U	10 U	50 U	5.0 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichloroethene,1,1-	0.07	5.0 U	5.0 U	500 U	50 U	5.0 U	100 U	10 U	50 U	5.0 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene	5	1.9 J	2.1 J	2600	50 U	22	100 U	10 U	50 U	5.0 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U
Trans-1,2-dichloroethene	5	0.91 J	1.1 J	500 U	50 U	5.0 U	100 U	10 U	50 U	5.0 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	5	2.6 J	3.0 J	500 U	50 U	5.0 U	100 U	10 U	50 U	5.0 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride	2	1.2 J	1.2 J	500 U	50 U	5.0 U	100 U	10 U	50 U	5.0 U	25 U	5.0 U	5.0 U	5.0 U	5.0 U
Total VOCs	NE	61.91	66.9	33700	1913	122.4	6534	578.1	2238	187.79	837	0	1.7	0	0
Noncarcinogenic PAHs (ug/L)															
Acenaphthene	20*	3.0 J	3.0 J	400 U	60 J	1.4 J	140 J	28 J	140 J	1.0 J	100	4.2 U	7.8	4.0 U	2.0 J
Acenaphthylene	NE	11	12	270 J	200 U	8.3	800 U	40 U	830 U	4.2 U	42 U	4.2 U	4.3 U	4.0 U	4.0 U
Anthracene	50*	3.7 J	3.5 J	400 U	200 U	1.0 J	800 U	40 U	830 U	4.2 U	5.4 J	4.2 U	0.52 J	4.0 U	4.0 U
Benzo[g,h,i]perylene	NE	4.0 U	4.2 U	400 U	200 U	8.0 U	800 U	40 UJ	830 U	4.2 U	42 U	4.2 U	4.3 U	4.0 U	4.0 U
Fluoranthene	50*	1.1 J	1.1 J	400 U	200 U	0.71 J	800 U	40 U	830 U	4.2 U	3.5 J	4.2 U	1.2 J	4.0 U	4.0 U
Fluorene	50*	9.8	10	37 J	20 J	2.9 J	800 U	13 J	830 U	4.2 U	21 J	4.2 U	2.3 J	4.0 U	0.59 J
Methylnaphthalene,2-	NE	35	45	720	120 J	24	540 J	110	620 J	4.2 U	17 J	4.2 U	4.3 U	4.0 U	1.1 J
Naphthalene	10*	43	56	6600	2500	120	4000	580	6300	0.59 J	370	4.2 U	1.4 J	4.0 U	4.1
Phenanthrene	50*	15	17	400 U	24 J	3.8 J	800 U	15 J	830 U	4.2 U	35 J	4.2 U	3.5 J	4.0 U	0.68 J
Pyrene	50*	2.8 J	2.6 J	400 UJ	200 UJ	1.6 J	800 U	3.6 J	830 U	4.2 U	4.3 J	4.2 U	0.56 J	4.0 U	4.0 U
Total Noncarcinogenic PAHs	NE	124.4	150.2	7627	2724	163.71	4680	749.6	7060	1.59	556.2	ND	17.28	ND	8.47
Carcinogenic PAHs (ug/L)															
Benz[a]anthracene	0.002*	4.0 U	4.2 U	400 UJ	200 UJ	8.0 UJ	800 U	40 U	830 U	4.2 U	42 U	4.2 U	4.3 U	4.0 U	4.0 U
Chrysene	0.002*	4.0 U	4.2 U	400 UJ	200 UJ	8.0 UJ	800 U	40 U	830 U	4.2 U	42 U	4.2 U	4.3 U	4.0 U	4.0 U
Indeno[1,2,3-cd]pyrene	0.002*	4.0 U	4.2 U	400 U	200 U	8.0 U	800 U	40 UJ	830 U	4.2 U	42 U	4.2 U	4.3 U	4.0 U	4.0 U
Total Carcinogenic PAHs	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total PAHs (ug/L)															
Total PAHs	NE	124.4	150.2	7627	2724	163.71	4680	749.6	7060	1.59	556.2	ND	17.28	ND	8.47
Other SVOCs (ug/L)															
Bis(2-ethylhexyl)phthalate	5	1.1 J	1.9 J	400 UJ	200 UJ	8.0 UJ	800 U	40 U	830 U	4.2 U	42 U	4.2 U	4.3 U	0.64 J	4.0 U
Butyl benzyl phthalate	50*	4.0 U	4.2 U	400 UJ	200 UJ	8.0 UJ	800 U	40 U	830 U	4.2 U	42 U	4.2 U	4.3 U	4.0 U	4.0 U
Carbazole	NE	4.0 U	4.2 U	400 U	200 U	8.0 U	800 U	40 U	830 U	4.2 U	5.8 J	4.2 U	4.3 U	4.0 U	4.0 U
Dibenzofuran	NE	1.1 J	1.0 J	400 U	200 U	8.0 U	800 U	40 U	830 U	4.2 U	5.2 J	4.2 U	2.0 J	4.0 U	4.0 U
Diethyl phthalate	50*	4.0 U	4.2 U	400 U	200 U	8.0 U	800 U	40 U	830 U	4.2 U	42 U	4.2 U	4.3 U	4.0 U	4.0 U
Di-n-butyl phthalate	50	4.0 U	4.2 U	400 U	200 U	8.0 U	800 U	40 U	830 U	4.2 U	42 U	4.2 U	4.3 U	4.0 U	4.0 U
Methylphenol, 4-	1	4.0 U	4.2 U	34 J	200 U	8.0 U	800 U	40 U	830 U	4.2 U	42 U	4.2 U	4.3 U	4.0 U	4.0 U
Methylphenol,2-	1	4.0 U	4.2 U	34 J	200 U	8.0 U	800 U	40 U	830 U	4.2 U	42 U	4.2 U	4.3 U	4.0 U	4.0 U
Phenol	1	4.0 U	4.2 U	400 U	200 U	8.0 U	800 U	40 U	830 U	4.2 U	3.2 J	4.2 U	4.3 U	4.0 U	4.0 U
Total SVOCs	NE	2.2	2.9	68	ND	ND	ND	ND	ND	ND	14.2	ND	2	0.64	ND

Table 6
Detected Groundwater Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Sample Name: Screen Interval (feet): Sample Date:	NYS AWQS	WWMW-04 (10-20) 11/4/2009	Duplicate of: WWMW-04 (10-20) 11/4/2009	WWMW-05 (4-14) 11/5/2009	WWMW-06 (0.3-10.3) 11/4/2009	WWMW-07 (0.3-10.3) 11/5/2009	WWMW-08 (0.3-10.3) 11/5/2009	WWMW-10 (4-14) 11/5/2009	WWMW-11 (4-14) 11/5/2009	WWMW-12 (5-15) 11/5/2009	WWMW-13 (4-14) 11/6/2009	WWMW-14 (4-14) 11/6/2009	WWMW-15 (4-14) 11/6/2009	WWMW-16 (4-14) 11/4/2009	WWMW-17 (4-14) 11/5/2009
PCBs (ug/L)															
Total PCBs	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pesticides (ug/L)															
Aldrin	ND	0.054 U	0.053 U	0.052 U	0.052 U	0.052 U	0.052 U	0.054 U	0.052 UJ	0.052 UJ	0.053 U	0.052 U	0.053 U	0.050 U	0.052 U
Alpha-bhc	0.01	0.054 U	0.053 U	0.052 U	0.052 U	0.052 U	0.052 U	0.054 U	0.052 UJ	0.052 UJ	0.053 U	0.052 U	0.020 J	0.050 U	0.052 U
Alpha-chlordane	NE	0.054 U	0.053 UJ	0.052 UJ	0.052 U	0.052 UJ	0.052 UJ	0.054 UJ	0.052 UJ	0.052 UJ	0.053 U	0.052 UJ	0.029 J	0.050 U	0.052 UJ
Beta-BHC	0.04	0.054 U	0.053 U	0.14 J	0.052 U	0.052 U	0.052 U	0.054 U	0.052 UJ	0.052 UJ	0.053 U	0.052 U	0.053 U	0.050 U	0.052 U
Chlordane, gamma	NE	0.054 U	0.053 U	0.052 U	0.052 U	0.052 U	0.052 U	0.054 U	0.052 UJ	0.052 UJ	0.053 U	0.052 U	0.053 U	0.050 U	0.052 U
DDT,4,4-	0.2	0.11 U	0.11 U	0.10 U	0.10 UJ	0.10 U	0.028 J	0.11 U	0.10 UJ	0.10 UJ	0.11 U	0.10 U	0.11 U	0.10 U	0.10 U
Delta-BHC	0.04	0.054 U	0.053 U	0.057 JN	0.011 J	0.052 U	0.019 J	0.054 U	0.041 J	0.052 UJ	0.053 U	0.052 U	0.053 U	0.050 U	0.052 U
Endosulfan I	NE	0.054 U	0.053 U	0.052	0.052 U	0.012 J	0.052 U	0.054 U	0.052 UJ	0.052 UJ	0.053 U	0.052 U	0.053 U	0.050 U	0.052 U
Endosulfan II	NE	0.11 U	0.11 U	0.10 U	0.10 U	0.10 U	0.10 U	0.11 U	0.10 UJ	0.10 UJ	0.11 U	0.10 U	0.11 U	0.10 U	0.10 U
Heptachlor	0.04	0.054 U	0.053 U	0.052 U	0.052 U	0.052 U	0.052 U	0.054 U	0.052 UJ	0.052 UJ	0.053 U	0.052 U	0.053 U	0.050 U	0.052 U
Heptachlor epoxide	0.03	0.054 U	0.053 U	0.052 U	0.052 U	0.052 U	0.052 U	0.054 U	0.052 UJ	0.052 UJ	0.053 U	0.052 U	0.053 U	0.050 U	0.052 U
Herbicides (ug/L)															
Total Herbicides	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Metals (ug/L)															
Aluminum	NE	500 U	500 U	105 J	500 U	500 U	128 J	297	500 U	500 U	500 U	2500 U	2500 U	500 U	500 U
Arsenic	25	15.0 U	15.0 U	15.0 U	7.6 J	15.0 U	17.7 U	15.0 U	15.0 U	9.1 J	6.4 J	32.0 J	42.8 J	16.4 U	15.0 U
Barium	1000	91.5	93.3	250	201	195	128	119	195	224	137	58.9	100	103	50.4
Beryllium	3*	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	25.0 U	25.0 U	5.0 U	5.0 U
Calcium	NE	59500	58500	56200	71100	71200	49700	56900	127000	234000	170000	266000	247000	53700	108000
Chromium	50	5.0 U	5.0 U	0.73 J	5.0 U	0.62 J	0.92 J	0.79 J	0.63 J	5.0 U	5.0 U	74.2	25.0 U	0.96 J	5.0 U
Cobalt	NE	5.0 U	5.0 U	4.6 J	5.0 U	2.5 J	1.3 J	5.0 U	5.0 U	5.0 U	5.0 U	6.4 J	25.0 U	5.0 U	0.99 J
Copper	200	10.0 U	1.9 J	6.8	1.9 J	72.4	4.1 J	2.0 J	10.0 U	3.1 J	7.1 J	44.1	50.0 U	10.0 U	7.7 J
Iron	300	2330	2350	2840	11400	161	4690	5000	1740	1940	2390	334 J	310 J	13400	629
Lead	25	15.0 U	15.0 U	15.0 U	15.0 U	25.9	15.0 U	15.0 U	15.0 U	15.0 UJ	15.0 U	75.0 U	75.0 U	15.0 U	15.0 U
Magnesium	35000*	5730	5800	10800	5080	13400	3450	7080	19500	79400	130000	697000	688000	10800	12200
Manganese	300	241	243	566	790	542	216	489	559	613	270	48.7	55.3	899	81.5
Mercury	0.7	0.40 U	0.40 U	0.40 U	0.40 U	0.40 J	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Nickel	100	7.4 J	8.2 J	32.8 J	16.8 J	15.1 J	15.8 J	1.7 J	26.2 J	11.8 J	5.0 UJ	159 J	25.0 UJ	5.0 UJ	14.4 J
Potassium	NE	24500 J	24500 J	45300 J	19700 J	15500 J	42900 J	13100 J	24900 J	55500 J	71100 J	379000 J	377000 J	15100 J	23400 J
Sodium	20000	363000	356000	779000	873000	187000	525000	343000	362000	1080000	982000	5990000	5980000	210000	316000
Vanadium	NE	1.8 J	1.7 J	4.7 J	3.4 J	3.8 J	8.1	2.6 J	7.7	26.7 J	6.9	26.1	30.7	1.7 J	2.6 J
Zinc	2000*	25.0 UJ	25.0 UJ	7.5 J	25.0 UJ	108 J	25.0 UJ	25.0 UJ	25.0 UJ	49.9 J	10.2 J	459 J	125 UJ	25.0 UJ	25.0 UJ
Other (ug/L)															
Cyanide, Total	200	21.9	24.9	94.7	102	19.7	323	23.5	211	39.4	10.0 U	10.0 U	10.0 U	10.0 U	281
Nitrogen, Ammonia	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 6
Detected Groundwater Analytical Results
Williamsburg Works MGP Site
Brooklyn, New York

Notes:

ug/L - micrograms per liter or parts per billion (ppb)
BTEX - benzene, toluene, ethylbenzene, and xylenes
VOCs - volatile organic compounds
PAHs - polycyclic aromatic hydrocarbons
SVOCs - semivolatile organic compounds
PCBs - polychlorinated biphenyls

NYS AWQS - New York State Ambient Water Quality Standards and Guidance Values for GA groundwater

* indicates the value is a guidance value and not a standard

NE - not established

NA - not analyzed

Bolding indicates a detected concentration

Shading and bolding indicates that the detected concentration is above the NYS AWQS objective it was compared to

Validation Qualifiers:

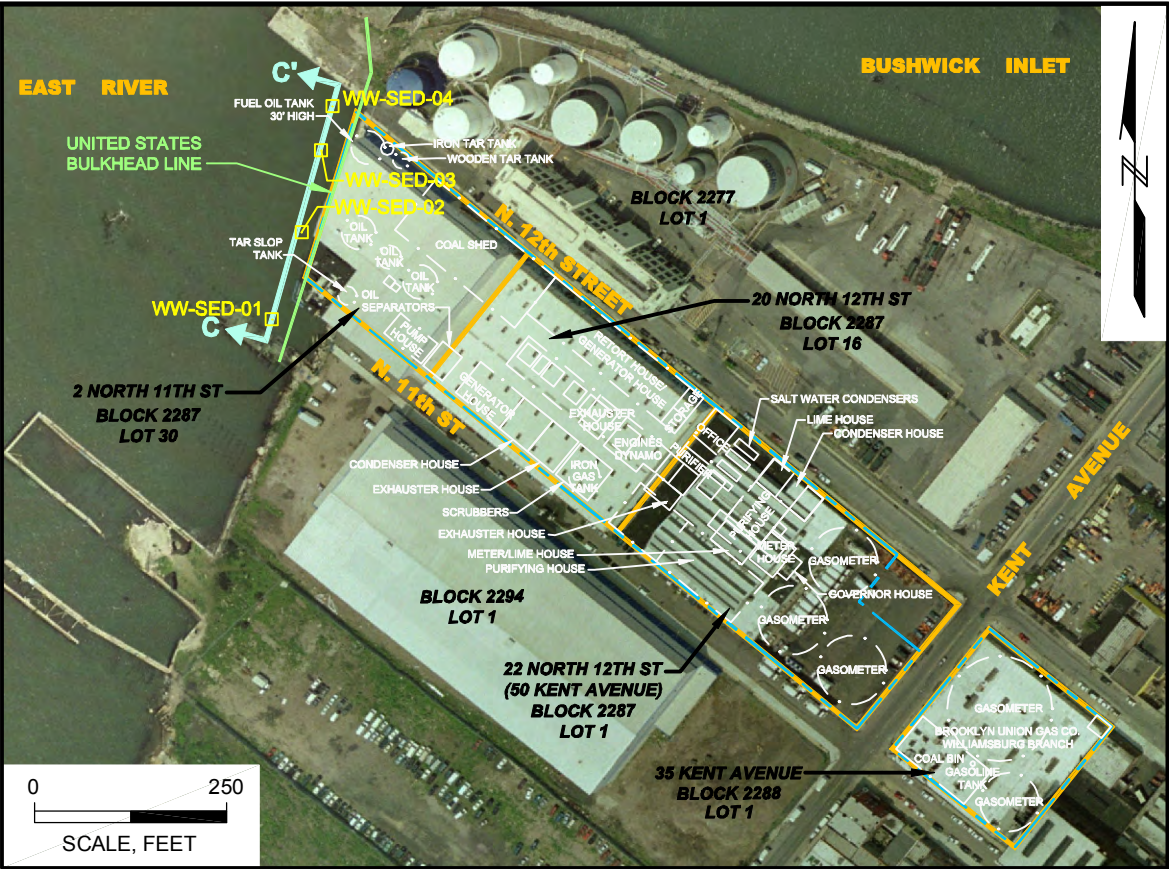
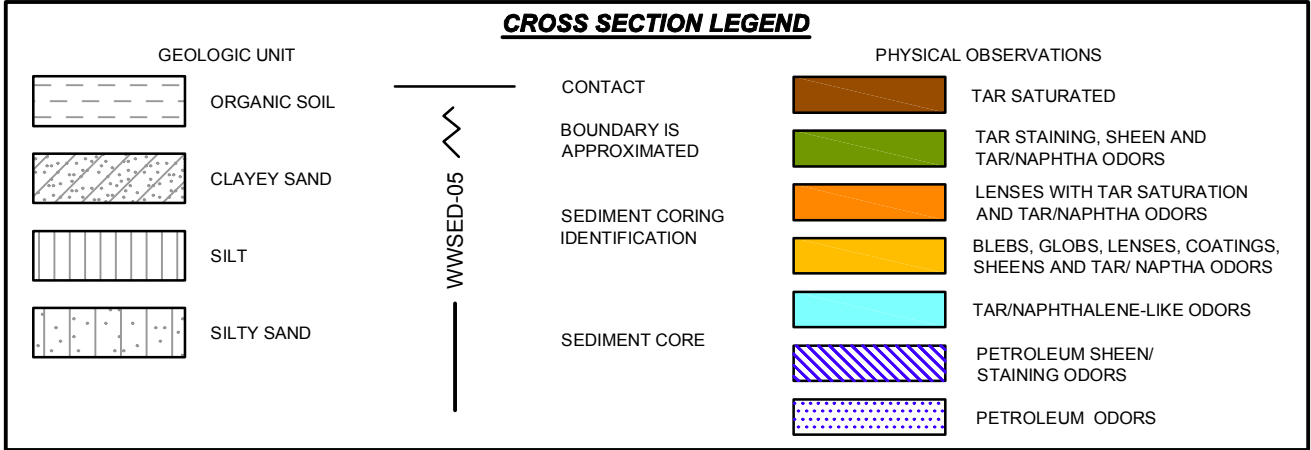
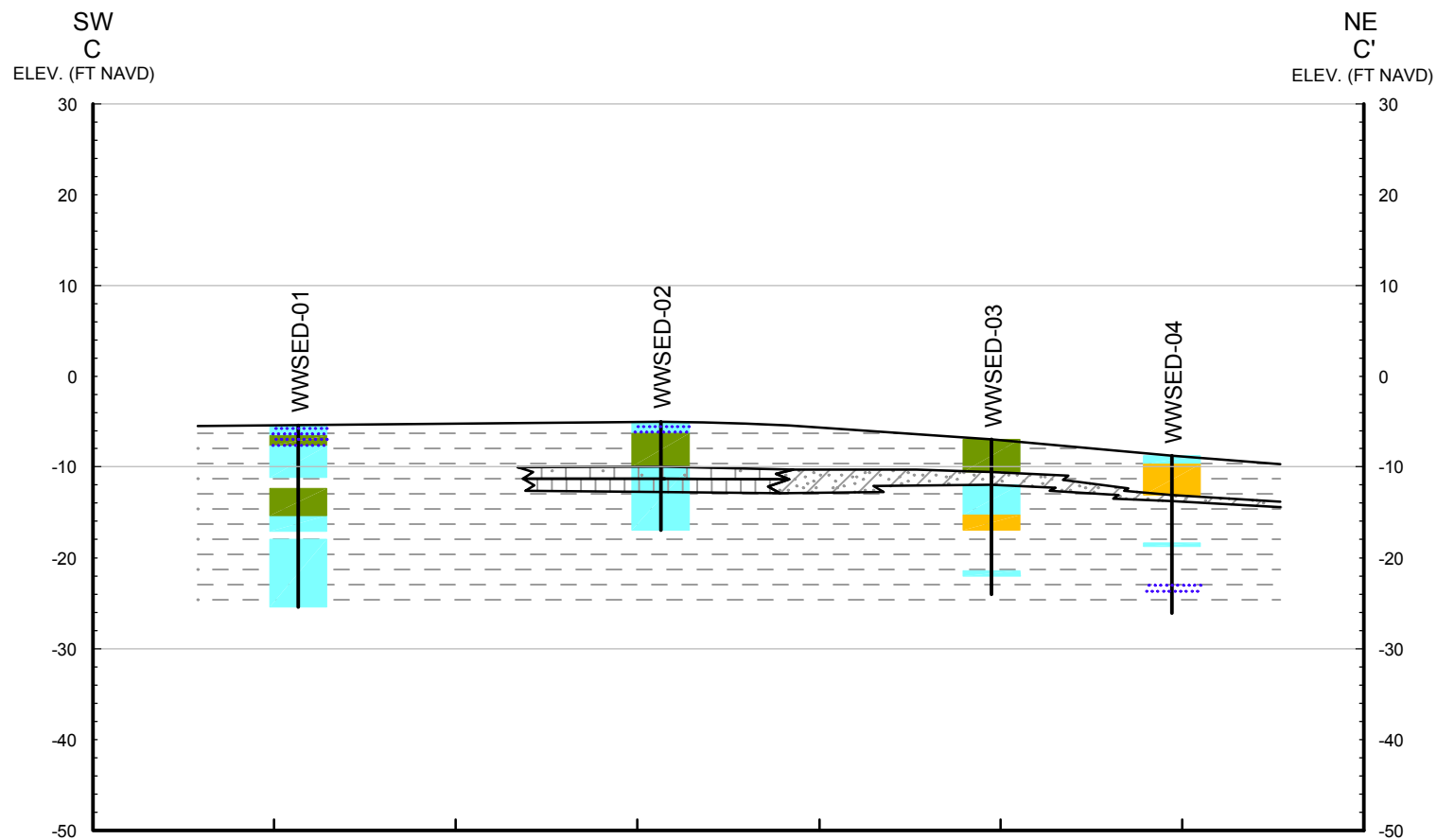
J - estimated value

JN - analyte is presumptively present at an approximated quantity

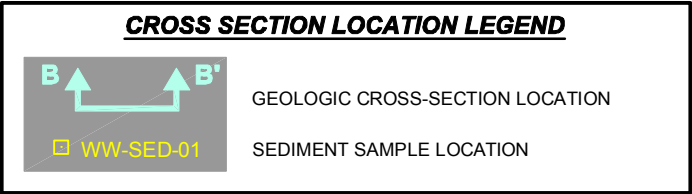
U - indicates not detected to the reporting limit for organic analysis and the method detection limit for inorganic analysis

UJ - not detected at or above the reporting limit shown and the reporting limit is estimated

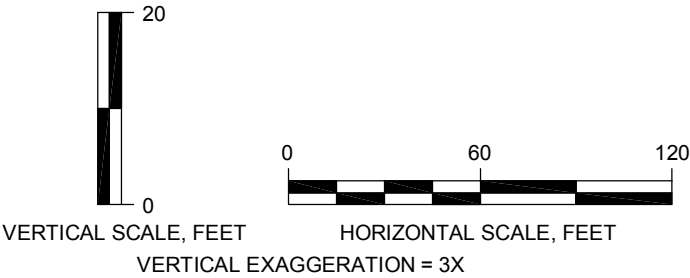
R - rejected



CROSS-SECTION LOCATION



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 3. NEW YORK CITY OPEN ACCESSIBLE SPACE INFORMATION SYSTEM <http://www.oasisnyc.net>, ACCESSED JANUARY 2008.
 4. SURVEY OF WILLIAMSBURG WORKS BOUNDARIES, EXISTING CONDITIONS, AND SAMPLE LOCATIONS CONDUCTED BY GEI CONSULTANTS, INC. SURVEYED BY NEW YORK STATE-LICENSED LAND SURVEYOR No. 050146.



DRAFT REMEDIAL INVESTIGATION INTERIM DATA SUMMARY
WILLIAMSBURG WORKS FORMER MGP SITE
BOROUGH OF BROOKLYN, NEW YORK

nationalgrid



Project 093060-1-1108

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**GEOLOGIC CROSS SECTION
C-C'**

August 2010

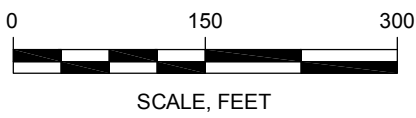
Figure 2



LEGEND

- APPROXIMATE CURRENT PROPERTY BOUNDARY
- APPROXIMATE BOUNDARY OF FORMER MANUFACTURED GAS PLANT (MGP) SITE
- HISTORIC STRUCTURE
- REMEDIAL INVESTIGATION (RI) MONITORING WELL LOCATION
- RI SOIL BORING LOCATION
- SOIL BORING WITH TEMPORARY GROUNDWATER SAMPLE LOCATION
- CLAY ELEVATION (FEET)
- CLAY CONTOUR (FEET)

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WILLIAMSBURG WORKS FORMER MGP SITE
BOROUGH OF BROOKLYN, NEW YORK

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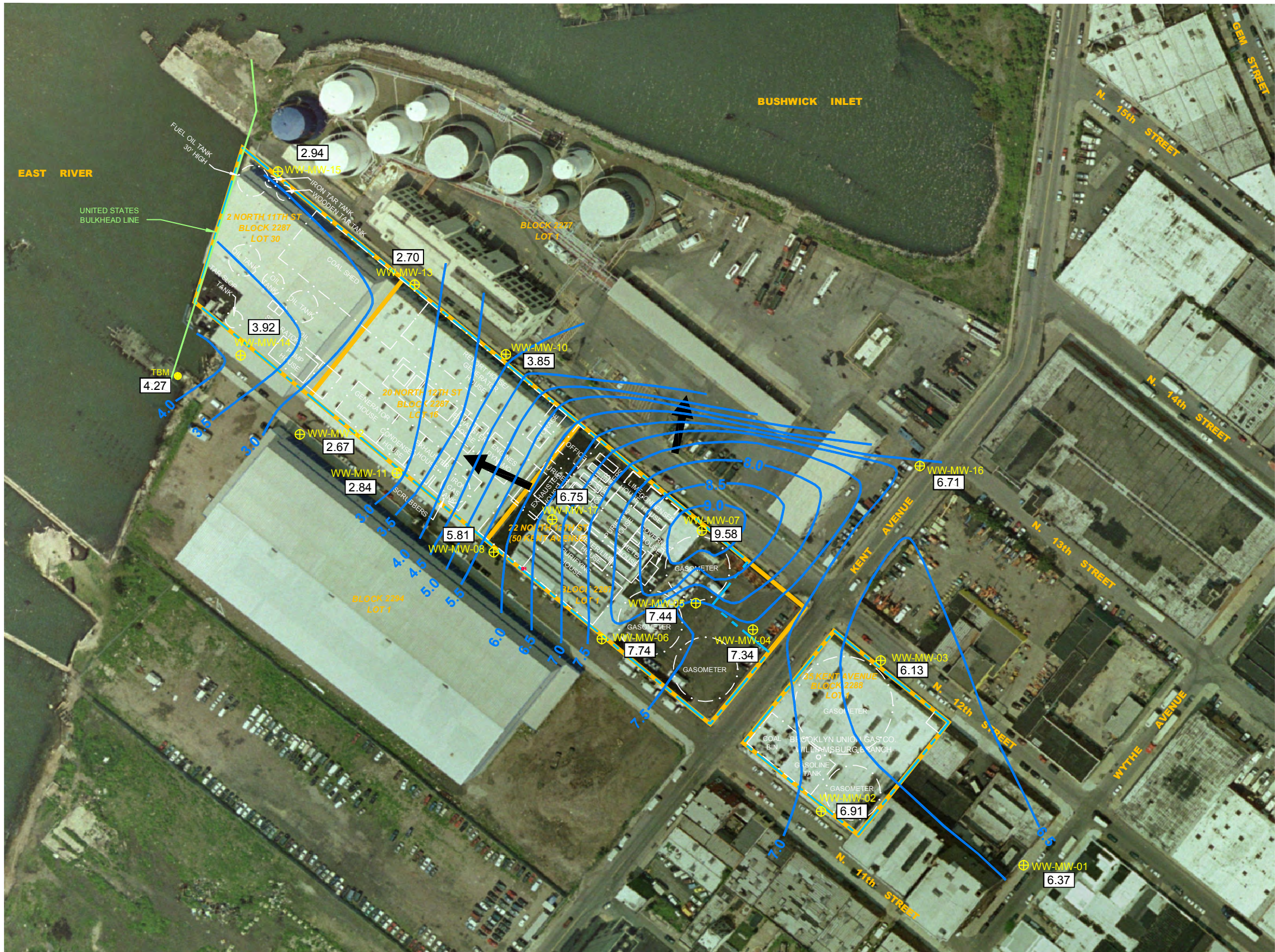
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CLAY CONTOUR MAP (FEET)

August 2010

Figure 4



LEGEND

APPROXIMATE CURRENT PROPERTY BOUNDARY

APPROXIMATE BOUNDARY OF FORMER MANUFACTURED GAS PLANT (MGP) SITE

HISTORIC STRUCTURE

REMEDIAL INVESTIGATION (RI) MONITORING WELL LOCATION

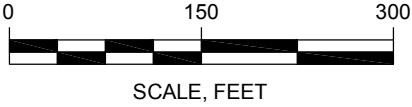
GROUNDWATER ELEVATION (FEET)

GROUNDWATER CONTOUR (FEET)

GROUNDWATER FLOW DIRECTION

NOTE:
THE WATER LEVEL AT WW-MW-07 IS ELEVATED DUE TO WATER DRAINING INTO THE AREA FROM THE ADJACENT HOLDER. THE WATER ELEVATION WITHIN THE HOLDER IS 8.27 FEET NAVD.

- SOURCES:**
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WILLIAMSBURG WORKS FORMER MGP SITE
BOROUGH OF BROOKLYN, NEW YORK

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HIGH TIDE GROUNDWATER CONTOURS (FEET)

Project 093060-1-1108

August 2010

Figure 5

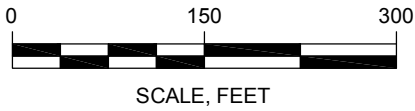


LEGEND

- APPROXIMATE CURRENT PROPERTY BOUNDARY
- APPROXIMATE BOUNDARY OF FORMER MANUFACTURED GAS PLANT (MGP) SITE
- HISTORIC STRUCTURE
- REMEDIAL INVESTIGATION (RI) MONITORING WELL LOCATION
- GROUNDWATER ELEVATION (FEET)
- GROUNDWATER CONTOUR (FEET)
- GROUNDWATER FLOW DIRECTION

NOTE:
THE WATER LEVEL AT WW-MW-07 IS ELEVATED DUE TO WATER DRAINING INTO THE AREA FROM THE ADJACENT HOLDER. THE WATER ELEVATION WITHIN THE HOLDER IS 8.27 FEET NAVD.

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WILLIAMSBURG WORKS FORMER MGP SITE
BOROUGH OF BROOKLYN, NEW YORK

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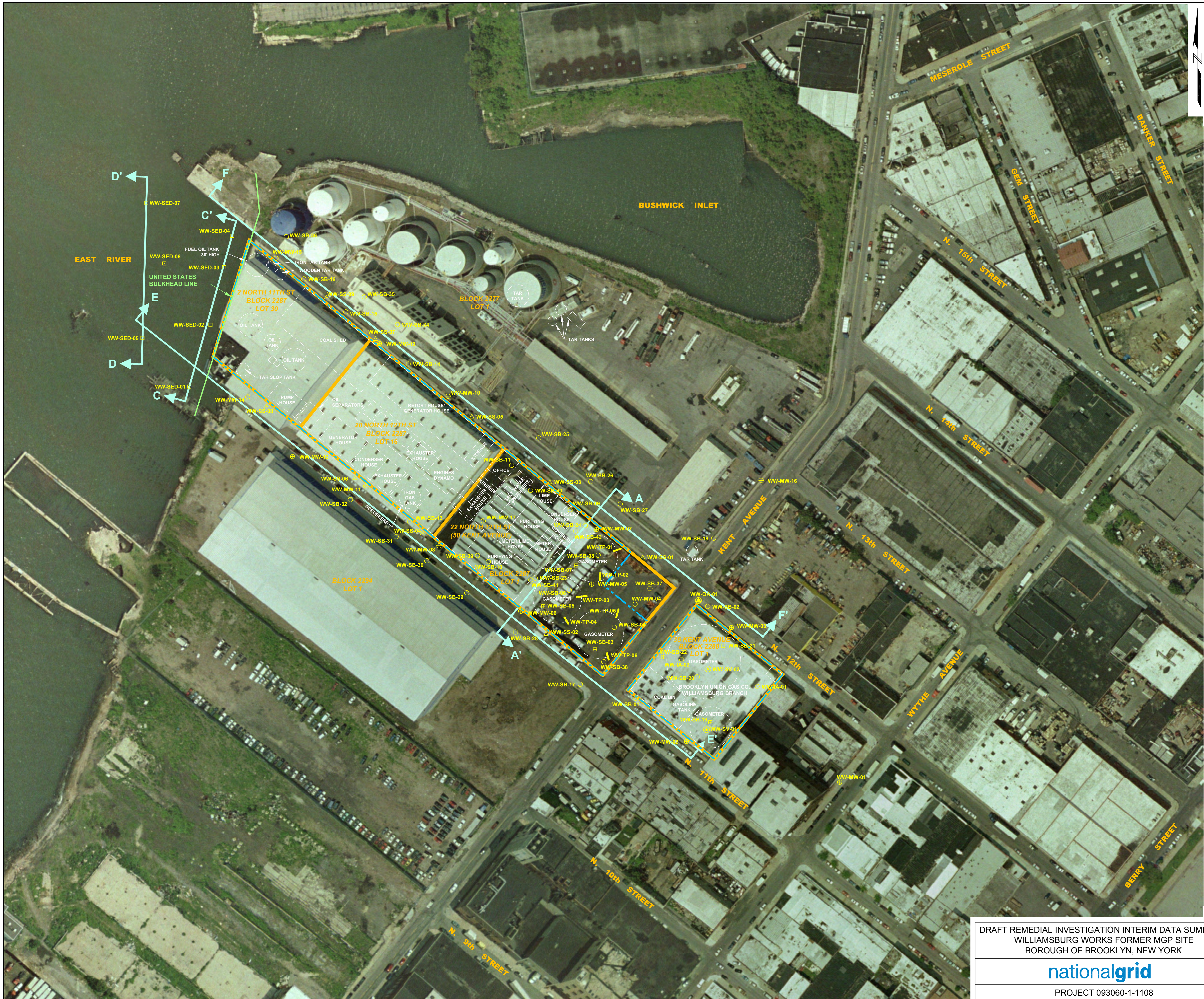
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**LOW TIDE GROUNDWATER
CONTOURS (FEET)**

August 2010

Figure 6



LEGEND

APPROXIMATE CURRENT PROPERTY BOUNDARY
APPROXIMATE BOUNDARY OF FORMER
MANUFACTURED GAS PLANT (MGP) SITE
HISTORIC STRUCTURE

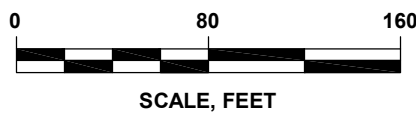
CROSS-SECTION LOCATION

EXISTING SAMPLES

REMEDIAL INVESTIGATION (RI) MONITORING WELL
LOCATION
RI SOIL BORING LOCATION
SOIL BORING WITH TEMPORARY GROUNDWATER
SAMPLE LOCATION
SURFACE SOIL SAMPLE LOCATION
SOIL VAPOR POINT
TEST PIT LOCATION
INDOOR AIR SAMPLE LOCATION
OUTDOOR AIR SAMPLE LOCATION
SEDIMENT SAMPLE LOCATION

NOTES:

1. THE LOCATION OF WW-SB-35 WAS NOT SURVEYED AND IS APPROXIMATE.
2. SURFACE SOIL SAMPLE LOCATIONS ARE APPROXIMATE.



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WILLIAMSBURG WORKS FORMER MGP SITE
BOROUGH OF BROOKLYN, NEW YORK

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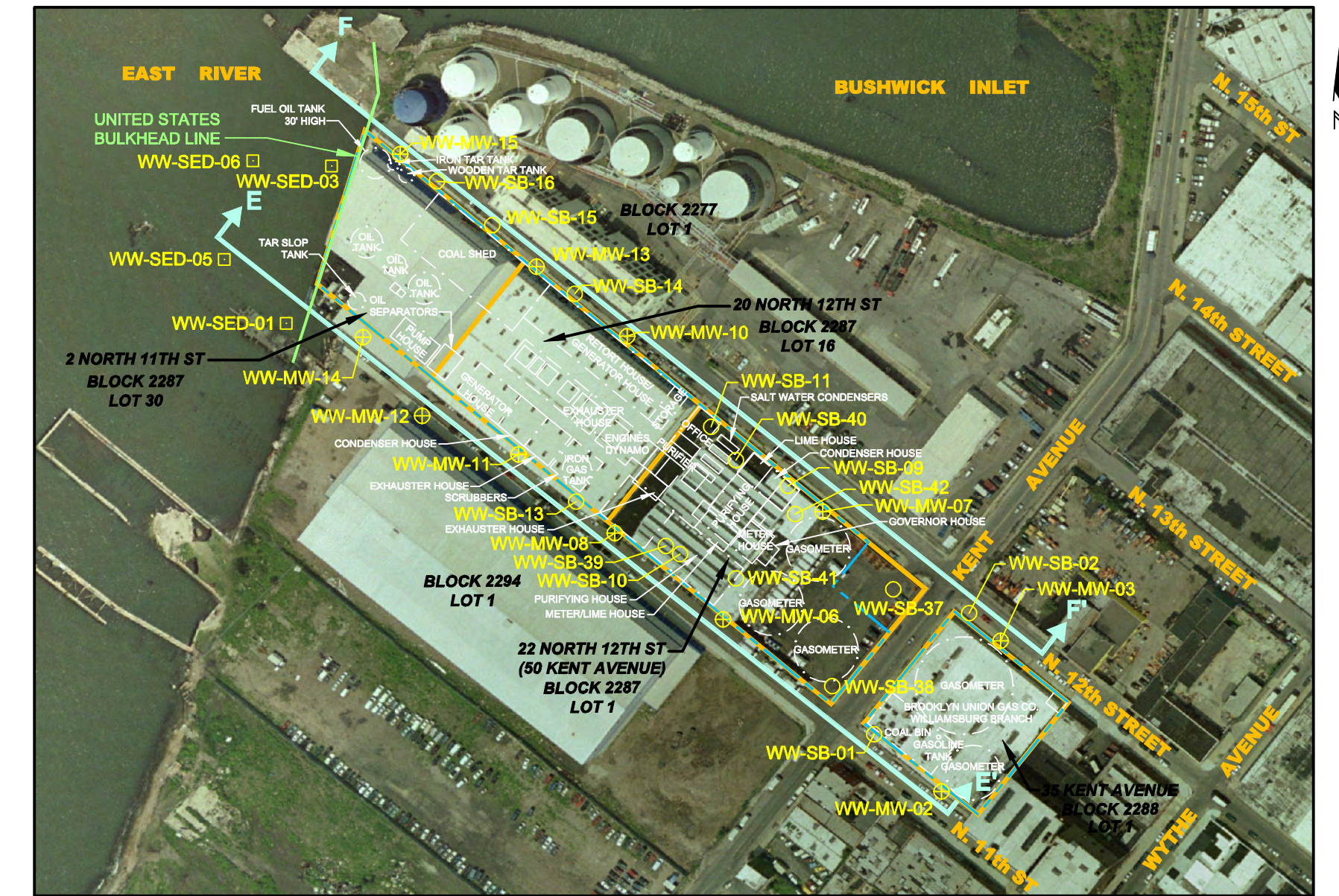
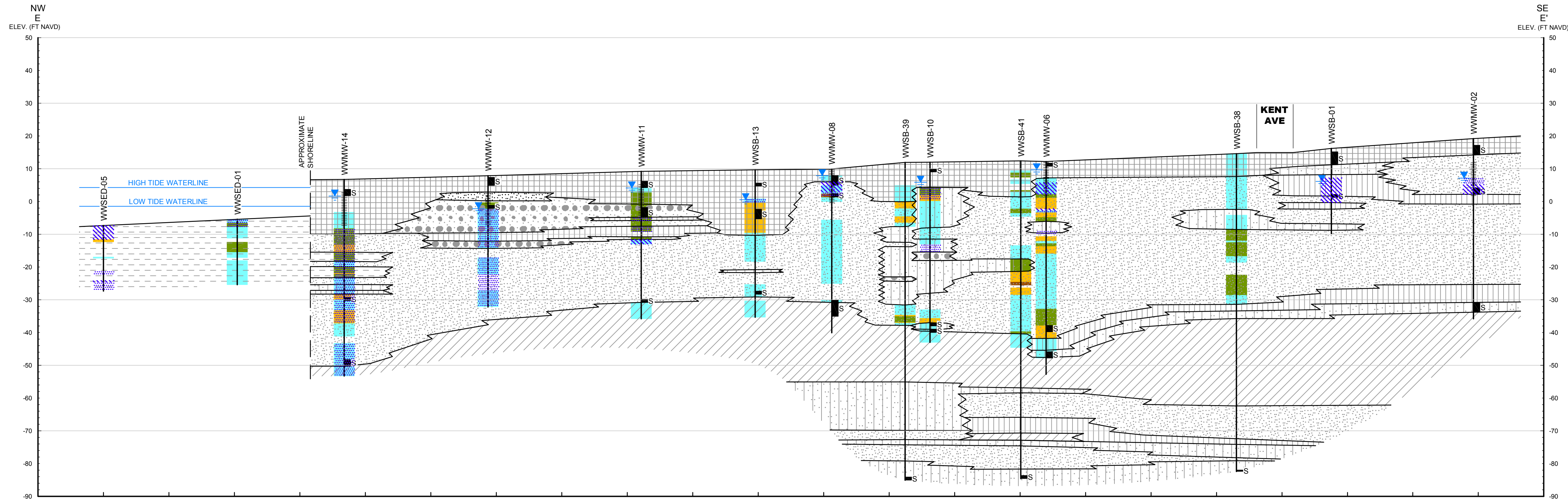
PROJECT 093060-1-1108

GEI Consultants
455 WINDING BROOK DRIVE
SUITE 201
GLASTONBURY, CONNECTICUT 06033

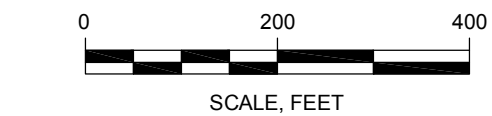
SAMPLE LOCATIONS

August 2010

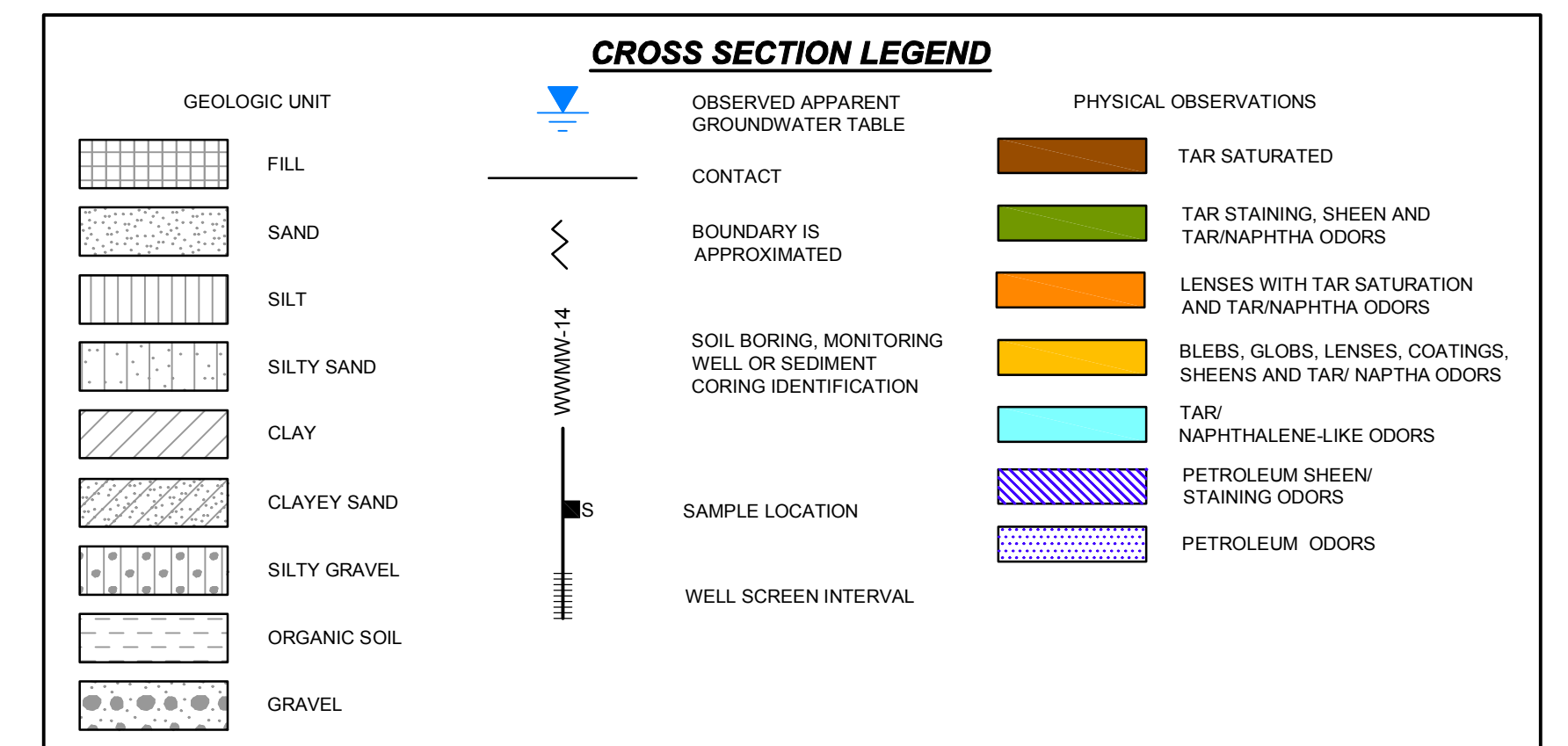
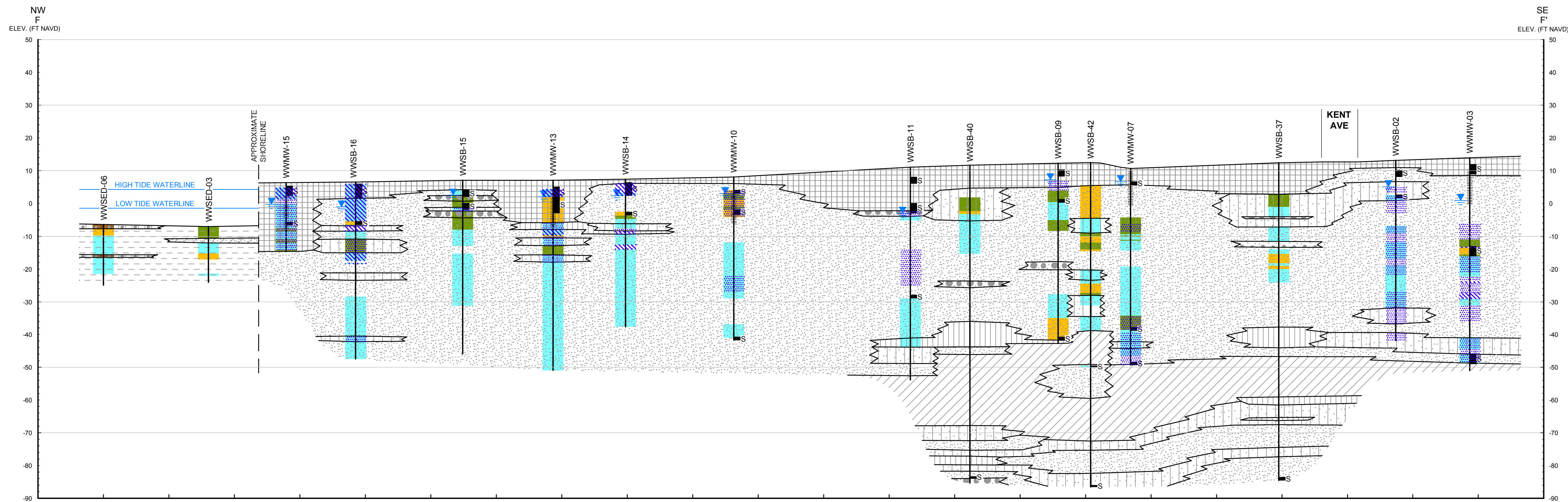
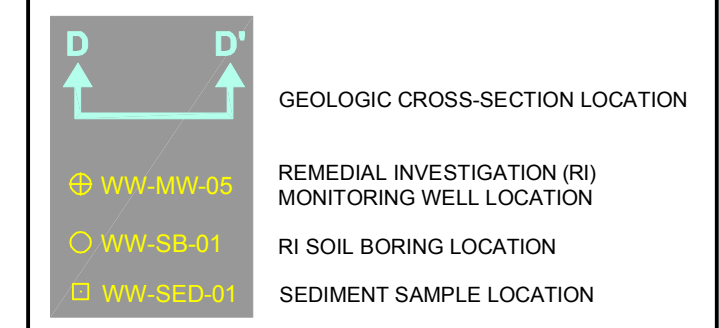
Plate 1



CROSS-SECTION LOCATION

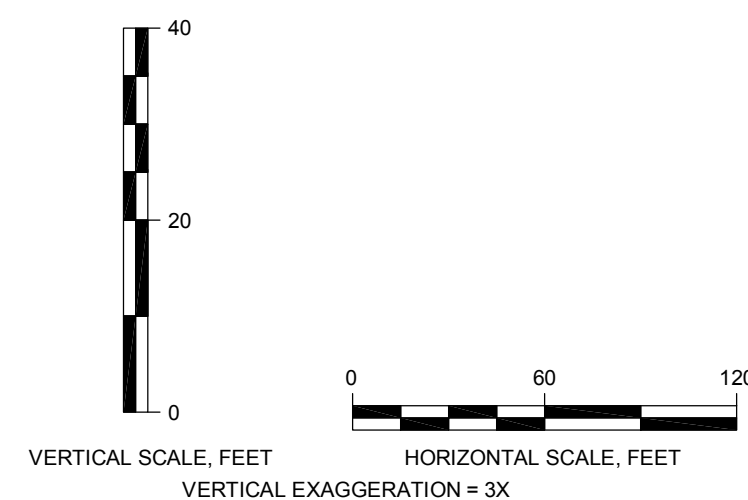


CROSS SECTION LOCATION LEGEND



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WILLIAMSBURG WORKS FORMER MGP SITE
BOROUGH OF BROOKLYN, NEW YORK

nationalgrid

PROJECT 093060-1-1108



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GEOLOGIC CROSS SECTIONS
E-E' AND F-F'

August 2010

Plate 2



GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

PAGE
1 of 3

WWW-01

GROUND SURFACE ELEVATION (FT): 21.55

LOCATION: Wythe Ave

NORTHING: 688406.1 EASTING: 642399.31

TOTAL DEPTH (FT): 65.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 6/16/2009 - 6/17/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 16.00 6/16/2009

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
0	S1	5.0		0.4			WWW-01 (0.5-5)	(0'- 0.5') CONCRETE. (0.5'- 6.5') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; light brown, hand cleared from 0 to 5 ft.
5	S2	5.0	3.25	1.3				(6.5'- 8.3') SANDY SILT (ML); ~60% fines, medium plasticity, ~40% sand, fine; slight organic-like odor, light brown.
						OLO		(8.3'- 10') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; slight organic-like odor, light brown.
10	S3	5.0	3.83	1.2			WWW-01 (16-17)	(10'- 13.9') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; light brown, soap-like odor.
								(13.9'- 14.5') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; slight sulfur-like odor, brown.
15	S4	5.0	4.33	1.1				(14.5'- 15') WIDELY GRADED GRAVEL WITH SAND (GW); ~80% gravel, fine to coarse, ~15% sand, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., gray, possible cobble.
						SLO		(15'- 16.3') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, low plasticity; light brown.
								(16.3'- 17.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., slight sulfur-like odor, gray.
								(17.1'- 20') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, medium plasticity; brown.
20								

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO = CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

PAGE
2 of 3

WWW-01

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
20	S5	5.0	3.33	0.8				(20'- 20.9') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, medium plasticity; brown, ash, two pieces of 2 inch gravel at the top of sample.
25	S6	5.0	3.67	1.2				(20.9'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown.
30	S7	5.0	3.25	0.7		SLO		(25'- 28.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown.
35	S8	5.0	3.33	0.5		OLO		(28.4'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight sulfur-like odor, black.
40	S9	5.0	3.25	0.8				(30'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown, gravelly lense from 31.9 to 32.3 ft.
								(35'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight organic-like odor, brown, light brown and orange colored layers, possible iron oxide staining.
								(40'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown.

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CITY/STATE: Brooklyn, New York

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BORING LOG

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WWW-01

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
45	S10	5.0	3.17	0.8				
50	S11	5.0	3.33	1.4				(50'- 52.1') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, low plasticity; light brown.
55	S12	5.0	3.67	1.1				(52.1'- 54') SILTY SAND (SM); ~70% sand, fine, ~30% fines, low plasticity; light brown. (54'- 55') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown. (55'- 56.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; light brown.
60	S13	5.0	3.25	0.9				(56.8'- 57.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, low plasticity; light brown. (57.5'- 61.4') SILT (ML); ~80% fines, low plasticity, ~20% sand, fine; brown, interbeds of silty sand, similar to 52.1 to 54 ft.
65							WWW-01 (63-64)	(61.4'- 62.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; light brown. (62.9'- 65') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; reddish brown.
Bottom of borehole at 65.0 feet.								

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BORING LOG

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WWMW-02

GROUND SURFACE ELEVATION (FT): 19.19

LOCATION: North 11th Street

NORTHING: 688484.29 EASTING: 642128.99

TOTAL DEPTH (FT): 55.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Melissa Felter

DATE START / END: 7/10/2009 - 7/13/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): ∇ 12.00 7/10/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0									(0'- 2') CONCRETE; gravel.
	S1	3.0	1.83	1.9				WWMW-02 (2-5)	(2'- 5') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines; ~5% to 10% brick and coal, dry, brown and gray, loose, hand cleared.
5	S2	5.0	2.08	0.6					(5'- 10') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines; ~5% to 10% brick and coal, dry to moist, brown and gray, loose.
10	S3	5.0	4.25						(10'- 12') NARROWLY GRADED SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine, ~5% fines; ~5% brick and coal, moist, brown, loose.
				224			PLO		(12'- 14') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine; slight petroleum-like odor, wet, gray, dense.
15	S4	5.0	4				PLO	WWMW-02 (15-17)	(14'- 17') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; moderate petroleum-like odor, wet, gray, loose, gray stained.
				315					(17'- 20') SANDY SILT (ML); ~60% fines, ~35% sand, fine to coarse, ~5% gravel, fine; moist, reddish brown, dense.
20									

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BORING LOG

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WWW-02

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4	5.7					(20'- 21.5') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to medium, ~20% gravel, fine to coarse, ~10% fines; moist, brown and reddish brown, dense.
25	S6	5.0	4.25	7.8					(21.5'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; wet, brown, loose.
30	S7	5.0		14.2					
35	S8	5.0	4.42	1.9					(35'- 44') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines; wet, brown, lense of gravel at 37.5 feet.
40	S9	5.0	4.83	9.5					

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WWW-02

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45	S10	5.0	5	2.2				WWW-02 (50-53)	(44'- 44.5') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; wet, gray, loose. (44.5'- 45') SILT (ML); ~90% fines, ~10% sand, fine; moist, reddish brown, dense, layered. (45'- 50') SILT WITH SAND (ML); ~60% fines, ~40% sand, fine; moist, brownish gray, dense, non cohesive.
50	S11	5.0	5						(50'- 53') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines; wet, grayish brown, dense.
55									(53'- 55') SANDY LEAN CLAY (CL); moist, red and gray, very dense, cohesive.

Bottom of borehole at 55.0 feet.

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BORING LOG

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WWMW-03

GROUND SURFACE ELEVATION (FT): 13.99 LOCATION: North 12th Street
NORTHING: 688683.91 EASTING: 642207.81 TOTAL DEPTH (FT): 65.00
DRILLED BY: Zebra Environmental / Luke Caballero DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Maura MacLeod DATE START / END: 6/23/2009 - 6/26/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): 13.00 6/23/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	2.0						WWMW-03 (2-5)	(0'- 0.5') CONCRETE. (0.5'- 5.5') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., brown, FILL, dry, brick fragments, hand cleared from 0 to 5 ft.
		3.0	1.83	0.0					
5	S2	5.0	3.83	0.0					(5.5'- 9.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; light brown.
10	S3	5.0	3.92				OLO		(9.8'- 10') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate organic-like odor. (10'- 14.1') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; light brown.
15	S4	5.0	4.08	5.7			OLO		(14.1'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate organic-like odor. (15'- 15.4') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; light brown. (15.4'- 20') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, low plasticity; moderate organic-like odor, moist, brown, organics, roots.
20									

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BORING LOG

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WWMW-03

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0		61.2			PLO	WWMW-03 (28-30)	(20'- 25') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, low plasticity; slight petroleum-like odor, wet, brown, organics, roots, lens of gray sand.
25	S6	5.0	3.17				NLO		(25'- 27.2') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, low plasticity; moderate naphthalene-like odor, wet, brown, organics, roots, sheen, moderate petroleum-like odor.
				>9999			PLO		(27.2'- 27.5') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, low plasticity; moderate petroleum-like odor, wet, brown, black staining.
							NLO		(27.5'- 29.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown, tar-like staining with lenses of coating.
30	S7	5.0	2.92	777			NLO		(29.5'- 30') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, low plasticity; moderate naphthalene-like odor, moist, brown, organics, roots, sheen.
							NLO		(30'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
35	S8	5.0	5	161			NLO		(35'- 36.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown.
							PLO		(36.2'- 37.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, moist, brown.
							PLO		(37.8'- 38.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate petroleum-like odor, moist, brown, black staining.
							PLO		(38.2'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, moist, brown.
40	S9	5.0	3.5	149			PLO		(40'- 41.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, moist, brown.
							PLO		(41.2'- 43.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate petroleum-like odor, moist, brown, sheen.

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WWW-03

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45							NLO		(43.1'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown.
	S10	5.0	5	9.9			NLO		(45'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, moist, brown.
50							PLO		
	S11	5.0	4.5	19.1					(50'- 55') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight organic-like odor, brown, two 1 inch silt lenses.
55							OLO		
	S12	5.0	4.17	131					(55'- 58.5') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; slight naphthalene-like odor, brown, slight petroleum-like odor.
60							NLO		
	S13	5.0	3.08	26.4					(58.5'- 60') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; slight petroleum-like odor, brown.
65							PLO		
									(60'- 62.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown, slight petroleum-like odor.
							NLO	WWW-03 (60-63)	(62.7'- 65') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; red.
									Bottom of borehole at 65.0 feet.

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BORING LOG

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WWMW-04

GROUND SURFACE ELEVATION (FT): 13.34 LOCATION: 50 Kent Ave
NORTHING: 688733.54 EASTING: 642033.04 TOTAL DEPTH (FT): 65.00
DRILLED BY: Zebra Environmental / Luke Caballero DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Maura MacLeod DATE START / END: 6/14/2009 - 6/15/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): 8.20 6/15/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0									(0'- 0.5') ASPHALT. (0.5'- 5') CONCRETE; ~80% concrete, ~20% medium to coarse gravel, FILL, hand cleared.
5	S1	5.0	1.42	37.1				WWMW-04 (5-10)	(5'- 10') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moist to wet, brown to gray.
10	S2	5.0	5	1635					(10'- 11.5') SILT WITH GRAVEL (ML); ~65% fines, low plasticity, ~20% gravel, fine to coarse, ~15% sand, fine to coarse; max. size 1 in., moderate petroleum-like odor, wet, black, sheen. (11.5'- 12.4') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, medium plasticity; moderate naphthalene-like odor, wet, gray. (12.4'- 15') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; moderate petroleum-like odor, wet, brown, gray, and black interbeds.
15	S3	5.0	3.33	1440					(15'- 15.8') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, brown, black staining, moderate fuel-like odor. (15.8'- 18.5') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., slight petroleum-like odor, brown, black petroleum-like staining. (18.5'- 20') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moderate petroleum-like odor, brown and black,
20									

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WWW-04

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S4	5.0	3.33	1795	[Pattern]	[Green]	PLO	WWW-04 (31-33)	moderate fuel-like odor, tar-like staining. (20'- 21') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; slight petroleum-like odor, reddish brown, slight fuel-like odor. (21'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, tar-like staining; moderate petroleum-like odor.
							NLO		
25	S5	5.0	3.25	7860			NLO		(25'- 27.1') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, tar-like staining.
							PLO		(27.1'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate petroleum-like odor, brown, tar-like staining.
30	S6	5.0	2.58	> 9999	[Pattern]	[Yellow]	NLO		(30'- 33.5') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, brown, tar-like coating.
							NLO		
35	S7	5.0	3.42				NLO		(33.5'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, sheen. (35'- 36.7') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown. (36.7'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown.
							NLO		
40	S8	5.0	3.5	1845	[Pattern]	[Green]	NLO		(40'- 43.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.
							NLO		

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWMW-04

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45							NLO		(43.8'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown.
	S9	5.0	2.58	58.5					(45'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.
50							NLO		
	S10	5.0	3.58	78.9			NLO		(50'- 51.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, reddish brown.
							NLO		(51.3'- 52.2') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, non plastic; slight naphthalene-like odor, reddish brown.
							NLO		(52.2'- 52.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.
55							NLO		(52.9'- 56.7') SANDY SILT (ML); ~60% fines, low plasticity, ~40% sand, fine to medium; slight naphthalene-like odor, brown.
	S11	5.0	1.92	56.9					
60							NLO	WWMW-04 (58-59)	(56.7'- 60') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.
	S12	5.0	3.58	194			NLO		(60'- 65') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; slight naphthalene-like odor, red.
65									Bottom of borehole at 65.0 feet.

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWMW-05

GROUND SURFACE ELEVATION (FT): 12.48

LOCATION: 50 Kent Ave

NORTHING: 688775.73 EASTING: 641946.36

TOTAL DEPTH (FT): 65.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 6/10/2009 - 6/11/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 10.00 6/10/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		377				WWMW-05 (0.75-5)	(0'- 0.75') ASPHALT. (0.75'- 5') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, dry, brown, hand cleared.
5	S2	5.0	4.67	>9999			NLO		(5'- 7.4') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate naphthalene-like odor, dry, brown, organics/wood fragments, lense of black color with sulfur/petroleum-like odor from 6.5 to 6.7 ft.
							NLO		(7.4'- 7.9') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate naphthalene-like odor, dry, brown, organics/wood fragments, sheen.
							NLO		(7.9'- 10') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate naphthalene-like odor, dry, brown, organics/wood fragments.
10	S3	5.0	5	>9999			NLO	WWMW-05 (12-13)	(10'- 11.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate naphthalene-like odor, wet, brown, organics/wood fragments, sheen, tar-like blebs, faint sulfur-like odor.
							NLO		(11.7'- 15') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate naphthalene-like odor, wet, brown, organics/wood fragments, sheen with interbedded layers of tar-like staining and coating.
15	S4	5.0	1.83	973			NLO		(15'- 16.4') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate naphthalene-like odor, brown, organics/wood fragments, sheen, tar-like staining.
							NLO		(16.4'- 20') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; slight naphthalene-like odor, brown, organics/wood fragments.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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CITY/STATE: Brooklyn, New York

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BORING LOG

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WWW-05

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	2.92				NLO		(20'- 22.3') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; slight naphthalene-like odor, reddish brown.
				>9999			NLO		(22.3'- 24') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, tar-like staining.
							NLO		(24'- 25') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; slight naphthalene-like odor, reddish brown.
25	S6	5.0	3	479			NLO		(25'- 26.7') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; slight naphthalene-like odor, reddish brown.
							NLO		(26.7'- 28.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, tar-like staining.
							NLO		(28.1'- 30') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; slight naphthalene-like odor, reddish brown.
30	S7	5.0	2.42				NLO		(30'- 31.6') SILTY SAND WITH GRAVEL (SM); ~35% sand, fine to coarse, ~35% fines, ~30% gravel, fine; max. size 0.5 in., moderate naphthalene-like odor, brown, dense.
				2891			NLO		(31.6'- 33.4') SILTY SAND WITH GRAVEL (SM); ~60% sand, fine to coarse, ~25% gravel, ~15% fines; max. size 0.75 in., strong naphthalene-like odor, brown, tar-like staining.
							NLO		(33.4'- 35') SILTY SAND WITH GRAVEL (SM); ~60% sand, fine to coarse, ~25% gravel, ~15% fines; max. size 0.75 in., strong naphthalene-like odor, brown.
35	S8	5.0	2.5	575			NLO		(35'- 40') SILTY SAND WITH GRAVEL (SM); ~35% sand, fine to coarse, ~35% fines, ~30% gravel, fine; max. size 0.5 in., moderate naphthalene-like odor, brown, dense.
40	S9	5.0	1.75	877			NLO		(40'- 40.5') SILTY SAND WITH GRAVEL (SM); ~60% sand, fine to coarse, ~25% gravel, ~15% fines; max. size 0.75 in., strong naphthalene-like odor, brown, tar-like staining.
							NLO		(40.5'- 45') SILTY SAND WITH GRAVEL (SM); ~40% fines, ~30% gravel, fine to coarse, ~30% sand, fine to medium; max. size 1 in., moderate naphthalene-like odor, brown.

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BORING LOG

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WWW-05

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45	S10	5.0	2.67				NLO		(45'- 48') SILTY SAND WITH GRAVEL (SM); ~40% fines, ~30% gravel, fine to coarse, ~30% sand, fine to medium; max. size 1 in., moderate naphthalene-like odor, brown.
							NLO		
50	S11	5.0	3.25	4673			NLO		(48'- 50') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines; max. size 0.25 in., strong naphthalene-like odor, brown with reddish brown, tar-like staining.
				3595			NLO		(50'- 50.9') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines; max. size 0.25 in., strong naphthalene-like odor, brown with reddish brown, tar-like staining.
							NLO		(50.9'- 51.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines; max. size 0.25 in., strong naphthalene-like odor, brown with reddish brown, tar-like coating.
							NLO		(51.5'- 53.2') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines; max. size 0.25 in., strong naphthalene-like odor, brown with reddish brown, tar-like staining.
55	S12	5.0	2.08	218			NLO		(53.2'- 54.9') SILT (ML); ~90% fines, ~5% gravel, fine, ~5% sand, fine; moderate naphthalene-like odor, brown gray, dense.
							NLO		(54.9'- 55') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines; max. size 0.25 in., strong naphthalene-like odor, brown with reddish brown.
							NLO		(55'- 60') SILT (ML); ~90% fines, ~5% gravel, fine, ~5% sand, fine; slight naphthalene-like odor, brown gray, dense.
60	S13	5.0	2.58	10.4			NLO		(60'- 63.2') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines; max. size 0.25 in., slight naphthalene-like odor, brown.
65								WWW-05 (63-64)	(63.2'- 65') LEAN CLAY (CL); ~95% fines, ~5% sand, fine; red and gray.

Bottom of borehole at 65.0 feet.

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BORING LOG

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WWMW-06

GROUND SURFACE ELEVATION (FT): 12.23

LOCATION: North 11th Street

NORTHING: 688730.17 EASTING: 641823.66

TOTAL DEPTH (FT): 65.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 6/17/2009 - 6/18/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): ∇ 2.50 6/17/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		0.4				WWMW-06 (0.5-1.5)	(0'- 5') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., brown, hand cleared.
5	S2	5.0	5				NLO		(5'- 6.5') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; slight naphthalene-like odor, brown.
							NLO		(6.5'- 10') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, brown, black stained interbeds, lenses of petroleum-like odor.
10	S3	5.0	4.42				NLO		(10'- 11') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; moderate naphthalene-like odor, brown, sheen.
							NLO		(11'- 13') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, sheen, tar-like blebs, staining, and pockets of coating.
							NLO		(13'- 14.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, tar-like coating.
15	S4	5.0	3				NLO		(14.4'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong petroleum-like odor, black, sheen, black petroleum-like staining.
							NLO		(15'- 15.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, moderate petroleum and sulfur-like odor.
							NLO		(15.6'- 17.1') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, brown, tar-like coating.
							OLO		(17.1'- 18.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, brown, tar-like staining.
20							OLO		(18.3'- 19.3') SILTY SAND (SM); ~80% sand, fine, ~20% fines, non plastic; slight organic-like odor, brown, slight burnt/sulfur-like

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BORING LOG

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WWW-06

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	3				SLO		odor. (19.3'- 20') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, non plastic; slight organic-like odor, brown, slight burnt/sulfur-like odor. (20'- 21') SILT (ML); ~90% fines, medium plasticity, ~10% sand, fine; slight sulfur-like odor, brown, slight burnt-like odor. (21'- 21.9') SILTY SAND (SM); ~80% sand, fine, ~20% fines, non plastic; slight petroleum-like odor, brown. (21.9'- 22.5') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., slight petroleum-like odor, brown, slight sulfur-like odor. (22.5'- 22.9') WIDELY GRADED GRAVEL (GW); fine to coarse; orange and reddish brown. (22.9'- 23.1') WIDELY GRADED GRAVEL (GW); fine to coarse; strong naphthalene-like odor, orange and reddish brown, tar-like coating. (23.1'- 24.2') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, tar-like coating. (24.2'- 25') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown. (25'- 25.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; strong naphthalene-like odor, brown, bands of tar-like staining. (25.8'- 28.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, tar-like coating. (28.1'- 30') SILTY SAND (SP); ~70% sand, fine to medium, ~30% fines, medium plasticity; strong naphthalene-like odor, brown. (30'- 40') SILTY SAND (SP); ~70% sand, fine to medium, ~30% fines, medium plasticity; strong naphthalene-like odor, brown, dense. (40'- 45') SILTY SAND (SP); ~70% sand, fine to medium, ~30% fines, medium plasticity; strong naphthalene-like odor, brown.
				2567			PLO		
							PLO		
							NLO		
							NLO		
							NLO		
25	S6	5.0	4.42				NLO		
				2310			NLO		
							NLO		
30	S7	5.0	3.75	2205					
35	S8	5.0	2.25	1300					
40	S9	5.0	1.92	286					
							NLO		

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BORING LOG

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WWMW-06

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45	S10	5.0	1.33	9316			NLO	WWMW-06 (50-52)	(45'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, brown, sheen, tar-like staining.
50	S11	5.0	4.17	>9999			NLO		
55	S12	5.0	2.25				NLO	WWMW-06 (58-60)	(50'- 54') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, brown, sheen, lense of fine sand from 53.3 to 53.6 ft, tar-like coating.
60	S13	5.0	2.25	0.0			NLO		(54'- 55') SILT (ML); ~90% fines, medium plasticity, ~10% sand, fine; strong naphthalene-like odor, brown. (55'- 57.6') SILT (ML); ~90% fines, medium plasticity, ~10% sand, fine; moderate naphthalene-like odor, brown.
65							NLO		(57.6'- 59.1') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown. (59.1'- 59.8') SILT (ML); ~90% fines, medium plasticity, ~10% sand, fine; moderate naphthalene-like odor, brown. (59.8'- 60') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; moderate naphthalene-like odor, reddish brown. (60'- 65') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; reddish brown.

Bottom of borehole at 65.0 feet.

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ALO = ASPHALT LIKE ODOR

CrLO = CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWW-07

GROUND SURFACE ELEVATION (FT): 10.69

LOCATION: North 12th Street

NORTHING: 688889.72 EASTING: 641970.87

TOTAL DEPTH (FT): 60.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 6/22/2009 - 6/23/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 4.00 6/22/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		2.3				WWW-07 (4-5)	(0'- 5') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., wet, brown, hand cleared.
5	S2	5.0	0						(5'- 10') no recovery.
10	S3	5.0	0						(10'- 15') no recovery.
15	S4	5.0	5				NLO		(15'- 16.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, medium plasticity; moderate naphthalene-like odor, wet, gray, sheen.
							NLO		(16.8'- 19.1') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, medium plasticity; moderate naphthalene-like odor, gray, lense of widely graded sand from 17.6 to 17.8 ft, tar-like staining, moderate petroleum-like odor.
20				> 9999			NLO		(19.1'- 20') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, medium plasticity; strong naphthalene-like

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWW-07

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	1.67	3372			NLO		odor, wet, gray, sheen, tar-like staining. (20'- 20.5') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, dense. (20.5'- 20.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, dense, tar-like staining. (20.8'- 21.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, dense. (21.8'- 22') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, dense, tar-like staining. (22'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, dense. (25'- 30') WIDELY GRADED SAND WITH SILT (SP-SM); ~85% sand, fine to coarse, ~10% fines, medium plasticity, ~5% gravel, fine; max. size 0.5 in., brown, dense, slight solvent/ burnt-like odor.
							NLO		
							NLO		
							NLO		
25	S6	5.0	4.67	784					
30	S7	5.0	4.67	1982					(30'- 31.9') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% fines, medium plasticity, ~5% gravel, fine; max. size 0.5 in., moderate naphthalene-like odor, brown, dense. (31.9'- 35') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., slight naphthalene-like odor, brown.
35	S8	5.0		565					(35'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, brown.
40	S9	5.0		401					

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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CLIENT: National Grid

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BORING LOG

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WWW-07

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)						
45							NLO	WWMW-07 (48.5-49.5)	(45'- 49.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, strong petroleum-like odor from 46.3 to 49.4 ft, tar-like staining.	
	S10	5.0	4.42	> 9999			NLO			
50							NLO		WWMW-07 (59-60)	(49.2'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown. (50'- 52.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown, moderate petroleum-like odor.
	S11	5.0	3.83	1269			NLO			
55							NLO			(52.8'- 54.1') SILTY SAND (SM); ~85% sand, fine, ~15% fines, medium plasticity; slight naphthalene-like odor, brown, slight petroleum-like odor. (54.1'- 54.3') WIDELY GRADED SAND (SW); fine to coarse; moderate naphthalene-like odor, brown, moderate petroleum-like odor. (54.3'- 55') SILTY SAND (SM); ~85% sand, fine, ~15% fines, medium plasticity; slight naphthalene-like odor, brown, slight petroleum-like odor. (55'- 57.1') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, slight petroleum-like odor. (57.1'- 59.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, wet, brown.
							NLO			
							NLO			
	S12	5.0	4	0.0			NLO			
60							PLO	WWMW-07 (59-60)	(59.6'- 59.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; wet, brown, slight solvent-like odor. (59.8'- 60') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; red gray.	

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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CLIENT: National Grid
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CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093060

BORING LOG

PAGE
1 of 3

WWW-08

GROUND SURFACE ELEVATION (FT): 9.93 LOCATION: North 11th Street
NORTHING: 688854.11 EASTING: 641670.88 TOTAL DEPTH (FT): 50.00
DRILLED BY: Zebra Environmental / Luke Caballero DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Maura MacLeod DATE START / END: 6/19/2009 - 6/19/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): 2.00 6/19/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0		2.0							(0'- 2') FILL, hand cleared.
	S1	3.0	1.58	540			NLO	WWW-08 (2-5)	(2'- 3.9') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, brown, FILL, brick fragments, hand cleared.
							PLO		(3.9'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate petroleum-like odor, brown, black staining, hand cleared.
5	S2	5.0	4.17				NLO		(5'- 7') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, brown, black staining from 5 to 5.9 ft, wood fragments from 6.8 to 7 ft, moderate petroleum-like odor.
				3038			NLO	WWW-08 (7.5-8.5)	(7'- 7.6') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; moderate naphthalene-like odor, brown, petroleum-like odor.
							NLO		(7.6'- 8.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, brown, sheen, tar-like saturation, petroleum-like odor.
10	S3	5.0	0						(8.6'- 10') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; moderate naphthalene-like odor, brown.
									(10'- 15') No Recovery.
15	S4	5.0	2.67	197					(15'- 15.5') SILTY SAND (SM); black.
							NLO		(15.5'- 20') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, light brown and brown.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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2 of 3

WWMW-08

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	1.58	221	[Pattern]		NLO		(20'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, light brown and brown, color change at 22.9 ft to brown.
25	S6	5.0	2.75	56.2			NLO		(25'- 25.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown.
							NLO		(25.8'- 26.4') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, light brown and brown.
							NLO		(26.4'- 26.7') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; reddish brown, 0.5 inch of widely graded fine to medium sand lense.
30	S7	5.0	2.67	178	[Pattern]		NLO		(26.7'- 27.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, light brown and brown.
									(27.3'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown, color change at 28.9 ft to blackish brown.
									(30'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, light brown and brown, silty lenses up to 0.5 inch throughout sample.
35	S8	5.0	2.67	0.1	[Pattern]				(35'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; light brown and brown, silty lenses up to 1 inch throughout sample, varved clay from 36.7 to 37 ft.
40	S9	5.0	1.92				NLO	WWMW-08 (40-45)	(40'- 40.7') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, light brown and brown.
									(40.7'- 45') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; red, gray silt varves, 2 inches of the clay has ~30% fine sand content.

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWMW-10

GROUND SURFACE ELEVATION (FT): 8.07

LOCATION: North 12th Street

NORTHING: 689118.5 EASTING: 641685.93

TOTAL DEPTH (FT): 49.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 9/8/2009 - 9/9/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 5.00 9/8/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0							(0'- 0.5') ASPHALT. (0.5'- 2') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., dry, brown, hand cleared. (2'- 4') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., dry, light brown, hand cleared.
5	S2	5.0	3.17	62.6			NLO	WWMW-10 (4-5)	(4'- 5') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight naphthalene-like odor, moist, brown, sheen, tar-like blebs, black staining, moderate petroleum-like odor, hand cleared. (5'- 7') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight naphthalene-like odor, wet, gray brown, sheen, slight petroleum-like odor. (7'- 8.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, wet, gray brown, sheen, tar-like blebs, slight petroleum-like odor.
10	S3	5.0	4.5	119			NLO	WWMW-10 (10-11.5)	(8.9'- 10') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, wet, gray brown, sheen, slight petroleum-like odor. (10'- 12.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, sheen and tar-like blebs, slight petroleum-like odor.
15	S4	5.0	4.58	11.3					(12.2'- 18.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown, slightly silty lenses.
20									(18.5'- 18.8') SILTY SAND (SM); ~70% sand, fine, ~30% fines, low plasticity; moist, brown. (18.8'- 19.1') SANDY SILT (ML); ~70% fines, low plasticity, ~30%

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWW-10

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	3.33	51.7			NLO		sand, fine; moist, black. (19.1'- 20') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, low plasticity, ~5% gravel, fine; max. size 0.5 in., moist, brown. (20'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, loose, slight burnt-like odor.
25	S6	5.0	2.25	65.9			NLO		(25'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, loose, slight burnt-like odor.
30	S7	5.0	2.92	69.6			NLO		(30'- 35') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, low plasticity, ~5% gravel, fine; max. size 0.5 in., slight naphthalene-like odor, moist, brown, dense, slight petroleum-like odor.
35	S8	5.0	3.83	36.1			NLO		(35'- 35.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown.
							NLO		(35.7'- 37') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, low plasticity, ~5% gravel, fine; max. size 0.5 in., slight naphthalene-like odor, moist, brown, dense.
									(37'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown.
40	S9	5.0	3.67	9.0					

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

	GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300				CLIENT: National Grid PROJECT: Williamsburg MGP RI CITY/STATE: Brooklyn, New York GEI PROJECT NUMBER: 093060				BORING LOG	
									PAGE 3 of 3	WWW-10

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45									(45'- 49') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown.
	S10	4.0	3.75	6.2			NLO		

Refusal at 49.0 feet.
 Bottom of borehole at 49.0 feet.

ENVIRONMENTAL BORING LOG - WILLIAMSBURG.GPJ - GEI CONSULTANTS.GDT 4/15/10

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL	ppm = PARTS PER MILLION	NLO = NAPHTHALENE LIKE ODOR	CrLO= CREOSOTE LIKE ODOR
REC = RECOVERY LENGTH OF SAMPLE	IN. = INCHES	PLO = PETROLEUM LIKE ODOR	OLO = ORGANIC LIKE ODOR
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)	FT. = FEET	TLO = TAR LIKE ODOR	SLO = SULFUR LIKE ODOR
		CLO = CHEMICAL LIKE ODOR	MLO = MUSTY LIKE ODOR
		ALO = ASPHALT LIKE ODOR	



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BORING LOG

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WWMW-11

GROUND SURFACE ELEVATION (FT): 9.2

LOCATION: North 11th Street

NORTHING: 688957.02 EASTING: 641529.95

TOTAL DEPTH (FT): 45.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 8/21/2009 - 8/25/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 5.00 8/21/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0						WWMW-11 (3-5)	(0'- 0.2') ASPHALT. (0.2'- 2.3') NARROWLY GRADED SAND WITH SILT AND GRAVEL (SP-SM); ~75% sand, fine, ~15% gravel, fine, ~10% fines, non plastic; ~40% concrete fragments up to 4 inches, max. size 0.5 in., dry, olive brown, FILL, hand cleared. (2.3'- 5') WIDELY GRADED GRAVEL WITH SAND (GW); ~55% gravel, fine to coarse, ~40% sand, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moist, gray to black, FILL, hand cleared.
5	S2	5.0	3.08				NLO		(5'- 6.4') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., slight naphthalene-like odor, brown black, FILL, coal and brick fragments. (6.4'- 8.8') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., slight naphthalene-like odor, moist, brown black, FILL, coal and brick fragments, sheen.
10	S3	5.0	2.42				NLO		(8.8'- 10') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, moist, brown black, FILL, coal and brick fragments, tar-like staining. (10'- 14') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, wet, black, coal fragments, sheen, tar-like staining.
15	S4	5.0	3.92				NLO	WWMW-11 (11-14)	(14'- 15') SILT (ML); ~90% fines, low plasticity, ~10% sand, fine; moderate naphthalene-like odor, moist, black, tar-like staining, slight petroleum-like odor. (15'- 16.7') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, wet, black, coal fragments, sheen, tar-like staining. (16.7'- 18.4') SILT (ML); ~90% fines, low plasticity, ~10% sand, fine; slight naphthalene-like odor, moist, black, tar-like staining, slight petroleum-like odor.
							NLO		(18.4'- 20') SILT (ML); ~90% fines, low plasticity, ~10% sand, fine; moist, gray.
20									

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ALO = ASPHALT LIKE ODOR

CrLO = CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
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MLO = MUSTY LIKE ODOR

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CITY/STATE: Brooklyn, New York

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BORING LOG

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WWMW-11

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	5.08				NLO	WWMW-11 (39-40)	(20'- 20.7') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, wet, black, coal fragments, sheen, tar-like staining. (20.7'- 22.2') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, low plasticity; slight naphthalene-like odor, moist, brown, gray petroleum-like staining, moderate petroleum-like odor. (22.2'- 27.4') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., wet, brown, loose. (27.4'- 30') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., wet, brown, dense. (30'- 35') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 2.5 in., moist, brown. (35'- 40') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., wet, brown, dense. (40'- 45') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; slight naphthalene-like odor, reddish gray.
				4.3			NLO		
25	S6	5.0	3.33	0.3					
30	S7	5.0		0.2					
35	S8	5.0	1.08						
40	S9	5.0	4.92	0.3					
							NLO		

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BORING LOG

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WWMW-12

GROUND SURFACE ELEVATION (FT): 7.89 LOCATION: North 11th Street
NORTHING: 689010.95 EASTING: 641395.17 TOTAL DEPTH (FT): 40.00
DRILLED BY: Zebra Environmental / Quincy Brandt DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Maura MacLeod DATE START / END: 8/28/2009 - 8/31/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): 10.00 8/31/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		0.1				WWMW-12 (0.5-3)	(0'- 0.5') CONCRETE. (0.5'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., dry, brown, hand cleared.
5	S2	5.0	3.42						(5'- 10') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., dry, brown, brick and coal fragments.
							NLO		(7.7'- 8.2') WIDELY GRADED GRAVEL WITH SAND (GW); ~55% gravel, ~40% sand, ~5% fines, non plastic; max. size 1.25 in., slight naphthalene-like odor, dry, brown gray.
				1520			NLO	WWMW-12 (9-10)	(8.2'- 10') WIDELY GRADED GRAVEL WITH SAND (GW); ~55% gravel, ~40% sand, ~5% fines, non plastic; max. size 1.25 in., moderate naphthalene-like odor, wet, brown gray, sheen.
10	S3	5.0	0.92	464					(10'- 17.4') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, wet, brown black, moderate petroleum-like odor.
							NLO		
15	S4	5.0	4.75	1472					
							NLO		(17.4'- 20') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; slight naphthalene-like odor, moist, slight petroleum-like odor.
20									

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BORING LOG

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WWW-12

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	3	787			NLO		(20'- 22.2') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, wet, brown black, moderate petroleum-like odor.
									(22.2'- 25') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., moist, light brown.
25	S6	5.0	4.75	14.4			NLO		(25'- 30') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., slight naphthalene-like odor, moist, light brown, slight petroleum-like odor.
30	S7	5.0	3.92	28.1			PLO		(30'- 35') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., slight petroleum-like odor, moist, light brown.
35	S8	5.0	3.17	215			NLO		(35'- 40') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., slight naphthalene-like odor, moist, light brown, slight petroleum-like odor.
40									Refusal at 40.0 feet. Bottom of borehole at 40.0 feet.

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BORING LOG

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WWMW-13

GROUND SURFACE ELEVATION (FT): 7.07

LOCATION: North 12th Street

NORTHING: 689223.85 EASTING: 641556.91

TOTAL DEPTH (FT): 58.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 9/15/2009 - 9/15/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 5.00 9/15/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0	2						(0'- 0.5') CONCRETE. (0.5'- 2.7') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., dry, brown, FILL, hand cleared.
				21.9			NLO	WWMW-13 (2-5)	(2.7'- 5') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., slight naphthalene-like odor, moist, black, FILL, coal fragments, petroleum-like staining, moderate petroleum-like odor, hand cleared.
5	S2	5.0	1.58				NLO	WWMW-13 (5-10)	(5'- 10') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 2 in., strong naphthalene-like odor, wet, black, FILL, brick, coal, organic fragments, tar-like staining, pockets of coating.
10	S3	5.0	2.42				NLO		(10'- 12.9') WIDELY GRADED GRAVEL WITH SAND (GW); ~80% gravel, fine to coarse, ~15% sand, fine to coarse, ~5% fines, non plastic; max. size 2 in., moderate naphthalene-like odor, wet, black, FILL, coal and brick fragments, tar-like staining and blebs.
				2463			NLO		(12.9'- 15') SILT WITH SAND (ML); ~80% fines, medium plasticity, ~20% sand, fine; slight naphthalene-like odor, moist, black, lense of organics, moderate petroleum-like odor.
15	S4	5.0	1.83				NLO		(15'- 16.8') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, brown, pockets of petroleum-like staining, moderate petroleum-like odor.
				377			NLO		(16.8'- 17.5') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, brown, pockets of tar-like coating, moderate petroleum-like odor.
							NLO		(17.5'- 20') SILTY SAND (ML); ~80% sand, fine to coarse, ~15% fines, low plasticity, ~5% gravel, fine to coarse; max. size 1 in., slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
20									

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CITY/STATE: Brooklyn, New York

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BORING LOG

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WWW-13

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	3.08	518			NLO		(20'- 22.7') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., moderate naphthalene-like odor, moist, brown, sheen and tar-like staining.
							NLO		(22.7'- 25') SILTY SAND (ML); ~80% sand, fine to coarse, ~15% fines, low plasticity, ~5% gravel, fine to coarse; max. size 1 in., slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
25	S6	5.0	2.92	52.9			NLO		(25'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, reddish brown.
30	S7	5.0	3.58	114					(30'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown.
35	S8	5.0	3.58	99.8			NLO		
40	S9	5.0	2.92	24.2					

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BORING LOG

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WWW-13

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45							NLO		(45'- 58') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, reddish brown.
	S10	5.0	3.58	50.7					
50									
	S11	5.0	3.17	207					
55									
	S12	3.0							
Refusal at 58.0 feet. Bottom of borehole at 58.0 feet.									

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BORING LOG

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WWMW-14

GROUND SURFACE ELEVATION (FT): 6.75 LOCATION: North 11th Street
NORTHING: 689120.85 EASTING: 641312.56 TOTAL DEPTH (FT): 60.00
DRILLED BY: Zebra Environmental / Quincy Brandt DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Maura MacLeod DATE START / END: 9/1/2009 - 9/2/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): 5.00 9/1/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0									(0'- 0.5') ASPHALT. (0.5'- 1.7') FILL, wood fragments.
	S1	4.5	1					WWMW-14 (3-5)	(1.7'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., dry, blackish brown, FILL, wood fragments, hand cleared.
				5.0					
5	S2	5.0	1.67						(5'- 10') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., wet to moist, brown, FILL, brick fragments.
				15.8					
10	S3	5.0	2.08	4.4					(10'- 15') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., slight naphthalene-like odor, wet, brown, FILL, brick fragments.
							NLO		
15	S4	5.0	2.75						(15'- 16.7') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., slight naphthalene-like odor, wet, brown, FILL, brick fragments, sheen, slight petroleum-like odor.
							NLO		(16.7'- 17.3') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~50% sand, fine to coarse, ~40% gravel, fine to coarse, ~10% fines, non plastic; max. size 1.5 in., slight naphthalene-like odor, wet, black, organics, wood, and root fragments, sheen, slight petroleum-like odor.
				578			NLO		(17.3'- 20') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~50% sand, fine to coarse, ~40% gravel, fine to
20									

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WWMW-14

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	3.83	973			NLO		coarse, ~10% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, wet, black, organics, wood, and root fragments, sheen, slight petroleum-like odor. (20'- 22.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, wet, black, tar-like coating, slight petroleum-like odor. (22.2'- 25') SANDY ORGANIC SOIL (OL); ~60% fines, low plasticity, ~40% sand, fine; moderate naphthalene-like odor, moist, black, organics, roots, wood fragments, tar-like staining, slight petroleum-like odor. (25'- 26.6') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., slight naphthalene-like odor, wet, brown, brick fragments, slight petroleum-like odor. (26.6'- 28.6') SANDY ORGANIC SOIL (OL); ~60% fines, low plasticity, ~40% sand, fine; moderate naphthalene-like odor, moist, black, organics, roots, wood fragments, tar-like staining, slight petroleum-like odor. (28.6'- 28.8') WIDELY GRADED SAND (SW); tar-like coating. (28.8'- 29.1') SANDY ORGANIC SOIL (OL); ~60% fines, low plasticity, ~40% sand, fine; moderate naphthalene-like odor, moist, black, organics, roots, wood fragments, tar-like staining, slight petroleum-like odor. (29.1'- 30') ORGANIC SOIL WITH SAND (OL); ~80% fines, low plasticity, ~20% sand, fine; moderate naphthalene-like odor, moist, black, organics, roots, wood fragments, tar-like staining, slight petroleum-like odor. (30'- 32.1') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, slight petroleum-like odor. (32.1'- 33.9') SILTY SAND (SM); ~75% sand, fine to medium, ~20% fines, non plastic, ~5% gravel, fine; max. size 0.25 in., slight naphthalene-like odor, brown, lenses of silt and white burnt-like material, slight petroleum-like odor. (33.9'- 35') SILT (ML); ~90% fines, low plasticity, slow dilatancy, ~10% sand, fine; slight naphthalene-like odor, wet, gray, slight petroleum-like odor. (35'- 36.6') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., strong naphthalene-like odor, black, tar-like coating, slight petroleum-like odor. (36.6'- 36.9') SLIT (ML); gray. (36.9'- 40') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to medium, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., slight naphthalene-like odor, wet, gray, slight petroleum-like odor. (40'- 42.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to medium, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., slight naphthalene-like odor, wet, gray, silty lenses, tar-like coating, slight petroleum-like odor. (42.1'- 43.9') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~75% sand, fine to coarse, ~15% gravel, fine to coarse, ~10% fines, non plastic; max. size 1.25 in., moderate
							NLO		
25	S6	5.0	4.58	1345			NLO		
							NLO		
							NLO		
30	S7	5.0	2.75	348			NLO		
							NLO		
							NLO		
35	S8	5.0	2.92	1313			NLO		
							NLO		
40	S9	5.0	4.67	1044			NLO		
							NLO		

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



GEI Consultants, Inc.
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CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

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BORING LOG

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WWMW-14

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45							NLO	WWMW-14 (55-57)	naphthalene-like odor, wet, brown, sheen, tar-like blebs, slight petroleum-like odor. (43.9'- 47.9') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight naphthalene-like odor, moist, brown.
	S10	5.0	4.5	100			NLO		
50									(47.9'- 50') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., moist, brown.
	S11	5.0	3.58	109			NLO		(50'- 54.8') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~85% sand, fine to coarse, ~10% fines, non plastic, ~5% gravel, fine to coarse; max. size 1 in., slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
55									(54.8'- 55') SANDY LEAN CLAY (CL); ~70% fines, medium plasticity, ~30% sand, fine; moist, reddish brown.
	S12	5.0	4.42	55.3			NLO		(55'- 57') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., slight naphthalene-like odor, moist, brown, lenses of clay, slight petroleum-like odor.
60									(57'- 60') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; slight naphthalene-like odor, moist, reddish gray, lense of sand, slight petroleum-like odor.
							NLO		
Bottom of borehole at 60.0 feet.									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWMW-15

GROUND SURFACE ELEVATION (FT): 6.35

LOCATION: North 12th Street

NORTHING: 689376.89 EASTING: 641364.64

TOTAL DEPTH (FT): 21.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 9/24/2009 - 9/29/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 6.50 9/28/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		323				WWMW-15 (1-4)	(0'- 0.5') CONCRETE. (0.5'- 1.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., dry, brown, FILL, hand cleared. (1.5'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, ~20% gravel, ~5% fines, non plastic; max. size 2 in., slight naphthalene-like odor, moist, brown, FILL, pockets of petroleum-like staining, moderate petroleum-like odor, hand cleared.
5	S2	5.0	2.25				NLO		(5'- 6.5') slight petroleum-like odor, FILL, wood fragments.
				1927			PLO		(6.5'- 10') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., moderate naphthalene-like odor, wet, black, FILL, wood fragments, moderate petroleum-like odor, strong organic-like odor.
10	S3	5.0	4.5				NLO	WWMW-15 (12-13)	(10'- 13.1') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., moderate naphthalene-like odor, wet, brown black, FILL, wood fragments, moderate petroleum and organic-like odor.
				3102			NLO		(13.1'- 13.9') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines; max. size 1 in., slight naphthalene-like odor, wet, gray, FILL, slight petroleum-like odor, moderate organic-like odor.
15	S4	5.0	4.42				NLO		(13.9'- 15') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, low plasticity; moderate naphthalene-like odor, moist, black, FILL, organics, moderate tar-like staining, moderate petroleum-like staining and odor.
				1437			NLO		(15'- 17.2') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., moderate naphthalene-like odor, wet, gray, FILL, wood fragments, moderate petroleum-like odor, strong organic-like odor.
							NLO		(17.2'- 18.3') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, low plasticity; moderate naphthalene-like odor, moist, black, FILL, organics, moderate tar-like staining, moderate petroleum-like odor.
20							NLO		(18.3'- 20') SANDY SILT (ML); ~70% fines, medium plasticity,

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

	GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300		CLIENT: National Grid PROJECT: Williamsburg MGP RI CITY/STATE: Brooklyn, New York GEI PROJECT NUMBER: 093060		BORING LOG WWW-15				
					PAGE 2 of 2				
DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	1.0	4.5	1015			NLO NLO		~30% sand, fine; moderate naphthalene-like odor, moist, black, FILL, moderate petroleum-like odor. (20'- 20.4') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, moist, black, FILL, moderate petroleum-like odor. (20.4'- 20.8') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, low plasticity; moderate naphthalene-like odor, moist, black, FILL, organics, moderate tar-like staining, moderate petroleum-like staining and odor. (20.8'- 21') FILL, wood fragments. Refusal at 21.0 feet. Bottom of borehole at 21.0 feet.
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE) ppm = PARTS PER MILLION IN. = INCHES FT. = FEET NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR GrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR									



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BORING LOG

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WWW-16

GROUND SURFACE ELEVATION (FT): 9.99 LOCATION: Kent Ave
NORTHING: 688979.55 EASTING: 642265.93 TOTAL DEPTH (FT): 52.50
DRILLED BY: Zebra Environmental / Luke Caballero DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Maura MacLeod DATE START / END: 7/27/2009 - 8/11/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): 5.60 8/10/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0						WWW-16 (2-3.5)	(0'- 0.9') CONCRETE.
				1.3					(0.9'- 2') SILTY GRAVEL WITH SAND (GM); ~50% gravel, fine to coarse, subangular, ~35% sand, fine to coarse, ~15% fines, non plastic; max. size 2.5 in., moist, dark brown, FILL, concrete, brick fragments, and cobbles, hand cleared.
									(2'- 3.5') SILTY SAND WITH GRAVEL (SM); ~55% sand, fine to coarse, ~25% gravel, fine to coarse, subangular, ~20% fines, non plastic; max. size 1.5 in., moist, brown to dark brown, FILL, coal and brick fragments, hand cleared.
									(3.5'- 5') SILTY SAND (SM); ~60% sand, fine to medium, ~30% fines, non plastic, ~10% gravel, fine, subangular; max. size 0.75 in., moist, brown to dark brown, hand cleared.
									(5'- 5.6') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, ~5% fines, non plastic; max. size 1 in., dry, brown.
5	S2	5.0	4.75					PLO	(5.6'- 10') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate petroleum-like odor, wet, brown.
				4843					
10	S3	5.0	3.92					PLO	(10'- 10.9') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., moderate petroleum-like odor, wet, brown, sheen.
				3520					(10.9'- 12.2') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; wet, brown, sheen.
								PLO	(12.2'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, wet, brown.
15	S4	5.0	5.17					PLO	(15'- 18.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, wet, brown, silty sand lenses from 16.6 to 17.6 ft.
				65.6				OLO	(18.3'- 20') SANDY ORGANIC SOIL (OL); ~60% fines, low plasticity, ~40% sand, fine; moderate organic-like odor, moist, brown black, organics, roots, seeds, plant matter.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWMW-16

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.83	8564			PLO	WWMW-16 (20-21)	(20'- 20.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate petroleum-like odor, wet, brown. (20.9'- 22') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate petroleum-like odor, wet, brown. (22'- 22.8') SANDY ORGANIC SOIL (OL); ~60% fines, low plasticity, ~40% sand, fine; moderate organic-like odor, moist, brown black, organics, roots, seeds, plant matter. (22.8'- 23.6') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, non plastic; slight petroleum-like odor, moist, gray. (23.6'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, reddish gray. (25'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, gray, slight fruit-like, possibly petroleum odor.
							PLO		
							OLO		
							PLO		
							PLO		
25	S6	5.0	4.5	81.2					
30	S7	5.0	4.92	0.8					(30'- 31.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; wet, brown, loose, moderate fruit-like, possibly petroleum odor. (31.2'- 31.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, low plasticity, ~5% gravel, fine; max. size 0.5 in., moist, brown, slity seams, fruit-like, possibly petroleum odor. (31.8'- 32.9') LEAN CLAY (CL); ~70% fines, medium plasticity, ~30% sand, fine; reddish gray, slight fruit-like, possibly petroleum odor. (32.9'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; wet, brown, slight fruit-like, possibly petroleum odor. (35'- 37.4') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, gray, slight fruit-like, possibly petroleum odor.
35	S8	5.0	3.83	5.7				WWMW-16 (38-40)	(37.4'- 40') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., brown, slight fruit-like, possibly petroleum odor.
40	S9	5.0	5.17	12.7					(40'- 48.1') SANDY SILT (ML); ~60% fines, low plasticity, ~40% sand, fine; brown, dense, slight fruit-like, possibly petroleum odor.

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BORING LOG

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WWW-16

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45	S10	5.0	5	4.2					(48.1'- 52.5') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown, slight fruit-like, possibly petroleum odor.
50	S11	2.5	4.25						

Refusal at 52.5 feet.
Bottom of borehole at 52.5 feet.

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BORING LOG

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WWW-17

GROUND SURFACE ELEVATION (FT): 11.62 LOCATION: 50 Kent Ave
NORTHING: 688916.75 EASTING: 641757.91 TOTAL DEPTH (FT): 60.00
DRILLED BY: Zebra Environmental / Luke Caballero DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Maura MacLeod DATE START / END: 6/8/2009 - 6/9/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		2.1				WWW-17 (1-2)	(0'- 0.33') CONCRETE. (0.3'- 5') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine; brown, hand cleared.
5	S2	5.0	2				NLO	WWW-17 (7-8)	(5'- 8.3') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine to coarse; max. size 2 in., slight naphthalene-like odor, brown.
				868			NLO		(8.3'- 10') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine to coarse; max. size 2 in., moderate naphthalene-like odor, brown, sheen, tar-like staining.
10	S3	5.0	4.08				NLO		(10'- 12.9') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine to coarse; max. size 2 in., slight naphthalene-like odor, brown, sand and gravel lenses.
				349					(12.9'- 15') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine to coarse; max. size 2 in., brown, sand and gravel lenses.
15	S4	5.0	3.75	1281			NLO		(15'- 15.2') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine to coarse; max. size 2 in., slight naphthalene-like odor, black, organics.
							NLO		(15.2'- 15.3') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine to coarse; max. size 2 in., slight naphthalene-like odor, black, organics, tar-like coating.
							NLO		(15.3'- 17') SILTY SAND (SM); ~80% sand, ~15% fines, non plastic, ~5% gravel; max. size 2 in., slight naphthalene-like odor, black, organics, sandy silt lense from 16.3 to 16.7 ft.
							NLO		(17'- 17.6') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine to coarse; max. size 2 in., slight naphthalene-like odor, black, organics, sheen.
20									

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OLO = ORGANIC LIKE ODOR
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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWW-17

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	2.92	71.3			NLO		(17.6'- 18.2') SILTY SAND (SM); ~55% sand, fine, ~45% fines, low plasticity; slight naphthalene-like odor, black. (18.2'- 20') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; gray, shells from 19.2 to 20 ft. (20'- 23.3') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine to coarse; max. size 2 in., slight naphthalene-like odor, brown.
25	S6	5.0	1.58	0					(23.3'- 25') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; brown gray.
30	S7	5.0	3.67	0					(25'- 30') SILTY SAND (SM); ~60% sand, fine to coarse, ~30% fines, non plastic, ~10% gravel, fine to coarse; max. size 2 in., brown.
35	S8	5.0	3.92	0					(30'- 35.3') SILTY SAND (SM); ~70% sand, fine to coarse, ~20% fines, non plastic, ~10% gravel, fine to coarse; max. size 2 in., brown, gravel layer from 43.9 to 44.4 ft.
40	S9	5.0	3.42	6.2			OLO		(35.3'- 36.1') WIDELY GRADED GRAVEL WITH SAND (GW); ~50% gravel, fine to coarse, ~45% sand, fine to coarse, ~5% fines, non plastic; max. size 2 in., gray. (36.1'- 38') SILTY SAND (SM); ~70% sand, fine to coarse, ~20% fines, non plastic, ~10% gravel, fine to coarse; brown, 1" lense of fine to coarse gravel at 37.9 ft.
							NLO		(38'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown.
									(40'- 41.6') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines, non plastic; moderate organic-like odor, brown.
									(41.6'- 46.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, black, lense of brown silty sand from 43.9 to 44.4 ft, organic odor.

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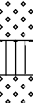
CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWW-17

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45							NLO		
	S10	5.0	3.25	11.6					
50									(46.8'- 49.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown, silty sand lenses.
									(49.2'- 50') SILT (ML); ~80% fines, non plastic, ~20% sand, fine; brown.
	S11	5.0	3.17	55			NLO	(50'- 50.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.	
							NLO	(50.3'- 50.7') SILTY SAND (SM); ~70% sand, fine, ~30% fines, non plastic; slight naphthalene-like odor, gray.	
55							NLO		(50.7'- 51.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.
							NLO		(51.8'- 52.4') SANDY SILT (ML); ~60% fines, non plastic, ~40% sand, fine; slight naphthalene-like odor, gray.
	S12	5.0	1.67	1.4			NLO	(52.4'- 54.7') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.	
									(54.7'- 55') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; slight naphthalene-like odor, reddish brown.
60									(55'- 60') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; brown, reddish brown varves.
Bottom of borehole at 60.0 feet.									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-01

GROUND SURFACE ELEVATION (FT): 16.19

LOCATION: North 11th Street

NORTHING: 688565.58 EASTING: 642026.96

TOTAL DEPTH (FT): 26.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Melissa Felter

DATE START / END: 7/10/2009 - 7/10/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 10.00 7/10/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0	3.17	0.2				WWSB-01 (1-5)	(0'- 0.5') CONCRETE. (0.5'- 5') SILTY SAND (SM); ~80% sand, fine, ~20% fines; ~5% brick, moist, brown, soft, hand cleared.
5	S2	5.0	3.75						(5'- 8') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines; ~5% brick, moist, brown, loose.
10	S3	5.0	3.58	256			PLO	WWSB-01 (14-15)	(8'- 8.2') WIDELY GRADED SAND (SW); ~95% sand, medium to coarse, ~5% fines; dry, light brown, loose. (8.2'- 9') SANDY SILT (ML); ~60% fines, ~40% sand, fine; moist, brown, soft. (9'- 10') SANDY SILT (ML); ~60% fines, ~40% sand, fine; moderate petroleum-like odor, moist, black, soft, black stained. (10'- 14.5') SANDY SILT (ML); ~50% fines, ~45% sand, fine to medium, ~5% gravel, fine to coarse; moderate petroleum-like odor, wet, black and brown, black stained lenses.
15	S4	5.0	5	582			PLO		(14.5'- 16.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine; moderate petroleum-like odor, wet, gray, loose, gray stained.
									(16.5'- 18.5') SANDY SILT (ML); ~60% fines, ~35% sand, fine, ~5% gravel, fine to coarse; moist, gray and reddish brown, dense.
20									(18.5'- 19.5') NARROWLY GRADED SAND WITH SILT (SP-SM); ~85% sand, fine to medium, ~10% fines, ~5% gravel, fine; moist, reddish brown, dense.

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-01

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.33						(19.5'- 20') SILTY SAND (SM); ~80% sand, fine, ~15% fines, ~5% gravel, fine to coarse; moist, brown, dense. (20'- 23') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines; wet, brown, loose.
				64					(23'- 25') SILTY SAND (SM); ~60% sand, fine, ~25% gravel, fine to coarse, ~15% fines; wet, brown and grayish brown, dense, lens of crushed rock 24-24.5 ft.
25	S6	1.0	1	21					(25'- 26') SANDY SILT (ML); ~60% fines, ~30% sand, fine, ~10% gravel, fine; moist, gray, very dense.
Refusal at 26.0 feet. Bottom of borehole at 26.0 feet.									

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BORING LOG

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WWSB-02

GROUND SURFACE ELEVATION (FT): 13.19

NORTHING: 688734.84 EASTING: 642160.11

DRILLED BY: Zebra Environmental / Luke Caballero

LOGGED BY: Maura MacLeod

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 8.00 7/8/2009

LOCATION: N 12th Street

TOTAL DEPTH (FT): 55.00

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

DATE START / END: 7/8/2009 - 7/9/2009

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
0	S1	5.0	1.5	5.5			WWSB-02 (2-5)	(0'- 0.5') CONCRETE. (0.5'- 2.2') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., gray.
						OLO		(2.2'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., moderate organic-like odor, brown, coal fragments and organics from 2.8 to 3.3 ft, hand cleared.
5	S2	5.0	2.75	1322			WWSB-02 (10.5-11.5)	(5'- 6.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., brown.
								(6.1'- 6.5') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; red.
								(6.5'- 8') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., organics.
						PLO		(8'- 9.1') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., slight petroleum-like odor, moist, organics, black layers.
						PLO		(9.1'- 10') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate petroleum-like odor, gray.
10	S3	5.0	5	1574				(10'- 10.6') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 2 in., moist, brown.
						NLO		(10.6'- 11.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, wet, gray, moderate petroleum-like odor.
						PLO		(11.1'- 11.7') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; moderate naphthalene-like odor, wet, brown, moderate petroleum-like odor.
						PLO		(11.7'- 12.3') SILT (ML); ~70% fines, medium plasticity, ~30% sand, fine; slight petroleum-like odor, brown.
15	S4	5.0	4.83	15.9				(12.3'- 13.9') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; slight petroleum-like odor, brown and black.
						PLO		(13.9'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, brown.
								(15'- 16.2') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight petroleum-like odor, black.
								(16.2'- 20') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown.
20								

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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CITY/STATE: Brooklyn, New York

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BORING LOG

PAGE
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WWSB-02

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
20	S5	5.0	3.67	317		NLO		(20'- 22.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
						PLO		(22.2'- 23.4') SILTY SAND (SM); ~80% sand, fine, ~20% fines, low plasticity; slight petroleum-like odor, brown.
						PLO		(23.4'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, moist, brown.
25	S6	5.0	4.08	356		NLO		(25'- 25.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
						NLO		(25.3'- 26.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown and black, moderate petroleum-like odor.
						NLO		(26.2'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, lense of gravel from 28.8 to 29 ft, slight petroleum-like odor.
30	S7	5.0	4.58	761		PLO		(30'- 32') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, moist, brown.
						NLO		(32'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, moderate petroleum-like odor.
						NLO		(35'- 38.6') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown.
35	S8	5.0	3.33	1014		NLO		(38.6'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, brown.
						NLO		(40'- 44.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown, slight petroleum-like odor.
						NLO		
40	S9	5.0	3.33	387		NLO		

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-02

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
45	S10	5.0	4.67	7.0	NLO			(44.3'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown, silty seams, slight petroleum-like odor. (45'- 50') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, low plasticity; slight petroleum-like odor, gray.
					NLO			
50	S11	5.0	4.58	185	PLO			(50'- 52.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; wet, brown, loose. (52.6'- 55') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; slight petroleum-like odor, brown.
					PLO			
55								Refusal at 55.0 feet. Bottom of borehole at 55.0 feet.

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BORING LOG

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WWSB-03

GROUND SURFACE ELEVATION (FT): 14.12 LOCATION: 50 Kent Ave
NORTHING: 688655.67 EASTING: 641952.51 TOTAL DEPTH (FT): 22.00
DRILLED BY: Zebra Environmental / Luke Caballero DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Sarah Hay DATE START / END: 7/14/2009 - 7/14/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): 7.50 7/14/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0									(0'- 3') hand cleared.
	S1	2.0	1.25	7.3				WWSB-03 (3-5)	(3'- 4.1') WIDELY GRADED SAND WITH SILT (SW-SM); ~89% sand, fine to medium, ~10% fines, low plasticity fines, ~1% gravel, fine; max. size 0.5 in., dry, brown, FILL, brick fragments, hand cleared. (4.1'- 4.3') CONCRETE; FILL, crushed concrete, hand cleared. (4.3'- 5') WIDELY GRADED SAND WITH SILT (SW-SM); ~89% sand, fine to medium, ~10% fines, low plasticity fines, ~1% gravel, fine; max. size 0.5 in., dry, brown, FILL, brick fragments, hand cleared. (5'- 7.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~89% sand, fine to medium, ~10% fines, low plasticity fines, ~1% gravel, fine; max. size 0.5 in., slight naphthalene-like odor, dry, brown, FILL, brick fragments. (7.5'- 10') BRICK; moderate naphthalene-like odor, wet, FILL, crushed brick with sand.
5	S2	5.0	1.5				NLO		
				769			NLO		
10	S3	5.0	1.83				NLO		(10'- 15') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, ~25% sand, ~5% fines; ~20% brick fragments, max. size 2 in., strong naphthalene-like odor, wet, brown to black, FILL.
				1089					
15	S4	5.0	3.33						(15'- 20') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, ~5% fines; max. size 1.5 in., strong naphthalene-like odor, wet, brown to black, FILL, brick fragments, sheen, tar-like staining, trace tar-like blebs.
				1777			NLO		
20									

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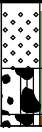
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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

		GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300		CLIENT: <u>National Grid</u>			BORING LOG	
				PROJECT: <u>Williamsburg MGP RI</u> CITY/STATE: <u>Brooklyn, New York</u> GEI PROJECT NUMBER: <u>093060</u>			PAGE 2 of 2	WWSB-03

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	2.0	1.75	3949			NLO	WWSB-03 (20-22)	(20'- 21') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to medium, ~5% fines; max. size 1.5 in., strong naphthalene-like odor, wet, brown to black, FILL, heavy tar-like staining, glass, coal ash, and brick fragments. (21'- 21.8') WIDELY GRADED GRAVEL WITH SILT (GW-GM); ~80% gravel, angular, ~10% sand, ~10% fines; max. size 2 in., strong naphthalene-like odor, wet, FILL, brick and concrete fragments, tar-like staining. (21.8'- 22') WIDELY GRADED GRAVEL WITH SILT (GW-GM); ~80% gravel, angular, ~10% sand, ~10% fines; max. size 2 in., strong naphthalene-like odor, wet, FILL, tar-like saturation. Refusal at 22.0 feet. Bottom of borehole at 22.0 feet.
							NLO		
							NLO		

NOTES:

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IN. = INCHES
FT. = FEET

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CLO = CHEMICAL LIKE ODOR
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CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
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CLIENT: National Grid
PROJECT: Williamsburg MGP RI
CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-04

GROUND SURFACE ELEVATION (FT): 13.8 LOCATION: 50 Kent Ave
NORTHING: 688696.34 EASTING: 641988.23 TOTAL DEPTH (FT): 20.00
DRILLED BY: Zebra Environmental / Quincy Brandt DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Maura MacLeod DATE START / END: 10/5/2009 - 10/5/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): ∇ 5.00 10/5/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		2.9				WWSB-04 (2-4)	(0'- 0.5') ASPHALT. (0.5'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., dry, brown, FILL, hand cleared.
5	S2	5.0	1.33	299			NLO		(5'- 10') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, wet, brown, FILL.
10	S3	5.0	2.17	1245			NLO	WWSB-04 (18-20)	(10'- 15') WIDELY GRADED GRAVEL WITH SAND (GW); ~75% gravel, fine to coarse, ~20% sand, fine to coarse, ~5% fines, non plastic; max. size 2.5 in., moderate naphthalene-like odor, wet, brown, FILL, sheen.
15	S4	5.0	2.83	1601			NLO		(15'- 20') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., strong naphthalene-like odor, wet, brown, FILL, tar-like staining.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

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BORING LOG

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WWSB-05

GROUND SURFACE ELEVATION (FT): 13.38

LOCATION: 50 Kent Ave

NORTHING: 688734.96 EASTING: 641857.09

TOTAL DEPTH (FT): 24.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Sarah Hay

DATE START / END: 7/14/2009 - 7/14/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 4.50 7/14/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0									(0'- 3') CONCRETE; hand cleared.
	S1	2.0	0.92	283				WWSB-05 (3-5)	(3'- 4.5') CONCRETE; FILL, crushed concrete, hand cleared.
5	S2	5.0	1.58	2324			NLO		(4.5'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, ~5% fines; max. size 0.75 in., slight naphthalene-like odor, wet, FILL, brick/coal fragments, hand cleared. (5'- 10') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, angular, ~25% sand, fine to coarse, ~5% fines; strong naphthalene-like odor, wet, FILL, black staining.
10	S3	5.0	1.17	3486			NLO		(10'- 15') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, angular, ~25% sand, fine to coarse, ~5% fines; strong naphthalene-like odor, wet, FILL, tar saturated.
15	S4	5.0	1.92	3051			NLO		(15'- 24') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW); ~75% sand, fine to coarse, ~15% gravel, fine to coarse, angular, ~10% fines; max. size 1 in., strong naphthalene-like odor, black, FILL, tar saturated.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

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				PROJECT: Williamsburg MGP RI				PAGE 2 of 2	WWSB-05
CITY/STATE: Brooklyn, New York				GEI PROJECT NUMBER: 093060					
DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	4.0	3.83	4567			NLO	WWSB-05 (20-24)	
Refusal at 24.0 feet. Bottom of borehole at 24.0 feet.									
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE) ppm = PARTS PER MILLION IN. = INCHES FT. = FEET NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR									

ENVIRONMENTAL BORING LOG - WILLIAMSBURG.GPJ - GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-06

GROUND SURFACE ELEVATION (FT): 12.59 LOCATION: 50 Kent Ave
NORTHING: 688764.65 EASTING: 641905.16 TOTAL DEPTH (FT): 25.50
DRILLED BY: Zebra Environmental / Luke Caballero DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Sarah Hay DATE START / END: 7/16/2009 - 7/16/2006
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): ∇ 5.00 7/16/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
0	S1	5.0		11.9				(0'- 0.7') CONCRETE. (0.7'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, subangular to angular, ~5% fines; max. size 1.5 in., brown, FILL, hand cleared.
5	S2	5.0	1.58	852				(5'- 12.2') WIDELY GRADED GRAVEL WITH SILT AND SAND (GW-GM); ~70% gravel, subrounded to angular, ~20% sand, medium to coarse, ~10% fines; ~5% brick and wood fragments, max. size 1.5 in., moderate naphthalene-like odor, wet, black, FILL, heavy sheen, petroleum-like odor.
10	S3	5.0	2.83	5558				(12.2'- 13.5') BRICK; ~95% sand, medium to coarse, ~5% gravel; ~80% brick fragments, strong naphthalene-like odor, wet, black, FILL, tar-like staining.
15	S4	5.0	1.25	> 9999				(13.5'- 15') WIDELY GRADED GRAVEL WITH SAND (GW); ~80% gravel, subrounded to subangular, ~20% sand, medium to coarse; ~5% wood and paper-like debris, max. size 1.5 in., strong naphthalene-like odor, black, FILL, tar-like coating. (15'- 23.5') WIDELY GRADED GRAVEL WITH SAND (GW); ~80% gravel, ~20% sand, fine to coarse; ~15% brick fragments, max. size 1 in., strong naphthalene-like odor, FILL, heavy tar-like coating.
20								

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-06

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
20	S5	5.0	2	> 9999			NLO	(23.5'- 25.5') WIDELY GRADED GRAVEL WITH SAND (GW); ~80% gravel, ~20% sand, fine to coarse; ~15% brick fragments, max. size 1 in., strong naphthalene-like odor, FILL, tar saturated.
25	S6	0.5	0.04	> 9999			NLO	
Refusal at 25.5 feet. Bottom of borehole at 25.5 feet.								

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BORING LOG

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WWSB-07

GROUND SURFACE ELEVATION (FT): 12.24 LOCATION: 50 Kent Ave
NORTHING: 688810.17 EASTING: 641917.83 TOTAL DEPTH (FT): 22.00
DRILLED BY: Zebra Environmental / Luke Caballero DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Sarah Hay DATE START / END: 7/15/2009 - 7/15/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): 3.00 7/15/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0									(0'- 3') hand cleared.
3	S1	2.0		5.6			PLO	WWSB-07 (3-5)	(3'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, ~5% fines; max. size 0.75 in., slight petroleum-like odor, wet, FILL, asphalt and brick fragments, hand cleared.
5	S2	5.0	3				OLO		(5'- 7.4') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines, non plastic; slight organic-like odor, brown, FILL.
7.4				8056			NLO		(7.4'- 10') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, angular, ~5% fines; max. size 0.75 in., moderate naphthalene-like odor, wet, FILL, wood fragments, tar-like staining, slight petroleum-like odor.
10	S3	5.0	3						(10'- 15') BRICK AND CONCRETE; ~70% sand, fine to coarse, ~30% gravel; ~60% brick and concrete fragments, max. size 0.25 in., wet, FILL, sheen, tar-like staining and blebs.
15	S4	5.0	2.25	> 9999					(15'- 20') BRICK AND CONCRETE; ~70% sand, fine to coarse, ~30% gravel; ~60% brick and concrete fragments, max. size 0.25 in., wet, FILL, wood fragments, heavy tar-like staining, tar-like blebs and partial coating.
20				> 9999				WWSB-07 (19-22)	

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

 GEI Consultants GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300		CLIENT: National Grid PROJECT: Williamsburg MGP RI CITY/STATE: Brooklyn, New York GEI PROJECT NUMBER: 093060				BORING LOG			
		PAGE 2 of 2	WWSB-07						
DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	2.0	2	> 9999					(20'- 22') BRICK AND CONCRETE; ~70% sand, fine to coarse, ~30% gravel; ~60% brick and concrete fragments, max. size 0.25 in., wet, FILL, tar-like coating with partial tar saturation.
Refusal at 22.0 feet. Bottom of borehole at 22.0 feet.									
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR CrLO= CREOSOTE LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE IN. = INCHES PLO = PETROLEUM LIKE ODOR OLO = ORGANIC LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR FT. = FEET TLO = TAR LIKE ODOR SLO = SULFUR LIKE ODOR HEADSPACE) ALO = ASPHALT LIKE ODOR CLO = CHEMICAL LIKE ODOR MLO = MUSTY LIKE ODOR									



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BORING LOG

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WWSB-08

GROUND SURFACE ELEVATION (FT): 11.8

LOCATION: 50 Kent Ave

NORTHING: 688829.09 EASTING: 641958.38

TOTAL DEPTH (FT): 24.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Sarah Hay

DATE START / END: 7/15/2009 - 7/15/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 3.00 7/15/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
0	S1	5.0		457				(0'- 3') CONCRETE; crushed concrete and asphalt, hand cleared.
5	S2	5.0	2.58				PLO	(3'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, ~5% fines; max. size 1.5 in., slight petroleum-like odor, wet, dark gray, FILL, brick/rubber fragments, slight organic-like odor, hand cleared.
							NLO	(5'- 8') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, ~5% fines; max. size 2 in., moderate naphthalene-like odor, wet, dark gray, FILL, brick fragments, tar-like coating.
				3929			NLO	(8'- 10') BRICK AND CONCRETE; ~100% sand, fine to coarse; ~90% brick and concrete fragments, strong naphthalene-like odor, wet, FILL, tar-like coating.
10	S3	5.0	2.83	1904			NLO	(10'- 11') WIDELY GRADED SAND WITH GRAVEL (SW); ~85% sand, fine to coarse, ~10% gravel, ~5% fines; strong naphthalene-like odor, wet, dark gray, FILL, tar-like coating.
								(11'- 13') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, ~30% gravel, ~5% fines; max. size 2 in., wet, dark gray, FILL, tar-like coating.
							NLO	(13'- 15') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~15% gravel, ~15% fines; max. size 1 in., strong naphthalene-like odor, moist, light brown to gray, FILL, partial tar-like staining.
15	S4	5.0	3				NLO	(15'- 17') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, ~5% fines; moderate naphthalene-like odor, dark gray to black, FILL, tar saturated.
				>9999			NLO	(17'- 20') WIDELY GRADED GRAVEL WITH SAND (GW); ~95% sand, fine to coarse, ~5% fines; ~60% gravel and concrete fragments, ~5% wood fragments, strong naphthalene-like odor, wet, FILL, tar saturated.
20								

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-09

GROUND SURFACE ELEVATION (FT): 12.28

LOCATION: 50 Kent Ave

NORTHING: 688912.53 EASTING: 641906.47

TOTAL DEPTH (FT): 55.00

DRILLED BY: Boart Longyear / Fred Lavoie

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 6/25/2009 - 7/13/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT): ∇ 5.00 7/13/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		2.1				WWSB-09 (2-4)	(0'- 1') WIDELY GRADED SAND WITH GRAVEL (SW); ~55% sand, fine to coarse, ~40% gravel, fine to coarse, subangular, ~5% fines, non plastic; max. size 3 in., brown, FILL, fragments of coal, brick, and glass, hand cleared. (1'- 2') CONCRETE; FILL. (2'- 5') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, subangular, ~5% fines, non plastic; max. size 1 in., brown, FILL, fragments of brick and coal, hand cleared.
									
									
5	S2	10.0	7.25	2.2			PLO	WWSB-09 (11-12)	(5'- 7.3') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~15% gravel, fine to coarse, ~10% fines, non plastic; max. size 2 in., slight petroleum-like odor, brown, FILL, fragments of coal and brick. (7.3'- 8.4') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~65% sand, fine to medium, ~20% gravel, fine to coarse, ~10% fines, non plastic; max. size 3 in., moderate petroleum-like odor, gray brown. (8.4'- 10.5') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~65% sand, fine to coarse, ~20% gravel, fine to coarse, ~10% fines, non plastic; max. size 3 in., strong naphthalene-like odor, gray brown, tar-like staining. (10.5'- 11.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown gray, sheen. (11.8'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown gray.
							PLO		
							NLO		
							NLO		
10	S3	10.0	7.25	1805			NLO		(15'- 17.4') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, low plasticity; moderate naphthalene-like odor, gray. (17.4'- 18.1') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, low plasticity; moderate naphthalene-like odor, gray, sheen, tar-like staining. (18.1'- 19.3') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, gray brown, sheen,
							NLO		
							NLO		
							NLO		
							NLO		
15	S3	10.0	7.25	644			NLO		(15'- 17.4') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, low plasticity; moderate naphthalene-like odor, gray. (17.4'- 18.1') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, low plasticity; moderate naphthalene-like odor, gray, sheen, tar-like staining. (18.1'- 19.3') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, gray brown, sheen,
							NLO		
							NLO		
							NLO		
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-09

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20				1297			NLO		tar-like staining. (19.3'- 20.6') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., slight naphthalene-like odor, brown, sheen. (20.6'- 25') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., brown.
25	S4	5.0	3.83	6.8					(25'- 30') WIDELY GRADED SAND WITH CLAY AND GRAVEL (SW-SC); ~80% sand, fine to medium, ~15% gravel, fine to coarse; max. size 1.5 in., gray.
30	S5	5.0	1	0.1					(30'- 32.5') Bolder.
35	S6	5.0	4.17	104					(32.5'- 37.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, low plasticity; gray.
40	S7	5.0	5	642			NLO		(37.8'- 40') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 2.5 in., brown, dense, iron oxide bands. (40'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.

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WWSB-09

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45				592			NLO	WWSB-09 (53-54)	(45'- 47.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, brown.
	S8	10.0	6.5	3159			NLO		(47.3'- 51.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, sheen, tar-like staining, lenses of tar-like coating.
50				2435			NLO		(51.4'- 54') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; strong naphthalene-like odor, gray brown, sheen, tar-like staining and blebs.
							NLO		(54'- 55') SILT (ML); ~80% fines, medium plasticity, ~20% sand, fine; gray.
55									

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BORING LOG

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WWSB-10

GROUND SURFACE ELEVATION (FT): 12.02

LOCATION: 50 Kent Ave

NORTHING: 688817.52 EASTING: 641755.8

TOTAL DEPTH (FT): 55.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Sarah Hay

DATE START / END: 6/25/2009 - 7/14/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 6.10 7/13/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		5.6					(0'- 0.3') CONCRETE. (0.3'- 0.7') ASPHALT. (0.7'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, subangular, ~5% fines, non plastic; max. size 2 in., brown, FILL, coal and brick fragments, hand cleared.
5	S2	5.0	2					WWSB-10 (2-3)	(5'- 7.7') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, ~5% fines; max. size 0.5 in., dry, tan, FILL, brick and shale fragments.
				8623			NLO		(7.7'- 10') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, ~5% fines; max. size 0.5 in., moderate naphthalene-like odor, wet, tan, wood fragments, tar-like staining and blebs, petroleum-like odor.
10	S3	5.0	4.17	3350			NLO		(10'- 11.8') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, ~5% fines; max. size 0.5 in., moderate naphthalene-like odor, tan, sheen, tar-like blebs, petroleum-like odors.
							NLO		(11.8'- 15') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic fines; moderate naphthalene-like odor, wet, brown.
15	S4	5.0	2.58						(15'- 20') SILTY SAND (SM); ~70% sand, ~30% fines, non plastic fines; moderate naphthalene-like odor, wet, brown to gray.
				426			NLO		
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-10

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.42	455			NLO		(20'- 23.5') WIDELY GRADED SAND (SW); ~94% sand, fine to medium, ~5% fines, ~1% gravel; slight naphthalene-like odor, wet, brown.
									(23.5'- 25') SANDY SILT (ML); ~60% fines, ~40% sand, fine to medium; slight naphthalene-like odor, dry, brown.
25	S6	3.0	1.33	0.0			PLO		(25'- 27.4') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; slight petroleum-like odor, gray.
									(27.4'- 28') possible bolder.
	S7	2.0	2	0.0					(28'- 28.9') possible bolder.
									(28.9'- 29.8') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., brown.
30	S8	5.0	0						(29.8'- 30') possible bolder.
									(30'- 35') no recovery, bolder plugged sampler.
35	S9	10.0	10	435					(35'- 40') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., brown.
40				173					(40'- 45') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines, non plastic; max. size 0.5 in., brown.

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WWSB-10

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45	S10	10.0	7.83				NLO		(45'- 47.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines, non plastic; max. size 0.5 in., moderate naphthalene-like odor, brown.
							NLO		(47.7'- 49') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, tar-like staining and coating.
50				9999			NLO	WWSB-10 (49-50)	(49'- 51') SANDY SILT (ML); ~60% fines, low plasticity, ~40% sand, fine; moderate naphthalene-like odor, gray.
				2553			NLO	WWSB-10 (51-52)	(51'- 51.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown.
							NLO		(51.6'- 55') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; slight naphthalene-like odor, reddish gray.
55									

Bottom of borehole at 55.0 feet.
Geoprobe refusal at 26' with Zebra Environmental, boring
completed by Boart Longyear using sonic drilling methods.

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BORING LOG

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WWSB-11

GROUND SURFACE ELEVATION (FT): 11.12

LOCATION: 50 Kent Ave

NORTHING: 688995.13 EASTING: 641798.81

TOTAL DEPTH (FT): 65.00

DRILLED BY: Boart Longyear / Fred Lavoie

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 6/25/2009 - 7/14/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT): 14.00 7/14/2009

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
0	S1	5.0		1.0			WWSB-11 (1-2)	(0'- 0.3') WIDELY GRADED SAND WITH GRAVEL (SW); ~55% sand, fine to coarse, ~40% gravel, fine to coarse, ~5% fines, non plastic; max. size 3 in., brown, FILL, coal, brick, and glass fragments, hand cleared. (0.3'- 1') CONCRETE; FILL. (1'- 5') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, subangular, ~5% fines, non plastic; max. size 1 in., brown, FILL, coal fragments, hand cleared.
5	S2	10.0	4	1.8				(5'- 7.9') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 3 in., reddish brown, FILL. (7.9'- 9.4') FILL, layer of brick.
10				114				(9.4'- 11') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW); ~65% sand, fine to coarse, ~25% gravel, fine to coarse, ~10% fines, non plastic; max. size 2 in., black, FILL, wood pieces, odor possibly related to wood preservative. (11'- 13.3') CONCRETE.
15	S3	10.0	6.92	150		PLO		(13.3'- 15') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 2.5 in., slight petroleum-like odor, wet, gray brown.
						NLO		(15'- 16.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown.
								(16.2'- 17.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown.
								(16.8'- 20.1') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to medium, ~10% gravel, fine to coarse, ~10% fines, non plastic; max. size 1 in., gray, layer of wood fragments.
20								

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-11

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
20				34.9				(20.1'- 21.4') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to medium, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., gray brown. (21.4'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; light brown.
25	S4	10.0	8.42	0.9		PLO		(25'- 27.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, light brown.
						PLO		(27.3'- 30.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, light brown.
30						PLO		(30.3'- 35') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight petroleum-like odor.
35	S5	10.0	8.58	2.5		PLO		(35'- 36.5') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, ~5% fines; slight petroleum-like odor, wet, orange brown.
								(36.5'- 39.4') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~75% sand, fine to coarse, ~15% gravel, fine to medium, ~10% fines; max. size 2 in., gray with red, dense.
40						NLO		(39.4'- 40.1') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, ~5% fines; wet, orange brown.
						NLO		(40.1'- 42.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; slight naphthalene-like odor, gray brown.
				125		NLO		(42.3'- 52.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; moderate naphthalene-like odor, gray brown.

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BORING LOG

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WWSB-11

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
45	S6	10.0	8.92		NLO		WWSB-11 (50-51)	
50				546				(52.2'- 55') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; slight naphthalene-like odor, brown.
55	S7	10.0	8.67	0.2	NLO			(55'- 60') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; gray.
60				0.3			WWSB-11 (63-64)	(60'- 63.7') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown.
65								(63.7'- 65') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; reddish gray.
Bottom of borehole at 65.0 feet.								

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BORING LOG

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WWSB-13

GROUND SURFACE ELEVATION (FT): 9.7

LOCATION: North 11th Street

NORTHING: 688890.86 EASTING: 641610.69

TOTAL DEPTH (FT): 45.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 8/21/2009 - 8/24/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 9.10 8/24/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0						WWSB-13 (4-5)	(0'- 0.2') ASPHALT. (0.2'- 0.8') NARROWLY GRADED SAND WITH SILT (SP-SM); ~75% sand, fine, ~15% gravel, fine, ~10% fines, non plastic; max. size 0.5 in., dry, olive brown, FILL. (0.8'- 5') WIDELY GRADED GRAVEL WITH SAND (GW); ~55% gravel, fine to coarse, ~40% sand, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moist, gray to black, FILL, asphalt, coal, brick fragments, hand cleared.
5	S2	5.0	3.25						(5'- 8.8') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., dry, brown black, FILL, coal, brick, metal-like fragments.
10	S3	5.0	3.75				NLO	WWSB-13 (12-15)	(8.8'- 9.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., moderate naphthalene-like odor, dry, brown black, FILL, coal, brick, metal-like fragments, slight petroleum-like odor. (9.1'- 10') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., moderate naphthalene-like odor, moist, brown black, FILL, coal, brick, metal-like fragments, slight petroleum-like odor. (10'- 17.5') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 2.5 in., strong naphthalene-like odor, black, FILL, brick, coal, wood fragments, sheen, tar-like coating.
15	S4	5.0	2.83				NLO		(17.5'- 19.3') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., moderate naphthalene-like odor, black, FILL, coal and wood fragments, sheen, tar-like coating.
20							NLO		(19.3'- 20') SANDY SILT (ML); ~60% fines, medium plasticity,

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-13

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.75	123			NLO		~40% sand, fine; slight naphthalene-like odor, moist, black, FILL, wood fragments. (20'- 21.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown. (21.2'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown.
							NLO		
25	S6	5.0	3.92	84.1			NLO		(25'- 28') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown.
									(28'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; dry, brown, slity seams.
30	S7	5.0	4.25	27.2					(30'- 30.5') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; wet, light brown, loose. (30.5'- 31.4') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, low plasticity; moist, brown, dense. (31.4'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; wet, light brown, loose.
35	S8	5.0	3.83	53.7			NLO	WWSB-13 (37-38)	(35'- 38.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, light brown.
40	S9	5.0	5	129			NLO		(40'- 45') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; slight naphthalene-like odor, reddish gray.

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CITY/STATE: Brooklyn, New York

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BORING LOG

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WWSB-14

GROUND SURFACE ELEVATION (FT): 7.45

LOCATION: North 12th Street

NORTHING: 689181.6 EASTING: 641608.69

TOTAL DEPTH (FT): 45.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 9/11/2009 - 9/14/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 5.00 9/11/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0	2.42					WWSB-14 (1-5)	(0'- 0.5') ASPHALT. (0.5'- 1.3') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., dry, brown. (1.3'- 2.5') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight petroleum-like odor, moist, brown, petroleum-like staining. (2.5'- 4.2') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., moderate petroleum-like odor, moist, brown, petroleum-like staining.
				213			PLO		
							PLO		
5	S2	5.0						WWSB-14 (10-11)	(4.2'- 5') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight naphthalene-like odor, moist, brown, petroleum-like staining, moderate petroleum-like odor, hand cleared. (5'- 10') no recovery.
10	S3	5.0	4.75	373			NLO		(10'- 11.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, wet, brown, sheen, tar-like staining, pockets of tar-like coating.
							NLO		(11.1'- 12.1') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight naphthalene-like odor, wet, brown, sheen.
							NLO		(12.1'- 13.6') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight naphthalene-like odor, wet, brown.
							NLO		(13.6'- 14.6') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; slight naphthalene-like odor, moist, brown, slight burnt-like odor.
15	S4	5.0	4.33	58.6			PLO		(14.6'- 15') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, ~5% fines, non plastic; max. size 0.5 in., slight naphthalene-like odor, moist, brown, slight burnt-like odor.
							PLO		(15'- 15.8') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; slight petroleum-like odor, moist, brown.
								NLO	(15.8'- 16.8') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; slight petroleum-like odor, moist, black, possible petroleum-like staining.
20									(16.8'- 20') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, low plasticity; max. size 2.5 in., slight naphthalene-like odor, wet, brown.

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

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BORING LOG

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WWSB-14

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.67	40.1			PLO		(20'- 21.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, low plasticity, ~5% gravel, fine to coarse; max. size 1.5 in., slight petroleum-like odor, moist, brown, seams of gray petroleum-like staining. (21.5'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, reddish brown, slight burnt-like odor, color change to brown at 24.2 ft. (30'- 35') WIDELY GRADED SAND (SW); ~90% sand, fine to medium, ~5% gravel, fine, subrounded, ~5% fines, non plastic; max. size 0.75 in., slight naphthalene-like odor, wet, brown. (35'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, lenses of silty sand from 36.6 to 36.7 and 27.2 to 27.3 ft. (40'- 45') WIDELY GRADED SAND (SW); ~90% sand, fine to medium, ~5% gravel, fine, subangular, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, sight sweet/fruit-like odor.
25	S6	5.0	3.83	32.0			NLO		
30	S7	5.0	3.5	8.8			NLO		
35	S8	5.0	4.67	3.1			NLO		
40	S9	5.0	2.67	1.2			NLO		

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

 GEI Consultants GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300		CLIENT: National Grid PROJECT: Williamsburg MGP RI CITY/STATE: Brooklyn, New York GEI PROJECT NUMBER: 093060			BORING LOG WWSB-14				
					PAGE 3 of 3				
DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45							NLO		Refusal at 45.0 feet. Bottom of borehole at 45.0 feet.
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR CrLO= CREOSOTE LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE IN. = INCHES PLO = PETROLEUM LIKE ODOR OLO = ORGANIC LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR FT. = FEET TLO = TAR LIKE ODOR SLO = SULFUR LIKE ODOR HEADSPACE) ALO = ASPHALT LIKE ODOR CLO = CHEMICAL LIKE ODOR MLO = MUSTY LIKE ODOR									



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BORING LOG

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WWSB-15

GROUND SURFACE ELEVATION (FT): 7.11

LOCATION: North 12th Street

NORTHING: 689277.67 EASTING: 641493.24

TOTAL DEPTH (FT): 53.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Amy Malsbary

DATE START / END: 9/17/2009 - 9/18/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 4.50 9/17/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0	2.5						(0'- 0.5') CONCRETE. (0.5'- 2.9') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~45% sand, fine to coarse, ~40% gravel, fine to coarse, subangular, ~15% fines; max. size 1.5 in., gray brown, FILL, brick fragments, hand cleared.
				1445			NLO	WWSB-15 (3-5)	(2.9'- 4.6') SILTY SAND (SM); ~80% sand, fine to medium, ~15% fines, non plastic, ~5% gravel, fine, subrounded; max. size 0.5 in., slight naphthalene-like odor, moist, dark gray to black, hand cleared.
5	S2	5.0	1.5				NLO		(4.6'- 6.4') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, angular to subangular, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, wet, dark gray, sheen, hand cleared to 5 ft.
				2637			NLO	WWSB-15 (7-9)	(6.4'- 8.3') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to medium, ~20% gravel, fine to coarse, subangular, ~10% fines, medium plasticity; max. size 1.5 in., moderate naphthalene-like odor, wet, dark gray to black, sheen, tar-like staining.
							NLO		(8.3'- 9.4') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; moderate naphthalene-like odor, moist, dark gray to black, slight petroleum-like odor.
10	S3	5.0	3.33	2283			NLO		(9.4'- 11.5') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, angular to subangular, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, wet, dark gray to black, sheen, slight tar-like staining.
							NLO		(11.5'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, wet, dark gray to black, lenses of silt and gravel, sheen.
15	S4	5.0	4.75	837			NLO		(15'- 17.9') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, rounded to subrounded, ~5% fines; max. size 0.5 in., moderate naphthalene-like odor, wet, gray to black, seams of silt starting at 16.6 ft.
							NLO		(17.9'- 18.4') SILT (ML); ~95% fines, non plastic, ~5% sand, fine to medium; moderate naphthalene-like odor, moist, gray.
							NLO		(18.4'- 20') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; slight naphthalene-like odor, wet, gray, color change to light brown at 19.6 ft.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-15

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.75	156					(20'- 21') WIDELY GRADED SAND (SW); ~95% sand, medium to coarse, ~5% fines, non plastic; moist, light brown, loose. (21'- 22.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, light brown, loose. (22.4'- 23.3') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; slight naphthalene-like odor, moist, light brown. (23.3'- 24.4') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~20% fines, non plastic; slight naphthalene-like odor, moist, light brown. (24.4'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, light brown. (25'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, light brown to gray.
25	S6	5.0	3	34.0			NLO		
30	S7	5.0	3.5	152			NLO		(30'- 33.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, wet, light brown. (33.5'- 35') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~65% sand, fine to coarse, ~25% gravel, fine to coarse, subangular to subrounded, ~10% fines; max. size 1.5 in., slight naphthalene-like odor, moist, light brown. (35'- 38.3') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~20% fines, non plastic; slight naphthalene-like odor, brown, dense.
35	S8	5.0	2.75	759			NLO		(38.3'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% gravel, fine to coarse, subangular; max. size 1 in., brown, loose. (40'- 41.3') WIDELY GRADED SAND (SW); ~95% sand, medium to coarse, ~5% fines; moist, brown. (41.3'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; moist, brown, lenses of silty sand.
40	S9	5.0	3.25	65.5					

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 GEI Consultants GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300	CLIENT: National Grid			BORING LOG	
	PROJECT: Williamsburg MGP RI			PAGE 3 of 3	WWSB-15
	CITY/STATE: Brooklyn, New York				
	GEI PROJECT NUMBER: 093060				

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45					XXXXXX XXXXXX XXXXXX				(45'- 53') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; moist, brown.
	S10	5.0	3.25	4.2					
50	S11	3.0	3.75	11.5	XXXXXX XXXXXX XXXXXX				

Refusal at 53.0 feet.
Bottom of borehole at 53.0 feet.

ENVIRONMENTAL BORING LOG - WILLIAMSBURG.GPJ - GEI CONSULTANTS.GDT 4/15/10

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL	ppm = PARTS PER MILLION	NLO = NAPHTHALENE LIKE ODOR	CrLO= CREOSOTE LIKE ODOR
REC = RECOVERY LENGTH OF SAMPLE	IN. = INCHES	PLO = PETROLEUM LIKE ODOR	OLO = ORGANIC LIKE ODOR
PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)	FT. = FEET	TLO = TAR LIKE ODOR	SLO = SULFUR LIKE ODOR
		CLO = CHEMICAL LIKE ODOR	MLO = MUSTY LIKE ODOR
		ALO = ASPHALT LIKE ODOR	



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BORING LOG

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WWSB-16

GROUND SURFACE ELEVATION (FT): 6.54

LOCATION: North 12th Street

NORTHING: 689338.56 EASTING: 641415.77

TOTAL DEPTH (FT): 54.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 9/22/2009 - 9/28/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 7.50 9/17/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		490				WWSB-16 (0.5-5)	(0'- 0.6') CONCRETE. (0.6'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, subangular, ~5% fines; max. size 1 in., moderate naphthalene-like odor, brown to dark gray, sheen, moderate petroleum-like odor, hand cleared.
5	S2	5.0	2.17				NLO		(5'- 7.5') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines; max. size 1.5 in., slight naphthalene-like odor, moist, black, black petroleum-like staining, moderate petroleum-like odor.
				2835			NLO		(7.5'- 10') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, non plastic, ~5% gravel, fine to coarse; max. size 1 in., moderate naphthalene-like odor, wet, brown, organics, black petroleum-like staining, moderate petroleum-like odor.
10	S3	5.0	4.08				NLO	WWSB-16 (12-13)	(10'- 11.9') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., strong naphthalene-like odor, moist, black, petroleum-like staining, moderate petroleum-like odor.
				1161			NLO		(11.9'- 13') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; max. size 2.5 in., strong naphthalene-like odor, wet, brown to gray, tar-like blebs, strong organic-like odor.
							NLO		(13'- 13.4') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, low plasticity; slight naphthalene-like odor, moist, black, organics, tar-like staining, petroleum-like staining and moderate odor, strong spicy-like odor.
							PLO		(13.4'- 15') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, low plasticity; moderate petroleum-like odor, moist, black, organics, petroleum-like staining, strong spicy odor.
15	S4	5.0	5				NLO	2607	(15'- 16.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, wet, black.
							NLO		(16.4'- 17.4') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~20% gravel, fine to coarse, ~10% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, wet, black, organics, strong spicy odor.
							NLO		(17.4'- 21.6') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, low plasticity; moderate naphthalene-like odor, moist,
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-16

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	5.08	2286			NLO		black, organics, tar-like staining, moderate petroleum-like staining and odor.
							NLO		(21.6'- 21.8') SILT (ML). (21.8'- 24') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, low plasticity, ~5% gravel, fine; max. size 0.5 in., slight naphthalene-like odor, reddish brown, gray varves of silty sand, petroleum-like staining, slight petroleum-like odor, spicy-like odor.
25	S6	5.0	3.5	28.5			NLO		(24'- 24.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, brown, slight spicy odor. (24.8'- 25') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, ~5% gravel, fine; max. size 0.5 in., slight naphthalene-like odor, reddish brown, gray varves of silty sand, petroleum-like staining, slight petroleum-like odor, spicy-like odor.
									(25'- 27.7') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., brown, moderate spicy odor.
30	S7	5.0	4.33	28.7					(27.7'- 30') SILTY SAND (SW-SM); ~70% sand, fine to coarse, ~30% fines, low plasticity; moist, light brown, dense, moderate spicy odor.
35	S8	4.0		7.0					(30'- 35') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, low plasticity; max. size 1.5 in., moist, brown, lense of silty sand, slight spicy odor.
40	S9	4.0	4.42				NLO		(35'- 47') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., slight naphthalene-like odor, wet, brown.

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-16

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45	S10	4.0	4.67	18.7			NLO		
50	S11	4.0	3.75	545			NLO		(47'- 48.7') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, low plasticity; slight naphthalene-like odor, moist, brown, slight petroleum and spicy-like odor.
							NLO		(48.7'- 49.3') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; slight naphthalene-like odor, moist, brown, slight spicy-like odor.
							NLO		(49.3'- 49.8') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, low plasticity; slight naphthalene-like odor, moist, brown, slight spicy-like odor.
	S12	3.0	4	29.3			NLO		(49.8'- 51') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; slight naphthalene-like odor, moist, brown, slight spicy-like odor. (51'- 54') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown.

Refusal at 54.0 feet.

Bottom of borehole at 54.0 feet.

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BORING LOG

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WWSB-17

GROUND SURFACE ELEVATION (FT): 14.77

LOCATION: Kent Ave

NORTHING: 688591.23 EASTING: 641925.35

TOTAL DEPTH (FT): 48.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 8/12/2009 - 8/13/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 6.00 8/12/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		0.0				WWSB-17 (2-4)	(0'- 0.5') CONCRETE. (0.5'- 5') NARROWLY GRADED SAND (SP); ~95% sand, fine to medium, ~5% fines, non plastic; dry, brown, FILL, hand cleared.
5	S2	5.0	4.67	0.0					(5'- 7.3') NARROWLY GRADED SAND (SP); ~95% sand, fine to medium, ~5% fines, non plastic; brown, FILL, wet at 6 ft.
									(7.3'- 8.7') NARROWLY GRADED SAND (SP); ~95% sand, fine to medium, ~5% fines, non plastic; wet, gray, FILL, iron oxide mottling.
									(8.7'- 10') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, subangular, ~5% fines, non plastic; max. size 0.5 in., wet, orange brown to gray, FILL.
10	S3	5.0	5						(10'- 12') NARROWLY GRADED SAND (SP); ~95% sand, fine to medium, ~5% fines, non plastic; dry, brown, FILL.
									(12'- 16.6') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, subangular, ~5% fines, non plastic; max. size 1 in., wet, brown to gray brown, FILL, lense of cobble from 13.2 to 13.4 ft.
15	S4	2.0	4.25	0.1					(16.6'- 16.8') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, subangular, ~25% sand, fine to medium, ~5% fines, non plastic; max. size 1.5 in., wet, reddish brown, FILL.
	S4B	3.0	0						(16.8'- 17') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, subangular, ~10% fines, non plastic; max. size 0.5 in., wet, dark gray, FILL.
20									(17'- 20') FILL, no recovery.

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-17

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	5	4.7					(20'- 20.8') NARROWLY GRADED SAND (SP); ~90% sand, fine to medium, ~5% gravel, fine, subangular, ~5% fines, non plastic; max. size 0.5 in., moist, light brown, FILL. (20.8'- 21.1') WIDELY GRADED GRAVEL WITH SAND (GW); ~75% gravel, fine to coarse, subangular, ~20% sand, fine to coarse, ~5% fines, non plastic; max. size 1.25 in., gray, FILL, possible cobble fragments. (21.1'- 25') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, low plasticity, ~5% gravel, fine, subangular; max. size 0.75 in., moist, dark gray, FILL, cinders, brick, coal fragments.
25	S6	5.0	3.67	1099					
30	S7	5.0	4.83	8326					
35	S8	5.0	4	8.2					(25'- 28.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown to black, moderate sheen. (28.9'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown to black, moderate tar-like staining. (30'- 33') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, wet, dark brown, sheen, tar-like staining, lenses of tar-like coating. (33'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, wet, dark brown. (35'- 38.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown. (38.6'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, brown.
40	S9	5.0	4.83	166					

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[illegible]



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BORING LOG

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1 of 3

WWSB-18

GROUND SURFACE ELEVATION (FT): 11.09

LOCATION: Kent Ave

NORTHING: 688860.54 EASTING: 642171.12

TOTAL DEPTH (FT): 55.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Kari Weber

DATE START / END: 7/27/2009 - 8/7/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 6.90 8/7/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0						WWSB-18 (3.5-4.5)	(0'- 0.7') CONCRETE. (0.7'- 5') SILTY SAND (SM); ~60% sand, fine to medium, ~35% fines, non plastic, ~5% gravel, fine, subangular; max. size 0.5 in., moist, light brown brown, hand cleared.
5	S2	5.0	2.92	2118					(5'- 6.9') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., brown.
							NLO	WWSB-18 (9-10)	(6.9'- 8.4') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; moderate naphthalene-like odor, wet, black, possible petroleum-like staining, moderate petroleum-like odor.
							NLO		(8.4'- 10') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, wet, light brown, strong petroleum-like odors.
10	S3	5.0	4	911			NLO		(10'- 12.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, wet, light brown, strong petroleum-like odors.
							PLO		(12.2'- 13') SILTY SAND (SM); ~70% sand, fine, ~30% fines, non plastic; slight petroleum-like odor, light brown.
							PLO		(13'- 13.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, black, possible petroleum-like staining.
15	S4	5.0	4	1.3			PLO		(13.8'- 14.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, black, possible petroleum-like staining.
							PLO		(14.6'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, brown.
									(15'- 16.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, black, possible petroleum-like staining.
									(16.8'- 20.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-18

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.17	717			NLO		(20.8'- 21.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, sheen, pockets of tar-like staining. (21.7'- 22.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown, sheen, pockets of tar-like staining. (22.9'- 23.9') SANDY SILT (ML); ~55% fines, low plasticity, ~45% sand, fine; slight naphthalene-like odor, light brown. (23.9'- 25') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines, non plastic; slight naphthalene-like odor, light brown, slight petroleum-like odor. (25'- 25.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown, sheen. (25.7'- 28.2') SANDY SILT (ML); ~55% fines, low plasticity, ~45% sand, fine; slight naphthalene-like odor, light brown, slight petroleum-like odor. (28.2'- 29.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, brown, burnt-like odor. (29.2'- 30') SANDY SILT (ML); ~55% fines, low plasticity, ~45% sand, fine; slight petroleum-like odor, light brown, cobble from 29.9 to 30 ft. (30'- 30.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, loose. (30.8'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown. (35'- 38.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, loose. (38.1'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown. (40'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown.
							NLO		
							NLO		
							NLO		
25	S6	5.0	3.5	132			NLO		
							NLO		
30	S7	5.0	4.75	439			PLO		
							NLO		
35	S8	5.0	4.17	419					
							NLO		
							NLO		
40	S9	5.0		18.7					

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BORING LOG

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WWSB-18

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45									
	S10	5.0	4.67	102			NLO		(45'- 48.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
50							NLO		(48.4'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown, slight petroleum-like odor.
	S11	5.0	4.92	5.9			NLO		(50'- 50.9') SANDY SILT (ML); ~60% fines, low plasticity, ~40% sand, fine; slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
							NLO		(50.9'- 52.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
							NLO		(52.9'- 53.8') SILTY SAND (ML); ~60% fines, low plasticity, ~40% sand, fine; slight naphthalene-like odor, moist, brown, slight petroleum-like odor, sand lense from 53.7 to 53.8 ft.
55							NLO		(53.8'- 55') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; slight naphthalene-like odor, reddish gray, sand lense from 54.7 to 54.9 ft.
Bottom of borehole at 55.0 feet.									

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BORING LOG

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WWSB-19

GROUND SURFACE ELEVATION (FT): 16.1

LOCATION: 35 Kent Ave

NORTHING: 688521.19 EASTING: 642164.94

TOTAL DEPTH (FT): 55.00

DRILLED BY: Boart Longyear / Fred Lavoie

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 7/28/2009 - 7/30/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT): 15.00 7/13/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0						WWSB-19 (2-3)	(0'- 0.7') CONCRETE.
				23.5					(0.7'- 5') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., brown, FILL, brick and coal fragments, hand cleared.
5	S2	10.0	4.17					WWSB-19 (4-5)	(5'- 10') rock in sample casing, no recovery.
10								WWSB-19 (14-15)	(10'- 13') CONCRETE; ~95% sand, fine to coarse, ~5% fines; ~70% concrete fragments, max. size 3 in., light gray, FILL, loose, concrete-like odor.
				119			PLO		(13'- 15') SILTY SAND (SM); ~75% sand, fine to coarse, ~15% fines, ~10% gravel, fine to coarse, angular; max. size 1 in., slight petroleum-like odor, moist, brown to grayish brown, FILL, brick and concrete fragments, lenses of silt.
15	S3	10.0	8.83				PLO		(15'- 16.3') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 3 in., moderate petroleum-like odor, wet, brown, loose, slight sheen.
							PLO		(16.3'- 18') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate petroleum-like odor, wet, brown, slight sheen.
							PLO		(18'- 19.6') SILTY SAND WITH GRAVEL (SM); ~65% sand, fine to medium, ~20% fines, non plastic, ~15% gravel, fine to coarse; max. size 2.5 in., moderate petroleum-like odor, brown.
							PLO		(19.6'- 20.6') WIDELY GRADED SAND (SW); ~95% sand, fine to
20							PLO		

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BORING LOG

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WWSB-19

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20				457			PLO	WWSB-19 (25-35)	coarse, ~5% fines, non plastic; moderate petroleum-like odor, wet, brown, slight sheen. (20.6'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate petroleum-like odor, wet, brown.
							PLO		
25	S4	10.0	8.75	171			NLO		(25'- 27') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; moderate naphthalene-like odor, wet, grayish brown, moderate petroleum-like odor.
							NLO		(27'- 28.5') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; moderate naphthalene-like odor, wet, grayish brown, petroleum-like staining, moderate petroleum-like odor.
30									(28.5'- 30.7') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; wet, brown.
35	S5	10.0	9.67	2.3				WWSB-19 (25-35)	(30.7'- 33.7') NARROWLY GRADED SAND (SP); ~95% sand, fine to medium, ~5% fines; wet, brown to orange brown.
									(33.7'- 35') SILTY SAND (SM); ~70% sand, fine, ~30% fines; reddish brown.
40									(35'- 36.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; slight petroleum-like odor, brown, loose.
									(36.9'- 37.8') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines; slight petroleum-like odor, reddish brown.
									(37.8'- 38.6') SILTY SAND (SM); ~70% sand, fine, ~30% fines; slight petroleum-like odor, reddish brown, dense.
									(38.6'- 45') SANDY SILT (ML); ~70% fines, ~30% sand, fine; gray brown, very dense.

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WWSB-19

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45	S6	10.0	5.33					WWSB-19 (47-50)	(45'- 48.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; brown, loose.
50				6.0					(48.8'- 55') LEAN CLAY (CL); red, dense.
55									Bottom of borehole at 55.0 feet.

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BORING LOG

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WWSB-20

GROUND SURFACE ELEVATION (FT): 15.94

LOCATION: 35 Kent Ave

NORTHING: 688604.92 EASTING: 642141.12

TOTAL DEPTH (FT): 65.00

DRILLED BY: Boart Longyear / Fred Lavoie

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 6/29/2009 - 7/21/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT): ∇ 10.00 7/15/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0						WWSB-20 (3-5)	(0'- 0.5') CONCRETE.
				0.4					(0.5'- 10') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., reddish brown, FILL, brick fragments, possible ground brick, hand cleared to 5 feet.
5	S2	5.0	2.17	0.3					
∇ 10	S3	5.0	1.67	32.8					(10'- 11.5') LEAN CLAY (CL); ~70% fines, medium plasticity, ~30% sand, fine to medium; gray, FILL.
									(11.5'- 15') BRICK; FILL, brick fragments.
15	S4	10.0	6.33	21.6			NLO		(15'- 18.7') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 3 in., slight naphthalene-like odor, gray, FILL, red portions from brick.
							NLO		(18.7'- 19.7') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., strong naphthalene-like odor,
20									

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BORING LOG

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WWSB-20

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20				825			NLO		brown. (19.7'- 21.6') SILTY SAND (SM); ~75% sand, fine to coarse, ~15% fines, non plastic, ~10% gravel, fine; max. size 0.5 in., slight naphthalene-like odor, brown, very dense. (21.6'- 23.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, brown, moderate burnt-like odor. (23.2'- 25') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines, non plastic; max. size 0.75 in., slight naphthalene-like odor, gray brown, slight burnt-like odor. (25'- 26.3') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse, ~35% sand, fine to coarse, ~5% fines, non plastic; max. size 2 in., slight petroleum-like odor, gray brown. (26.3'- 26.9') SILTY SAND (SP); ~85% sand, fine to medium, ~15% fines, non plastic; gray, moderate burnt rubber-like odor. (26.9'- 28.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; gray, moderate burnt-like odor. (28.1'- 33.2') SILTY SAND (SP); ~85% sand, fine to medium, ~15% fines, non plastic; gray, moderate burnt-like odor. (33.2'- 33.8') Possible bolder. (33.8'- 35') SILTY SAND (SP); ~85% sand, fine to medium, ~15% fines, non plastic; gray, moderate burnt rubber-like odor. (35'- 45') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, ~5% gravel; max. size 0.5 in., slight naphthalene-like odor, moist, brown, very dense.
							NLO		
							NLO		
				377			NLO		
25	S5	10.0	9.33	347			PLO		
30				313					
35	S6	10.0	4.67						
40				58			NLO		

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BORING LOG

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WWSB-20

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45				1805			NLO		
	S7	10.0	3.5						(45'- 52.6') WIDELY GRADED SAND (SW); ~100% sand, fine to medium; moderate naphthalene-like odor, wet, brown, loose.
50							NLO		
									(52.6'- 55') WIDELY GRADED SAND WITH GRAVEL (SW); ~85% sand, fine to coarse, ~15% gravel; ~5% cobbles, max. size 1 in., strong naphthalene-like odor, wet, brown, loose.
55	S8	10.0	7.42	2885			NLO	WWSB-20 (55-57)	(55'- 58') WIDELY GRADED SAND (SW); ~100% sand, medium to coarse; strong naphthalene-like odor, brown, very loose, tar-like staining and partial coating.
							NLO		(58'- 59.4') WIDELY GRADED SAND (SW); ~100% sand, medium to coarse; strong naphthalene-like odor, brown, very loose.
60							NLO	WWSB-20 (62-63)	(59.4'- 59.8') WIDELY GRADED SAND (SW); ~100% sand, fine to medium; moderate naphthalene-like odor, moist, brown. (59.8'- 63.1') SANDY SILT (ML); ~75% fines, ~25% sand, fine; slight naphthalene-like odor, brown gray, occasional sandy pockets.
							NLO		
							SLO		(63.1'- 64') WIDELY GRADED SAND (SW); ~100% sand, fine to medium; slight sulfur-like odor.
65									(64'- 65') LEAN CLAY (CL); ~100% fines; red, very dense.
Bottom of borehole at 65.0 feet. Geoprobe refusal at 10' with Zebra Environmental, boring completed by Boart Longyear using sonic drilling methods.									

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BORING LOG

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WWSB-21

GROUND SURFACE ELEVATION (FT): 12.24 LOCATION: 35 Kent Ave
NORTHING: 688661.96 EASTING: 642188.43 TOTAL DEPTH (FT): 78.00
DRILLED BY: Boart Longyear / Fred Lavoie DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Sarah Hay DATE START / END: 7/1/2009 - 7/23/2009
DRILLING DETAILS: Sonic Coring
WATER LEVEL DEPTHS (FT): 9.00 7/1/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		0.4				WWSB-21 (1-2)	(0'- 0.67') CONCRETE. (0.67'- 5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate organic-like odor, reddish brown, FILL, brick fragments.
5	S2	5.0	2.5	5.2			OLO		(5'- 7') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., light brown and dark brown, FILL, brick fragments. (7'- 7.8') FILL, layer of brick from 7 to 7.3 ft, layer of organics with roots from 7.3 to 7.8 ft. (7.8'- 9.2') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., light brown, FILL, brick fragments, layer of brick from 8.5 to 9 ft. (9.2'- 10') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., slight petroleum-like odor, wet, light brown, FILL, brick fragments. (10'- 14.4') BRICK AND CONCRETE; ~95% sand, fine to coarse, ~5% fines; ~75% crushed brick and concrete, moderate naphthalene-like odor, wet, brown to brownish black, FILL, coal ash, and wood fragments.
10	S3	10.0	6				PLO		
15				21.0			NLO		(14.4'- 17.4') WIDELY GRADED SAND WITH GRAVEL (SW); ~55% sand, fine to coarse, ~40% gravel, ~5% fines; strong naphthalene-like odor, moist, light brown, FILL, wood fragments, sheen.
20				2538			NLO		(17.4'- 20') WIDELY GRADED SAND (SW); ~80% sand, fine to medium, ~15% gravel, ~5% fines; ~15% brick and concrete fragments, strong naphthalene-like odor, moist, brown, orange lenses, sheen, 5 inch concrete fragment in sample tip.

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WWSB-21

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S4	5.0	2	228					(20'- 25') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines; moist, gray to grayish brown, dense.
25	S5	5.0	5	149					(25'- 27.7') SANDY SILT (ML); ~70% fines, ~25% sand, fine to coarse, ~5% gravel, fine to coarse, angular to well rounded; max. size 2 in., moist, dark gray, dense, red sandstone particles from 27.3 to 27.7 ft.
30	S6	10.0	8.67	2114			NLO	WWSB-21 (33-34)	(27.7'- 30') WIDELY GRADED SAND WITH SILT (SW-SM); ~65% sand, fine to coarse, ~25% gravel, fine to coarse, angular to subrounded, ~10% fines; max. size 1.5 in., moist, dark gray, red sandstone. (30'- 33.2') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; slight naphthalene-like odor, moist, brown, loose.
35							NLO		(33.2'- 35.4') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; strong naphthalene-like odor, moist, brown, loose, tar-like staining and blebs.
40	S7	10.0	8				NLO		(35.4'- 40') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; moderate naphthalene-like odor, moist, brown, loose.
							NLO		(40'- 43.3') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; strong naphthalene-like odor, moist, dark brown, loose, moderate tar-like staining.

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WWSB-21

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45				799			NLO		(43.3'- 44.8') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; slight naphthalene-like odor, moist, brown, loose.
									(44.8'- 46.1') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, rounded, ~5% fines; brown, loose, silty pockets approximately 0.5 inch deposits.
									(46.1'- 50') WIDELY GRADED SAND (SW); ~100% sand, medium to coarse; brown.
50	S8	5.0	4	14.6					(50'- 55') WIDELY GRADED SAND (SW); ~95% sand, medium to coarse, ~5% gravel, fine to coarse, subrounded; max. size 1 in., moist, brown, loose.
55	S9	5.0	5	8.5					(55'- 60') WIDELY GRADED SAND (SW); ~99% sand, medium to coarse, ~1% gravel; brown, loose, trace gravel.
60	S10	8.0	10.25	0.0			SLO		(60'- 63.7') SANDY SILT (ML); ~80% fines, ~20% sand, fine; slight sulfur-like odor, moist, gray.
65									(63.7'- 68') WIDELY GRADED SAND (SW); ~99% sand, fine to coarse, ~1% fines; brown, loose, pockets of silt, trace red fines.

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WWSB-21

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
70	S11	10.0	9.42				SLO	WWSB-21 (68-69)	(68'- 69.6') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; slight sulfur-like odor, brown, loose.
									(69.6'- 73.1') LEAN CLAY (CL); ~100% fines; red and brown gray, dense.
75				1.5					(73.1'- 78') SANDY SILT (ML); ~80% fines, ~20% sand, fine; moist, gray.

Bottom of borehole at 78.0 feet.
Geoprobe refusal at 10' with Zebra Environmental, boring completed by Boart Longyear using sonic drilling methods.

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GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-22

GROUND SURFACE ELEVATION (FT): 16.04

LOCATION: 35 Kent Ave

NORTHING: 688641.56 EASTING: 642078.4

TOTAL DEPTH (FT): 70.00

DRILLED BY: Boart Longyear / Fred Lavoie

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 6/29/2009 - 7/27/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT): 10.50 7/1/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		1.2				WWSB-22 (3-4)	(0'- 0.67') CONCRETE.
							NLO		(0.67'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 0.75 in., slight naphthalene-like odor, brown, coal fragments, hand cleared.
5	S2	5.0	3.83	1.0				WWSB-22 (13-15)	(5'- 10') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, subangular, ~5% fines, non plastic; max. size 0.5 in., brown.
10	S3	5.0	4	61.9					(10'- 12.8') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, subangular, ~5% fines, non plastic; brown, moist from 10.5 to 15 ft, gravel layer from 12.6 to 12.8 ft.
							PLO		(12.8'- 15') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, subangular, ~5% fines, non plastic; slight petroleum-like odor, brown, black staining.
15	S4	5.0	5	6.0				PLO	(15'- 20') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, subangular, ~5% fines, non plastic; slight petroleum-like odor, brown, wet from 15 to 16.7 ft, moist from 16.7 to 20 ft.
20									

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BORING LOG

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WWSB-22

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)						
20	S5	5.0	4.25	20.6			PLO	WWSB-22 (37-38)	(20'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, brown.	
25	S6	5.0	4	18.6			NLO		(25'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown, slight petroleum-like odor.	
30	S7	5.0	4.33	24.0			PLO		(30'- 31.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, brown.	
35	S8	10.0	9.5	>9999			NLO		(35'- 36.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% gravel; max. size 3 in., strong naphthalene-like odor, brown, loose, tar-like staining.	
							NLO		(36.4'- 38.1') SILT WITH SAND (ML); ~80% fines, ~20% sand, fine to coarse; moderate naphthalene-like odor, brown, dense.	
							NLO		(38.1'- 42.2') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; strong naphthalene-like odor, brown, loose, lenses of tar-like staining.	
40							NLO			(42.2'- 45') SILT WITH SAND (ML); ~90% fines, ~10% sand, fine to medium; strong organic-like odor, dry, dark brown, very dense.
							OLO			

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WWSB-22

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45	S9	10.0	8.08	15.5			OLO		(45'- 48.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown, moderate cement-like odor.
50							NLO		(48.4'- 55') SILTY SAND (SM); ~80% sand, fine, ~20% fines, non plastic; slight organic-like odor, brown.
55	S10	10.0	8.67	76.3			OLO		(55'- 56.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.
60							NLO		(56.9'- 60.6') SANDY SILT (ML); ~60% fines, low plasticity, ~40% sand, fine; slight naphthalene-like odor, brown.
65	S11	5.0	4.08	9.2			PLO	WWSB-22 (65-65.5)	(60.6'- 65') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, brown.
									(65'- 65.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown. (65.6'- 70') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; reddish gray.

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BORING LOG

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WWSB-22

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
									

70

Bottom of borehole at 70.0 feet.
Geoprobe refusal at 35 ft with Zebra Environmental, boring completed by Boart Longyear using sonic drilling methods.

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BORING LOG

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WWSB-23

GROUND SURFACE ELEVATION (FT): 12.1

LOCATION: 50 Kent Ave

NORTHING: 688786.9 EASTING: 641842.33

TOTAL DEPTH (FT): 65.00

DRILLED BY: Boart Longyear / Fred Lavoie

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Sarah Hay

DATE START / END: 7/16/2009 - 7/17/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	4.5	4	188			PLO	WWSB-23 (1-4)	(0'- 0.7') CONCRETE.
									(0.7'- 4.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~70% sand, fine to coarse, ~20% gravel, ~10% fines; ~5% brick and wood fragments, max. size 2 in., slight petroleum-like odor, light brown and brown, FILL, hand cleared.
5	S2	10.0	5.33	1081					(4.5'- 5') Rock.
							PLO		(5'- 7.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~15% fines, ~5% gravel, subangular; max. size 0.5 in., strong petroleum-like odor, FILL, asphalt fragments.
10									(7.5'- 13.1') SILTY SAND (SM); ~75% sand, fine to medium, ~20% fines, ~5% gravel, subrounded; max. size 0.5 in., strong naphthalene-like odor, brown to dark gray, slight petroleum-like odor.
15	S3	10.0	2.92	1076			NLO		(13.1'- 23.6') SILTY SAND (SM); ~75% sand, fine to medium, ~20% fines, ~5% gravel, subrounded; max. size 0.5 in., strong naphthalene-like odor, brown to dark gray, lenses of tar-like staining and blebs, slight petroleum-like odor.
20									

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BORING LOG

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WWSB-23

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20							NLO		
25	S4	10.0	8.58				NLO		(23.6'- 25') SANDY SILT (ML); ~60% fines, ~40% sand, medium to coarse; dark gray, burnt-like odor.
							NLO		(25'- 27.9') SILTY SAND (SM); ~65% sand, fine to medium, ~35% fines; strong naphthalene-like odor, moist, blue and gray, tar-like blebs.
							NLO		(27.9'- 29.3') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines; strong naphthalene-like odor, moist, brown to gray, tar-like coating.
30				452			NLO	WWSB-23 (31-33)	(29.3'- 30.3') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines; strong naphthalene-like odor, tar-like staining, partial tar-like coating.
							NLO		(30.3'- 33.6') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; strong naphthalene-like odor, brown, tar-like coating, partially tar saturated.
35	S5	15.0	12.5	9259			NLO		(33.6'- 35') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; strong naphthalene-like odor, brown, tar-like stained.
							NLO		(35'- 38.8') SILTY SAND □ WELL GRADED GRAVEL WITH SAND □ SILTY SAND (SM); ~84% sand, fine, ~15% fines, ~1% gravel; strong naphthalene-like odor, moist, gray, dense, tar saturated seams.
40							NLO		(38.8'- 39.5') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, coarse, ~30% sand, fine to coarse; max. size 5 in., tar saturated.
							NLO		(39.5'- 44.5') SILTY SAND (SM); ~84% sand, fine, ~15% fines, ~1% gravel; strong naphthalene-like odor, moist, gray, dense, tar saturated seams.

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BORING LOG

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WWSB-23

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45							NLO		(44.5'- 48.2') WIDELY GRADED SAND (SW); ~100% sand; gray, tar-like coating, lenses of tar-like saturation.
50	S6	15.0	10.83				NLO		(48.2'- 50') SILTY SAND □ WELL GRADED GRAVEL WITH SAND □ SILTY SAND (SM); ~84% sand, fine, ~15% fines, ~1% gravel; strong naphthalene-like odor, moist, gray, dense, tar saturated seams. (50'- 54.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; moderate naphthalene-like odor, brown, tar saturated lenses.
55				>9999			NLO		(54.8'- 59.5') SILTY SAND (SW-SM); ~85% sand, fine to coarse, ~15% fines; strong naphthalene-like odor, lense of sand from 59.2 to 59.7 ft.
60							NLO		(59.5'- 60.4') WIDELY GRADED SAND (SW); ~100% sand, medium to coarse; strong naphthalene-like odor, wet, brown, sheen.
65							OLO	WWSB-23 (62-63)	(60.4'- 65') LEAN CLAY (CL); ~95% fines, ~5% sand; moderate organic-like odor, wet, red, dense, sand pocket at 61 ft.
Bottom of borehole at 65.0 feet.									

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BORING LOG

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WWSB-24

GROUND SURFACE ELEVATION (FT): 12.3

LOCATION: 50 Kent Ave

NORTHING: 688883.82 EASTING: 641934.45

TOTAL DEPTH (FT): 55.00

DRILLED BY: Boart Longyear / Fred Lavoie

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Sarah Hay

DATE START / END: 7/16/2009 - 7/16/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT): 5.00 7/16/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		5.5					(0'- 0.5') CONCRETE. (0.5'- 5') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~75% sand, fine to coarse, ~15% gravel, angular, ~10% fines, non plastic; max. size 2 in., slight petroleum-like odor, moist, brown, FILL, slight organic-like odor, hand cleared.
5	S2	10.0	6.5				PLO	WWSB-24 (4-5)	(5'- 7.6') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~75% sand, fine to coarse, ~15% gravel, angular to rounded, ~10% fines, non plastic; max. size 2 in., wet, dark gray, FILL, asphalt and brick fragments. (7.6'- 12.1') SILTY SAND (SM); ~70% sand, fine to medium, ~25% fines, ~5% gravel, subangular; slight naphthalene-like odor, dark gray to brown, lenses of sand with petroleum-like odor.
10							NLO		
				8959			NLO		(12.1'- 15') SILTY SAND (SM); ~70% sand, fine to medium, ~25% fines, ~5% gravel, subangular; moderate naphthalene-like odor, brown, light tar-like staining, trace tar-like blebs.
15	S3	10.0	8				NLO		(15'- 16.7') WIDELY GRADED SAND (SW); ~90% sand, fine to medium, ~5% gravel, rounded, ~5% fines; max. size 0.25 in., strong naphthalene-like odor, dark gray, shells, tar-like staining, tar-like seam. (16.7'- 20.2') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, angular to rounded, ~10% fines; max. size 2.5 in., light brown to dark brown, tar-like staining and blebs.
20				6418			NLO		

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BORING LOG

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WWSB-24

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20				1326			NLO		(20.2'- 21.8') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines; moderate naphthalene-like odor, light brown, sheen. (21.8'- 25') SANDY SILT (ML); ~60% fines, ~35% sand, fine to medium, ~5% gravel; moist, light brown to orange, dense.
25	S4	10.0	5						(25'- 35') SANDY SILT (ML); ~60% fines, ~35% sand, fine to medium, ~5% gravel; slight naphthalene-like odor, moist, light brown to orange, very dense, likely marine deposited.
30							NLO		
35	S5	10.0	10	>9999				WWSB-24 (38-40)	(35'- 36.5') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~75% sand, fine to coarse, ~15% gravel, subrounded, ~10% fines; max. size 1 in., wet, brown, shale fragments, dense. (36.5'- 37.7') WIDELY GRADED SAND (SW); ~90% sand, fine to medium, ~5% gravel, subrounded, ~5% fines, non plastic; max. size 1 in., tar-like staining and blebs. (37.7'- 39.5') WIDELY GRADED SAND (SW); ~90% sand, fine to medium, ~5% gravel, subrounded, ~5% fines, non plastic; max. size 1 in., tar saturated. (39.5'- 40.3') WIDELY GRADED SAND (SW); ~90% sand, fine to medium, ~5% gravel, subrounded, ~5% fines, non plastic; max. size 1 in., tar-like staining. (40.3'- 42') SANDY ELASTIC SILT (ML); ~70% fines, ~30% sand, fine; slight naphthalene-like odor, gray, dense. (42'- 47.7') SANDY SILT (ML); ~70% fines, ~30% sand, fine to medium; moist, gray, occational sand lenses, slight burnt-like odor.
40							NLO		

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BORING LOG

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WWSB-24

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45	S6	10.0	9.17	31.8				WWSB-24 (53-55)	(47.7'- 53.4') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, subangular, ~10% fines; moderate naphthalene-like odor, wet, brown, moderate organic-like odor. (53.4'- 55') LEAN CLAY (CL); ~95% fines, ~5% sand; red, very small sand lenses.
50						NLO			
55									
Bottom of borehole at 55.0 feet.									

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Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid
PROJECT: Williamsburg MGP RI
CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-25

GROUND SURFACE ELEVATION (FT): 9.67 LOCATION: North 12th Street
NORTHING: 689045.29 EASTING: 641848.68 TOTAL DEPTH (FT): 55.00
DRILLED BY: Zebra Environmental / Luke Caballero DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Kari Weber DATE START / END: 7/28/2009 - 7/29/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): 5.60 7/28/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		1.9				WWSB-25 (1-3)	(0'- 5.6') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, ~5% gravel, fine; max. size 0.5 in., dry, brown, FILL, brick and coal fragments, hand cleared to 5 ft.
5	S2	5.0	5						(5.6'- 7.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; wet, brown.
							PLO		(7.5'- 8') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight petroleum-like odor, wet, brown.
							OLO		(8'- 8.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight organic-like odor, wet, brown.
				1894			PLO		(8.7'- 8.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; wet, brown.
							PLO		(8.8'- 9.3') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight petroleum-like odor, wet, brown.
10	S3	5.0	0						(9.3'- 9.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; moderate petroleum-like odor, wet, brown, sheen.
									(9.7'- 10') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight petroleum-like odor, wet, brown.
									(10'- 15') no recovery.
15	S4	5.0	5	4143			NLO		(15'- 15.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; strong naphthalene-like odor, wet, brown, seams of tar-like staining, slight petroleum-like odor.
							NLO		(15.5'- 16.6') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight naphthalene-like odor, wet, brown, slight petroleum-like odor.
									(16.6'- 17.9') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; wet, brown.
							OLO		(17.9'- 18.1') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight organic-like odor, wet, brown.
20									

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CrLO = CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-25

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.33	586			NLO		(18.1'- 18.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; wet, brown. (18.7'- 19.4') SANDY ORGANIC SOIL (OL); low plasticity, fine to medium; moderate organic-like odor, dark gray. (19.4'- 20') WIDELY GRADED SAND (SW); ~95% sand, ~5% fines, low plasticity; wet, brown. (20'- 21.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, wet, brown, sheen, seams of tar and petroleum-like staining, strong petroleum-like odor. (21.3'- 21.6') WIDELY GRADED SAND (SW); ~85% sand, fine to medium, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., moderate naphthalene-like odor, light brown to brown, very dense, sheen, moderate petroleum-like odor. (21.6'- 23.7') WIDELY GRADED SAND (SW); ~85% sand, fine to medium, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., slight naphthalene-like odor, light brown to brown, very dense, slight petroleum-like odor. (23.7'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, slight petroleum-like odor. (25'- 25.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, wet, brown, strong petroleum-like odor. (25.9'- 26.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, wet, brown, sheen and tar-like blebs, strong petroleum-like odor. (26.6'- 26.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, wet, brown, strong petroleum-like odor. (26.8'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown. (30'- 33.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, wet, brown, sheen. (33.9'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, wet, brown, heavy tar-like coating. (35'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown gray. (40'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown gray.
							NLO		
							NLO		
							NLO		
25	S6	5.0	4.75	3197			NLO		
							NLO		
							NLO		
							NLO		
30	S7	5.0	2.33				NLO		
							NLO		
				>15000			NLO	WWSB-25 (34-35)	
35	S8	5.0	1.67	116.6			NLO		
							NLO		
40	S9	5.0	2.5	180.7			NLO		

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-25

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45							NLO		(45'- 48.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown gray, lenses of silty sand.
	S10	5.0	4.17	57.9			NLO		
50							NLO		(48.6'- 50') SILT WITH SAND (ML); ~80% fines, low plasticity, ~20% sand, fine; slight naphthalene-like odor, brown gray, dense.
	S11	5.0	3.75	76.1			NLO		(50'- 52') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; slight naphthalene-like odor, wet, brown, occasional gray sand lenses, slight petroleum-like odor.
55								WWSB-25 (52-53)	(52'- 54.1') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines; max. size 0.5 in..
									(54.1'- 55') LEAN CLAY (CL); medium plasticity; moist, red and gray.

Bottom of borehole at 55.0 feet.

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BORING LOG

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WWSB-26

GROUND SURFACE ELEVATION (FT): 10.37

LOCATION: North 12th Street

NORTHING: 688964.85 EASTING: 641944.61

TOTAL DEPTH (FT): 42.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 7/29/2009 - 7/30/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 5.00 7/29/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		>15000				WWSB-26 (1-4)	(0'- 5') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate petroleum-like odor, dry, brown, FILL, coal and brick fragments, hand cleared.
5	S2	5.0	4.25	>15000			PLO		(5'- 5.7') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; moist, brown, FILL. (5.7'- 7.1') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; strong petroleum-like odor, brown, FILL, black petroleum-like staining.
							PLO		(7.1'- 10') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; strong petroleum-like odor, brown, FILL.
10	S3	5.0	2.58	>15000			PLO	WWSB-26 (12-13)	(10'- 13.4') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; strong petroleum-like odor, brown, FILL, sheen.
							PLO		(13.4'- 15') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; strong petroleum-like odor, brown, FILL.
15	S4	5.0	4.25	44.5			PLO		(15'- 15.9') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines; slight petroleum-like odor, wet, brown, FILL.
							PLO		(15.9'- 17') SILTY SAND (SM); ~85% sand, fine, ~15% fines; moderate petroleum-like odor, wet, gray, FILL.
							PLO		(17'- 18.7') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; slight petroleum-like odor, wet, gray brown, FILL.
20									(18.7'- 19.5') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., brown, FILL.

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WWSB-26

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.58	10223			NLO		(19.5'- 20') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., brown, FILL, petroleum-like staining.
							NLO		(20'- 21.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; strong naphthalene-like odor, wet, brown, FILL, tar-like blebs and lenses of coating.
							NLO		(21.5'- 24.1') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, ~5% gravel, fine; max. size 0.75 in., moderate naphthalene-like odor, FILL, moderate petroleum-like odors.
							NLO		(24.1'- 24.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; strong naphthalene-like odor, FILL, tar-like coating.
25	S6	5.0	2.92	9853			NLO		(24.4'- 25') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines; max. size 0.25 in., slight naphthalene-like odor, FILL, dense, slight petroleum-like odors.
							NLO		(25'- 27.6') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines; max. size 1.25 in., strong naphthalene-like odor, wet, brown, FILL, sheen, tar-like blebs and lenses of tar-like coating.
							NLO		(27.6'- 30') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines; max. size 0.75 in., moderate naphthalene-like odor, wet, brown, FILL, petroleum-like odors.
							NLO		(30'- 31.4') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, brown, FILL, dense, brick fragments, moderate petroleum and burnt-like odor.
30	S7	5.0	4.92	1083			NLO		(31.4'- 35') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., slight naphthalene-like odor, brown, FILL, dense, brick fragments, slight petroleum and burnt-like odor.
							NLO		(35'- 37') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight naphthalene-like odor, dry, gray brown, dry, very dense.
							NLO		(37'- 40') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight petroleum-like odor, dry, gray brown, dry, very dense, slight burnt-like odor.
							PLO		
35	S8	5.0	4.42	6.5			NLO		(40'- 42') SILTY SAND (SM); ~70% sand, fine to coarse, ~25% fines, ~5% gravel; max. size 0.5 in., strong naphthalene-like odor, brown, dense from 41.1 to 42 ft, pockets and seams of tar coating.
							NLO		
							NLO		
							NLO		
40	S9	2.0	3.92	338.2			NLO		
Refusal at 42.0 feet. Bottom of borehole at 42.0 feet.									

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BORING LOG

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WWSB-27

GROUND SURFACE ELEVATION (FT): 11.09

LOCATION: North 12th Street

NORTHING: 688923.46 EASTING: 641999.09

TOTAL DEPTH (FT): 53.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 8/3/2009 - 8/5/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 1.30 8/3/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0	2.83					WWSB-27 (4-5)	(0'- 4.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., brown, FILL, dry brick, wet at 1.3 ft, hand cleared.
5	S2	5.0	4.5	84.3			PLO		(4.7'- 5') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., slight petroleum-like odor, wet, brown, FILL, hand cleared.
				958			PLO		(5'- 6.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., moderate petroleum-like odor, wet, brown, FILL, hand cleared. (6.5'- 10') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate petroleum-like odor, moist, brown, FILL, dense.
10	S3	5.0	3.08				NLO	WWSB-27 (14-15)	(10'- 13.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; slight naphthalene-like odor, wet, brown, FILL, loose, sheen, moderate petroleum-like odor.
15	S4	5.0	4.42	8.4			NLO		(13.8'- 15.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown, FILL, brick fragments from 15 to 15.9 ft, moderate petroleum-like odor.
									(15.9'- 17.7') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown gray, moderate sweet/fruity-like odor.
							PLO		(17.7'- 18.4') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; greenish gray, moderate sweet/fruity-like odor.
20							PLO		(18.4'- 18.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, black,

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WWSB-27

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.92	3.6	[Pattern]	[Pattern]	PLO		odor is sweet/fruity-like. (18.9'- 20') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, brown, odor is sweet/fruity-like. (20'- 23.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, medium plasticity; slight petroleum-like odor, light brown, odor is sweet/fruity-like. (23.1'- 23.7') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight petroleum-like odor, brown, dense, odor is sweet/fruity-like. (23.7'- 25') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., brown, dense. (25'- 25.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, wet, brown, loose, odor is sweet/fruity-like. (25.9'- 30') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., dry, brown, dense, iron oxide staining. (30'- 30.6') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., slight petroleum-like odor, moist, brown, iron oxide staining. (30.6'- 33.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., brown, dry, dense, iron oxide staining. (33.5'- 35') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., slight petroleum-like odor, moist, brown, odor is sweet/fruity-like. (35'- 38.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, moist, dark brown. (38.6'- 40') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., brown, dry, dense, iron oxide staining. (40'- 49.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown, moderate petroleum-like odor.
							PLO		
25	S6	5.0	4.83	5.0	[Pattern]	[Pattern]	PLO		
30	S7	5.0	4.92		[Pattern]	[Pattern]	PLO		
				17.5	[Pattern]	[Pattern]	PLO		
35	S8	5.0	2.75						
				79.4			PLO		
					[Pattern]	[Pattern]			
40	S9	5.0	3.33	229			NLO		

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MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

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BORING LOG

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WWSB-27

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45							NLO		
	S10	5.0	4.17	407					
50							PLO		
	S11	3.0	5	149			NLO		

(49.2'- 50') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; slight petroleum-like odor, dry, brown.
(50'- 50.8') WIDEY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
(50.8'- 53') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; dry, brown.

Refusal at 53.0 feet.
Bottom of borehole at 53.0 feet.

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BORING LOG

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WWSB-28

GROUND SURFACE ELEVATION (FT): 13.13 LOCATION: North 11th Street
NORTHING: 688687.48 EASTING: 641805.87 TOTAL DEPTH (FT): 30.00
DRILLED BY: Zebra Environmental / Luke Caballero DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Maura MacLeod DATE START / END: 8/14/2009 - 8/19/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): ∇ 5.00 8/14/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0	2.25	18.9				WWSB-28 (3-5)	(0'- 0.5') CONCRETE. (0.5'- 5') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight organic-like odor, moist, dark gray, FILL, hand cleared.
5	S2	5.0	2	948			OLO		(5'- 8.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to medium, ~10% fines, non plastic, ~5% gravel, fine to coarse, subangular; max. size 1 in., slight naphthalene-like odor, wet, dark gray, FILL.
10	S3	5.0	3.17	238			NLO		(8.8'- 10') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, ~10% fines, non plastic, ~5% gravel; max. size 1 in., moderate naphthalene-like odor, FILL, trace pottery fragments. (10'- 11.8') SILTY SAND (SM); ~80% sand, fine to medium, ~15% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., slight naphthalene-like odor, moist, dark gray.
15	S4	5.0	4.67	1633			NLO		(11.8'- 14.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; moist, gray.
20							NLO		(14.7'- 15') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight naphthalene-like odor, moist, gray, slight tar-like staining. (15'- 17.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight naphthalene-like odor, wet, brown gray.
							NLO		(17.5'- 18.2') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; moderate naphthalene-like odor, wet, brown gray, sheen, moderate tar-like staining and coating. (18.2'- 20') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight

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BORING LOG

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WWSB-28

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	3.92	>9999			NLO	WWSB-28 (22-23)	naphthalene-like odor, wet, brown. (20'- 22.1') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines; slight naphthalene-like odor, wet, brown, slight tar-like staining.
							NLO		(22.1'- 23.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines; slight naphthalene-like odor, wet, brown, moderate tar-like staining and coating.
							NLO		(23.7'- 25') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines; slight naphthalene-like odor, wet, brown, tar-like staining with blebs and globs.
25	S6	5.0	2.42	384					(25'- 30') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines, non plastic; max. size 0.75 in., slight naphthalene-like odor, dry, brown, dense.
							NLO		
30									

Refusal at 30.0 feet.
Bottom of borehole at 30.0 feet.
Sample shoe chipped with rock in shoe.

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BORING LOG

PAGE
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WWSB-29

GROUND SURFACE ELEVATION (FT): 11.51

LOCATION: North 11th Street

NORTHING: 688759.89 EASTING: 641715.94

TOTAL DEPTH (FT): 28.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 8/18/2009 - 8/19/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 5.00 8/18/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0									(0'- 2') hand cleared.
	S1	3.0	1.75	101				WWSB-29 (2-5)	(2'- 5') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., slight petroleum-like odor, dry, brown, moist at 2.6 ft, hand cleared.
5	S2	5.0	0.75	423					(5'- 10') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight naphthalene-like odor, moist, brown, moderate petroleum-like odor.
10	S3	5.0	4.5	51.4					(10'- 14.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., slight naphthalene-like odor, wet, gray brown, loose, slight petroleum-like odor.
15	S4	5.0	4.92						(14.7'- 15') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, moist, brown, tar-like staining, pockets of tar-like coating.
									(15'- 16.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown.
									(16.6'- 19.6') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., moderate naphthalene-like odor, moist, brown, sheen, pockets of tar-like coating and blebs.
20				1516					(19.6'- 20') WIDELY GRADED SAND (SW); ~90% sand, fine to

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BORING LOG

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WWSB-29

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.92	96.1			NLO	WWSB-29 (20-22)	coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., strong naphthalene-like odor, moist, brown, sheen, pockets of tar-like coating and blebs. (20'- 21.9') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., moderate naphthalene-like odor, moist, brown, sheen, tar-like blebs, and pockets of tar-like coating. (21.9'- 25') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, dry, reddish brown, very dense, sheen.
							NLO		
25	S6	3.0	1.33	315			NLO		(25'- 28') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine, ~10% fines, non plastic; max. size 0.5 in., slight naphthalene-like odor, moist, brown, dense.
Refusal at 28.0 feet. Bottom of borehole at 28.0 feet. Rock in sample shoe.									

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GEI PROJECT NUMBER: 093060

BORING LOG

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1 of 3

WWSB-30

GROUND SURFACE ELEVATION (FT): 10.51

LOCATION: North 11th Street

NORTHING: 688819.1 EASTING: 641642.48

TOTAL DEPTH (FT): 50.00

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 8/18/2009 - 8/20/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 5.90 8/18/2009

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
0								(0'- 2') Hand cleared.
	S1	3.0	2	562		PLO	WWSB-30 (2-5)	(2'- 5') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate petroleum-like odor, dry, brown, FILL, coal fragments, organics, roots, hand cleared.
5	S2	5.0	3.92	747		PLO	WWSB-30 (7-9)	(5'- 10') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate petroleum-like odor, dry, brown, FILL, brick and coal fragments, change to wet at 5.9 ft.
10	S3	5.0	0					(10'- 15') no recovery.
15	S4	5.0	5	63.5				(15'- 17.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; wet, light brown.
						PLO		(17.9'- 18.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, light brown, lenses of silt.
						PLO		(18.7'- 19.4') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; slight petroleum-like odor, gray.
20						PLO		

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-30

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
20	S5	5.0	4.42	95.7		PLO		(19.4'- 20') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight petroleum-like odor, light brown. (20'- 22.3') SILTY SAND (SM); ~70% sand, fine to medium, ~20% fines, non plastic, ~10% gravel, fine; max. size 0.75 in., slight petroleum-like odor, wet, gray brown. (22.3'- 23.3') SILTY SAND (SM); ~70% sand, fine to medium, ~20% fines, non plastic, ~10% gravel, fine; max. size 0.75 in., wet, gray brown. (23.3'- 25') WIDELY GRADED SAND (SW); ~90% sand, fine to medium, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., wet, brown.
25	S6	5.0	2.33	45		PLO		(25'- 32.4') WIDELY GRADED SAND (SW); ~90% sand, fine to medium, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight petroleum-like odor, wet, brown.
30	S7	5.0	5			PLO		(32.4'- 34.3') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., slight petroleum-like odor, wet, brown to gray. (34.3'- 36.8') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, non plastic; wet, brown, color change at 35 ft to gray brown. (36.8'- 37.9') SILT WITH SAND (ML); ~80% fines, low plasticity, ~20% sand, fine; wet, gray brown, lense of sand from 37.4 to 37.5 ft. (37.9'- 40.9') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, non plastic; wet, gray brown.
35	S8	5.0	4.33	113				
40	S9	5.0	2.25	9.9				(40.9'- 50') LEAN CLAY (CL); ~100% fines, medium plasticity; moist, red gray.

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

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				PROJECT: Williamsburg MGP RI			PAGE 3 of 3	WWSB-30
CITY/STATE: Brooklyn, New York								
GEI PROJECT NUMBER: 093060								
DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
45	S10	5.0	5	10.1			WWSB-30 (45-50)	
50								Bottom of borehole at 50.0 feet.
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE) ppm = PARTS PER MILLION IN. = INCHES FT. = FEET NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR								

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BORING LOG

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WWSB-31

GROUND SURFACE ELEVATION (FT): 9.68

LOCATION: North 11th Street

NORTHING: 688863.67 EASTING: 641585.88

TOTAL DEPTH (FT): 60.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 8/26/2009 - 8/27/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 9.10 8/26/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		1365			PLO	WWSB-31 (1-5)	(0'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., moderate petroleum-like odor, brown, FILL, brick and coal fragments, black petroleum-like staining, hand cleared.
5	S2	5.0	1.92	1809			NLO		(5'- 5.9') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., slight naphthalene-like odor, brown, FILL, brick and coal fragments, black petroleum-like staining and odor.
							NLO		(5.9'- 7.4') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., moderate naphthalene-like odor, brown, FILL, moderate petroleum-like odor.
							NLO		(7.4'- 9.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., moderate naphthalene-like odor, black, FILL, coal and brick fragments, moderate petroleum-like odor.
10	S3	5.0	1.58	1767			NLO		(9.1'- 10') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., moderate naphthalene-like odor, wet, black, FILL, coal and brick fragments, tar-like staining, moderate petroleum-like odor.
							NLO		(10'- 12.9') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 2 in., moderate naphthalene-like odor, black, FILL, brick and coal fragments, tar and petroleum-like staining.
							NLO		(12.9'- 15') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~35% gravel, fine to coarse, ~5% fines, non plastic; max. size 0.75 in., moderate naphthalene-like odor, brown black, moderate petroleum-like odor.
15	S4	5.0	4.75	2274			NLO	WWSB-31 (15-17)	(15'- 17.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~35% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, moderate tar and petroleum-like staining, moderate petroleum-like odor.
				754			PLO		(17.5'- 17.9') ORGANIC SOIL WITH SAND (OL); ~70% fines, low plasticity, ~30% sand, fine; strong petroleum-like odor, wet, black, wood fragments and organics, petroleum-like saturation.
							OLO		(17.9'- 19.1') WOOD; wood fragments, moderate wood preservative-like odor.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



GEI Consultants, Inc.
455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-31

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.67	136			OLO		(19.1'- 20.8') SILT WITH SAND (ML); ~75% fines, low plasticity, ~25% sand, fine; moderate organic-like odor, black. (20.8'- 23') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; wet, brown.
									(23'- 25') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, ~5% fines, non plastic; max. size 1.75 in., moist, light brown, dense.
25	S6	5.0	4.67	171			PLO		(25'- 27') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; slight petroleum-like odor, moist, brown.
									(27'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; wet, light brown.
30	S7	5.0	3.83	152					(30'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, wet, light brown.
35	S8	5.0	2.92	50.1			PLO		
40	S9	5.0	3.33	60.4			NLO		(40'- 45.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown.

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WWSB-31

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45	S10	5.0	3.42	8.3	[Pattern: Dotted]	[Pattern: Vertical Lines]	NLO	WWSB-31 (52-54)	(45.9'- 47.8') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; moist, gray brown.
									(47.8'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown.
50	S11	5.0	4.5	23.7	[Pattern: Dotted]	[Pattern: Vertical Lines]	NLO		(50'- 53.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown.
									(53.8'- 55') LEAN CLAY (CL); ~90% fines, ~10% sand, fine; red gray.
55	S12	5.0	5.17	398	[Pattern: Diagonal Lines]	[Pattern: Vertical Lines]	NLO		(55'- 60') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; slight naphthalene-like odor, reddish gray, dense.
60									Bottom of borehole at 60.0 feet.

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BORING LOG

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WWSB-32

GROUND SURFACE ELEVATION (FT): 8.7

LOCATION: North 11th Street

NORTHING: 688931.61 EASTING: 641501.7

TOTAL DEPTH (FT): 45.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 8/27/2009 - 8/28/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 3.00 8/27/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0	2.33					WWSB-32 (4-5)	(0'- 1.4') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., dry, black, FILL, coal fragments, hand cleared.
							OLO		(1.4'- 3') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., moderate organic-like odor, dry, gray brown, FILL, hand cleared.
				651			PLO		(3'- 5.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate petroleum-like odor, wet, gray, FILL, petroleum-like staining, hand cleared to 5 ft.
5	S2	5.0	2.42				NLO		(5.7'- 7.1') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~35% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., moderate naphthalene-like odor, moist, black, FILL, coal fragments, petroleum-like staining, moderate petroleum-like odor.
							NLO	WWSB-32 (10-11)	(7.1'- 7.8') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~75% sand, fine to coarse, ~15% gravel, fine, ~10% fines, non plastic; max. size 0.75 in., moderate naphthalene-like odor, dry, black, FILL, organics, moderate petroleum-like odor.
				1787			NLO		(7.8'- 10') WIDELY GRADED GRAVEL WITH SAND (GW); ~55% gravel, fine to coarse, ~40% sand, fine to coarse, ~5% fines, non plastic; max. size 0.75 in., strong naphthalene-like odor, black, FILL, brick and coal fragments, yellow-green tar-like staining and coating.
10	S3	5.0	2.67	1984			NLO		(10'- 11.3') WIDELY GRADED GRAVEL WITH SAND (GW); ~55% gravel, fine to coarse, ~40% sand, fine to coarse, ~5% fines, non plastic; max. size 0.75 in., strong naphthalene-like odor, black, FILL, brick and coal fragments, tar-like staining and coating, slight petroleum-like odor.
							NLO		(11.3'- 15') WIDELY GRADED GRAVEL WITH SAND (GW); ~55% gravel, fine to coarse, ~40% sand, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, gray, pockets of black petroleum-like staining moderate petroleum-like odor.
15	S4	5.0	2.25				NLO		(15'- 17.2') WIDELY GRADED GRAVEL WITH SAND (GW); ~65% gravel, fine to coarse, ~30% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., strong naphthalene-like odor, moist, gray brown, tar-like staining, moderate petroleum-like odor.
				1088			NLO		(17.2'- 18.7') WIDELY GRADED GRAVEL WITH SAND (GW); ~65% gravel, fine to coarse, ~30% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., strong naphthalene-like odor, moist, gray brown, moderate petroleum-like odor.
							PLO		(18.7'- 20') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; slight petroleum-like odor, moist, black.
20									

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BORING LOG

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WWSB-32

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.17	1471			NLO		(20'- 21.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, gray black, strong petroleum-like odor. (21.2'- 22.6') WIDELY GRADED GRAVEL WITH SAND (GW); ~65% gravel, fine to coarse, ~30% sand, fine to coarse, ~5% fines, non plastic; max. size 1 in., strong naphthalene-like odor, moist, gray brown, tar-like staining, moderate petroleum-like odor. (22.6'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, moist, light brown.
							NLO		
							PLO		
25	S6	5.0	4.08	5.6					(25'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, light brown, lense of gravel from 28.3 to 28.4 ft.
30	S7	5.0	2.83	31.8					(30'- 33.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, moist, light brown.
							PLO		
35	S8	5.0	2.92	29.6					(33.2'- 35') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moist, light brown.
40	S9	5.0	4.75						(35'- 40') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, ~5% fines, non plastic; max. size 1.5 in., moist, light brown, dense, lenses of reddish-brown clay from 38.1 to 40 ft.
							PLO		

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BORING LOG

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1 of 2

WWSB-34

GROUND SURFACE ELEVATION (FT): 7.47

LOCATION: North 12th Street

NORTHING: 689254.48 EASTING: 641588.37

TOTAL DEPTH (FT): 26.50

DRILLED BY: Zebra Environmental / Luke Caballero

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 9/16/2009 - 9/16/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 5.00 9/16/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0	2.5					WWSB-34 (2-5)	(0'- 3.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~35% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., dry, brown, FILL, coal fragments.
				2011			NLO		(3.5'- 5') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~20% gravel, fine to coarse, ~10% fines, non plastic; max. size 1.5 in., slight naphthalene-like odor, moist, brown, FILL, coal fragments, black petroleum-like staining, strong petroleum-like odor, hand cleared.
5	S2	5.0	2.08				NLO	WWSB-34 (10-13)	(5'- 7.2') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~20% gravel, fine to coarse, ~10% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, moist, brown, FILL, coal fragments, black petroleum-like staining, moderate petroleum-like odor.
				1150			NLO		(7.2'- 8.8') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 2.5 in., moderate naphthalene-like odor, moist, gray with brown, black petroleum-like staining, moderate petroleum-like odor.
							NLO		(8.8'- 9.6') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 2.5 in., moist, gray with brown.
10	S3	5.0	2.92	1333			NLO		(9.6'- 10') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 2.5 in., moderate naphthalene-like odor, moist, gray with brown, black petroleum-like staining, moderate petroleum-like odor.
							NLO		(10'- 15') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 2.5 in., strong naphthalene-like odor, moist, gray with brown, sheen, tar-like blebs with pockets of staining and coating, pockets of petroleum-like staining.
15	S4	5.0	2.83	432			NLO		(15'- 15.6') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine, ~5% fines, non plastic; max. size 0.5 in., slight naphthalene-like odor, moist, brown black, black petroleum-like staining, moderate petroleum-like odor.
							PLO		(15.6'- 17.6') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; slight petroleum-like odor, moist, brown to black, wood, roots, and organics to 16 ft.
							NLO		(17.6'- 25') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-34

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	0.58	83.2			NLO		
25	S6	1.5	2.5	70.8					

(25'- 26') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., slight naphthalene-like odor, wet, brown, slight petroleum-like odor.
(26'- 26.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, low plasticity, ~5% gravel, fine; max. size 0.75 in., slight naphthalene-like odor, moist, brown, slight petroleum-like odor, cobbles from 26.4 to 26.5 ft.
Refusal at 26.5 feet.
Bottom of borehole at 26.5 feet.
Cobble in sample shoe.

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BORING LOG

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WWSB-35

GROUND SURFACE ELEVATION (FT):

LOCATION: North 12th Street

NORTHING: EASTING:

TOTAL DEPTH (FT): 10.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 9/24/2009 - 9/30/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 5.00 9/24/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0		353				WWSB-35 (1-4.5)	(0'- 0.5') CONCRETE. (0.5'- 3') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~65% sand, fine to coarse, ~25% gravel, fine to coarse, ~10% fines, non plastic; max. size 3 in., dry, brown, hand cleared.
5	S2	5.0	1.17	2342			PLO	WWSB-35 (8-10)	(3'- 5') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~65% sand, fine to coarse, ~25% gravel, fine to coarse, ~10% fines, non plastic; max. size 3 in., moderate petroleum-like odor, moist, brown, pockets of petroleum-like staining, hand cleared. (5'- 8.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown.
10									Refusal at 10.0 feet. Bottom of borehole at 10.0 feet.

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BORING LOG

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WWSB-36

GROUND SURFACE ELEVATION (FT): 6.88

LOCATION: North 12th Street

NORTHING: 689416.49 EASTING: 641383.41

TOTAL DEPTH (FT): 34.00

DRILLED BY: Zebra Environmental / Quincy Brandt

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Maura MacLeod

DATE START / END: 9/29/2009 - 9/30/2009

DRILLING DETAILS: Geoprobe

WATER LEVEL DEPTHS (FT): 5.00 9/29/2009

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	5.0						WWSB-36 (3-5)	ASPHALT. (0.5'- 5') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, ~5% fines, non plastic; max. size 2 in., dry, brown, FILL, organics, wood, roots, and brick fragments, hand cleared.
5	S2	5.0	2.67	1.7					(5'- 8.4') SILT WITH SAND (ML); ~80% fines, low plasticity, ~20% sand, fine; slight naphthalene-like odor, wet, brown, loose, wood fragments from 5 to 5.6 ft.
10	S3	5.0	2.17	2846			NLO	WWSB-36 (9-10)	(8.4'- 10') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate naphthalene-like odor, brown, moderate petroleum-like staining and odor. (10'- 12.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, slight petroleum-like odor.
15	S4	5.0	4.08	1867			NLO		(12.3'- 15') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, non plastic, ~5% gravel, fine; max. size 0.5 in., moderate naphthalene-like odor, wet, brown to black, moderate petroleum-like staining and odor, organic odor.
							NLO		(15'- 16.7') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine, ~5% fines, non plastic; max. size 0.75 in., moderate naphthalene-like odor, brown to black, moderate petroleum-like odor with sheen.
							NLO		(16.7'- 18.9') SILT WITH SAND (ML); ~80% fines, non plastic, ~20% sand, fine; moderate naphthalene-like odor, wet, brown, loose, moderate petroleum-like odor with sheen and staining from 16.7 to 17.2 ft.
20				1173			NLO		(18.9'- 20') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~20% gravel, fine to

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455 Winding Brook Road
Glastonbury, CT 06033
(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-36

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20	S5	5.0	4.83	555			NLO		coarse, ~10% fines, low plasticity; max. size 2 in., slight naphthalene-like odor, wet, brown to black, strong petroleum-like odor with staining and pockets of coating. (20'- 20.9') WIDELY GRADED GRAVEL WITH SILT AND SAND (GW-GM); ~60% gravel, fine to coarse, ~30% sand, fine to coarse, ~10% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, wet, black, sheen, tar-like blebs and staining, pockets of petroleum-like coating, moderate petroleum-like odor. (20.9'- 21.6') SILT WITH SAND (ML); ~75% fines, low plasticity, ~20% sand, fine, ~5% gravel, fine; max. size 0.5 in., moderate naphthalene-like odor, black, pockets of tar-like staining and coating, moderate petroleum-like odor with pockets of coating. (21.6'- 25') SILT (ML); ~90% fines, medium plasticity, ~10% sand, fine; slight petroleum-like odor, moist, black. (25'- 28') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine to coarse; max. size 2.5 in., slight naphthalene-like odor, moist, brown, slity seams. (28'- 30') SANDY ELASTIC SILT (MH); ~60% fines, medium plasticity, ~40% sand, fine to coarse; moist, whiteish gray. (30'- 31.7') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, medium plasticity; slight naphthalene-like odor, moist, brownish white, slight burnt-like odor. (31.7'- 32.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, slight burnt-like odor. (32.3'- 33.5') SANDY ELASTIC SILT (MH); ~60% fines, medium plasticity, ~40% sand, fine to coarse; slight naphthalene-like odor, moist, whiteish gray, slight burnt-like odor. (33.5'- 34') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown. Refusal at 34.0 feet. Bottom of borehole at 34.0 feet.
							NLO		
							PLO		
25	S6	5.0	3.17	65.5			NLO		
30	S7	4.0	3.83	18.7			NLO		
							NLO		
							NLO		

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BORING LOG

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WWSB-37

GROUND SURFACE ELEVATION (FT): 12.96

LOCATION: 50 Kent Ave

NORTHING: 688767.82 EASTING: 642053.71

TOTAL DEPTH (FT): 97.00

DRILLED BY: Boart Longyear / Craig Marsh

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Amy Malsbary

DATE START / END: 12/28/2009 - 12/28/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	7.0							(0.5'- 7') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~20% gravel, fine to coarse, ~10% fines, non plastic; ~20% concrete fragments, max. size 1.5 in., dry, dark brown, FILL.
5									
	S2	10.0	6.5						(7'- 10.1') CONCRETE.
10				127					
							NLO		(10.1'- 12') SILTY SAND WITH GRAVEL (SM); ~65% sand, fine to coarse, ~20% fines, non plastic, ~15% gravel, fine to coarse, subangular to subrounded; max. size 4 in., moderate naphthalene-like odor, brown, sheen, lenses and seams of black staining.
							NLO		(12'- 13.5') SILTY SAND WITH GRAVEL (SM); ~65% sand, fine to coarse, ~20% fines, non plastic, ~15% gravel, fine to coarse, subangular to subrounded; max. size 4 in., strong naphthalene-like odor, dark gray and black, sheen, lenses and seams of black staining, slight tar-like staining.
							NLO		(13.5'- 13.9') SILTY SAND (SM); ~75% sand, fine to coarse, ~15% fines, non plastic, ~10% gravel, fine to coarse; max. size 2.5 in., slight naphthalene-like odor, moist, light brown, sheen.
15									(13.9'- 17') SILTY SAND (SM); ~75% sand, fine to coarse, ~15% fines, non plastic, ~10% gravel, fine to coarse; max. size 2.5 in., slight naphthalene-like odor, moist, light brown.
	S3	5.0	8	46.2					(17'- 17.6') COBBLE.
									(17.6'- 20.1') SILTY SAND (SM); ~80% sand, fine to coarse, ~15% fines, non plastic, ~5% gravel, fine to coarse, subangular to subrounded; max. size 1.5 in., moist, light reddish brown.
20				239					

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSB-37

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20									(20.1'- 24.5') NARROWLY GRADED SAND (SP); ~100% sand, fine; slight naphthalene-like odor, dry, light gray, color change at 22 feet to light brownish gray, powder-like, cobble from 21.1 to 21.4 feet.
	S4	5.0	7	241			NLO		
25									(24.5'- 26.3') COBBLE; black, light gray specks.
	S5	10.0	11				NLO		(26.3'- 27') WIDELY GRADED GRAVEL WITH SILT AND SAND (GW-GM); ~60% gravel, fine to coarse, ~30% sand, fine to coarse, ~10% fines, non plastic; max. size 4 in., reddish brown.
				3487			NLO		(27'- 28.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown, loose.
30							NLO		(28.4'- 31.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown, loose, tar-like staining and coating.
							NLO		(31.1'- 32') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown, loose, 3 inch lense of dense fine sand at 32 feet.
							NLO		(32'- 32.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown, loose, sheen, tar-like staining and coating.
35				148			NLO		(32.9'- 37') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown, loose.
	S6	10.0	11						(37'- 41.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown, loose.
40				11.1					
									(41.5'- 42.2') WIDELY GRADED SAND (SW); ~95% sand, medium to coarse, ~5% fines, non plastic; moist, orangish brown, loose.
									(42.2'- 45.2') WIDELY GRADED SAND (SW); ~95% sand, fine to

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BORING LOG

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WWSB-37

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45				6.3					coarse, ~5% fines, non plastic; moist, brown, loose.
	S7	10.0	15						(45.2'- 45.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, brown. (45.6'- 49') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown, loose.
50				9.8					(49'- 50.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, brown. (50.2'- 50.7') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines, non plastic; moist, brown. (50.7'- 57') SILT WITH SAND (ML); ~80% fines, low plasticity, ~20% sand, fine to medium; moist, brown, dense, 4 inch sand lense at 52.3 feet.
55				105					
	S8	10.0	13						(57'- 59.7') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, brown.
60				3.2					(59.7'- 67') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; red with gray, color change to gray at 64.3 feet, very dense.
65									

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BORING LOG

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WWSB-37

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
70	S9	10.0	12	2.4					(67'- 72') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; olive brown, color change to gray at 71.2 feet, very dense.
				2.1					
75				1.6					(72'- 74.5') SILT WITH SAND (ML); ~80% fines, low plasticity, ~20% sand, fine; moist, gray, dense.
80				1.4					(74.5'- 75.8') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; dry, gray, dense, brittle.
85				1.3					(75.8'- 78.3') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; moist, gray, dense.
90				1.4					(78.3'- 79.2') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; moist, gray, dense.
									(79.2'- 80.5') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; moist, gray, dense.
									(80.5'- 87.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, gray, loose.
									(87.4'- 90.3') SILTY SAND (SM); ~75% sand, fine to medium, ~25% fines, non plastic; moist, whitish gray, dense.

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		GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300		CLIENT: National Grid				BORING LOG	
				PROJECT: Williamsburg MGP RI		PAGE 5 of 5		WWSB-37	
				CITY/STATE: Brooklyn, New York					
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DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
90									(90.3'- 92.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, whitish gray, loose.
95				1.4				WW-SB-37 (96-97)	(92.8'- 93.3') SILTY SAND (SM); ~75% sand, fine to medium, ~25% fines, non plastic; moist, whitish gray, dense. (93.3'- 94.5') WIDELY GRADED SAND (SW); ~95% sand, medium to coarse, ~5% fines, non plastic; moist, whitish gray, loose, lense of fine to medium dark gray sand. (94.5'- 95.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, dark gray, dense. (95.3'- 97') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, gray.
Bottom of borehole at 97.0 feet.									

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BORING LOG

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WWSB-38

GROUND SURFACE ELEVATION (FT): 14.58

LOCATION: 50 Kent Ave

NORTHING: 688632.81 EASTING: 641968.6

TOTAL DEPTH (FT): 97.00

DRILLED BY: Boart Longyear / Craig Marsh

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Amy Malsbary

DATE START / END: 12/28/2009 - 12/29/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	7.0							(0'- 7') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~20% gravel, fine to coarse, angular, ~10% fines, non plastic; max. size 2 in., slight naphthalene-like odor, dry, dark gray, FILL, brick fragments.
5							NLO		
	S2	10.0	4.75	34.6					(7'- 17') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moderate naphthalene-like odor, moist, reddish brown, color change to gray at 10.7 feet, pepper-like odor, dark gray seam from 9.6 to 14.4 feet.
10				80.1			NLO		
15									
	S3	10.0	11.5						(17'- 18.7') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; moist, brown, dense, moderate pepper-like odor.
							NLO		(18.7'- 19.2') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; slight naphthalene-like odor, moist, brown.
20							NLO		

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WWSB-38

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	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20				32.7			NLO		(19.2'- 23.1') SILTY SAND WITH GRAVEL (SM); ~55% sand, fine to coarse, ~30% fines, non plastic, ~15% gravel; max. size 3.5 in., slight naphthalene-like odor, moist, brown, dense, slight pepper-like odor.
25							NLO		(23.1'- 25.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown and grayish brown, pockets of silt, sheen, pockets of tar-like staining.
				1476			NLO		(25.3'- 26.6') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown, sheen, tar-like staining.
							NLO		(26.6'- 27') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown.
30	S4	10.0	10.5				NLO		(27'- 31.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, wet, brown, loose, sheen.
				1491			NLO		(31.3'- 33.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown, loose.
									(33.2'- 37') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown, loose.
35				70.1					
40	S5	10.0	10.5						(37'- 43.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown with gray, sheen.
				114			NLO		

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WWSB-38

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45				14.4			NLO		(43.2'- 46') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, reddish brown.
	S6	10.0	10.5						(46'- 48') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine to medium; moist, brown.
									(48'- 49.4') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, low plasticity; moist, brown, dense.
50				14.8					(49.4'- 50.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown, loose.
									(50.3'- 67') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; moist, red with gray, very dense, color change to gray at 65.5 feet.
55				130					
	S7	10.0	13						
60				12.2					
65				2.9					

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WWSB-38

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
70	S8	10.0	12	0.2					(67'- 77') LEAN CLAY (CL); ~90% fines, low plasticity, ~10% sand, fine; moist, gray, very dense, color change to light brown at 75.3 feet.
				0.2					
75				0.2					
80	S9	10.0	10	0.2					(77'- 87') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; wet, whiteish gray, color change to gray at 86 feet.
				0.2					
85				0.1					
90	S10	10.0	12	0.2					(87'- 88.7') SILT WITH SAND (ML); ~85% fines, low plasticity, ~15% sand, fine; moist, grayish brown, dense. (88.7'- 89.1') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, non plastic; moist, brown. (89.1'- 89.5') SILT WITH SAND (ML); ~85% fines, low plasticity,
				0.2					

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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(860) 368-5300

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CITY/STATE: Brooklyn, New York

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BORING LOG

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WWSB-38

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
90									~15% sand, fine; moist, gray, dense. (89.5'- 92.8') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; moist, whiteish gray, dense, brittle.
									(92.8'- 93.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, whiteish gray.
									(93.7'- 95.3') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; gray to blackish gray, dense.
95				0.2					(95.3'- 96.2') SILT WITH SAND (ML); ~85% fines, low plasticity, ~15% sand, fine; moist, gray, dense.
									(96.2'- 97') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; moist, gray.
								WW-SB-38 (96.5-97)	Bottom of borehole at 97.0 feet.

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WWSB-39

GROUND SURFACE ELEVATION (FT): 11.92 LOCATION: 50 Kent Ave
NORTHING: 688828.48 EASTING: 641735.67 TOTAL DEPTH (FT): 97.00
DRILLED BY: Boart Longyear / Craig Marsh DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Amy Malsbary DATE START / END: 12/29/2009 - 12/30/2009
DRILLING DETAILS: Sonic Coring
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	7.0							(0'- 0.3') ASPHALT. (0.3'- 0.8') CONCRETE. (0.8'- 7') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~75% sand, fine to coarse, ~15% gravel, fine to coarse, ~10% fines, non plastic; ~30% brick and concrete fragments, max. size 2.5 in., FILL.
5									
	S2	10.0	10				NLO		(7'- 10') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; ~30% brick and concrete fragments, moderate naphthalene-like odor, moist, brown with black, FILL.
10				43.5			NLO		(10'- 12') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; slight naphthalene-like odor, moist, brown, FILL, brick fragments.
							NLO		(12'- 14') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown, sheen, pockets of tar-like staining and blebs.
15				180			NLO		(14'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown.
							NLO		(15'- 16.5') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, moist, gray.
	S3	10.0	11.5				NLO		(16.5'- 17') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown, tar-like staining and coating.
				274			NLO		(17'- 18.3') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; strong naphthalene-like odor, moist, brown, sheen, tar-like blebs, and pockets of staining.
20									(18.3'- 19.6') WIDELY GRADED SAND (SW); ~95% sand, fine to

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WWSB-39

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20									coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown. (19.6'- 24.4') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; moist, brown.
25				73.6					(24.4'- 25.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown. (25.7'- 27') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; moist, brown.
30	S4	10.0	7	4.3					(27'- 34.9') SILTY SAND (SM); ~75% sand, fine to coarse, ~15% fines, non plastic, ~10% gravel, fine to coarse; max. size 1 in., moist, brown, dense.
35				20.4					(34.9'- 36.3') COBBLE. (36.3'- 37') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; moist, brown, dense. (37'- 43.5') SILTY SAND WITH GRAVEL (SM); ~65% sand, fine to coarse, ~20% fines, non plastic, ~15% gravel, fine to coarse; max. size 3.5 in..
40	S5	10.0	11.5	81.5					

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BORING LOG

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WWSB-39

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45				1444			NLO		(43.5'- 46.6') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown, loose.
	S6	10.0	13				NLO		(46.6'- 47') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown, loose, tar-like staining and coating.
							NLO		(47'- 48.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, loose, sheen.
50				1105			NLO		(48.7'- 48.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown, loose, sheen, tar-like staining and coating.
							NLO		(48.9'- 49.7') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, non plastic; moderate naphthalene-like odor, brown, dense.
55				146					(49.7'- 67') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; moist, red with gray, dense.
	S7	10.0	11.5						
60				2.2					
65				0.7					

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BORING LOG

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WWSB-39

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
70	S8	10.0	12.5	0.1					(67'- 71') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines, low plasticity; moist, brown, dense.
75				0.0					(71'- 71.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; dry, gray, brittle. (71.8'- 81.8') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines, non plastic; moist, grayish brown, dense.
80	S9	10.0	12.5	0.0					
85				0.0					(81.8'- 84.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, grayish brown.
90	S10	10.0	13.5						(84.6'- 86.2') SILTY SAND (SM); ~75% sand, fine to medium, ~25% fines, non plastic; moist, whiteish gray, dense. (86.2'- 87') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, whiteish gray, loose. (87'- 88.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown, loose. (88.1'- 88.9') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines, non plastic; moist, brown, dense, wood fragments. (88.9'- 90.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown, loose, lense of silt at

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

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	PROJECT: Williamsburg MGP RI				PAGE 5 of 5		WWSB-39			
	CITY/STATE: Brooklyn, New York									
GEI PROJECT NUMBER: 093060										
DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)						
90				0.0	***			WW-SB-39 (96-97)	89.6 feet. (90.3'- 91.1') SILTY SAND (SM); ~75% sand, fine to coarse, ~25% fines, non plastic; moist, brown, dense. (91.1'- 97') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines, non plastic; moist, gray with white, color change to greenish gray with white at 92.2 feet, dense.	
95				0.0						
Bottom of borehole at 97.0 feet.										
NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR CrLO= CREOSOTE LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE IN. = INCHES PLO = PETROLEUM LIKE ODOR OLO = ORGANIC LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR FT. = FEET TLO = TAR LIKE ODOR SLO = SULFUR LIKE ODOR HEADSPACE) ALO = ASPHALT LIKE ODOR CLO = CHEMICAL LIKE ODOR MLO = MUSTY LIKE ODOR										

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BORING LOG

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WWSB-40

GROUND SURFACE ELEVATION (FT): 11.7

LOCATION: 50 Kent Ave

NORTHING: 688948.78 EASTING: 641833.62

TOTAL DEPTH (FT): 97.00

DRILLED BY: Boart Longyear / Craig Marsh

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Amy Malsbary

DATE START / END: 12/23/2009 - 12/23/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0									
5									
	S1	10.0	7						(7'- 9.9') SILTY SAND WITH GRAVEL (SM); ~55% sand, fine to coarse, ~30% gravel, fine to coarse, subrounded, ~15% fines, non plastic; max. size 3 in., moist, brown.
10				1.5					(9.9'- 14.1') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; moderate naphthalene-like odor, wet, brown, sheen.
				24.1			NLO		
15									(14.1'- 14.9') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; strong naphthalene-like odor, wet, brown, sheen, tar-like staining and blebs. (14.9'- 17') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; slight naphthalene-like odor, wet, brown, sheen.
							NLO		
	S2	10.0	10.5						(17'- 21.3') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight naphthalene-like odor, wet, brown and dark gray.
				48.2			NLO		
20									

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WWSB-40

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20							NLO		(21.3'- 22.7') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~20% gravel, fine to coarse, subangular to subrounded, ~10% fines, non plastic; max. size 3 in., slight naphthalene-like odor, moist, brownish gray. (22.7'- 23.7') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; slight naphthalene-like odor, light brown, dense. (23.7'- 24.1') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown with red. (24.1'- 27') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; slight naphthalene-like odor, brown, dense. (27'- 35.3') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; brown, dense. (35.3'- 37.4') COBBLE; max. size 6 in.. (37.4'- 47.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown, loose.
				9.4			NLO		
							NLO		
							NLO		
25							NLO		
	S3	10.0	3	3.3					
				2.6					
30									
35									
	S4	10.0	11.5	45.7					
40									

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WWSB-40

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45				151					
	S5	10.0	13.5						(47.7'- 49.6') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; moist, brown, dense.
50				28.1					(49.6'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, brown, loose. (50'- 53.3') SILT WITH SAND (ML); ~80% fines, low plasticity, ~20% sand, fine; moist, brown, dense.
55				3.0					(53.3'- 55.5') SANDY SILT (ML); ~60% fines, low plasticity, ~40% sand, fine to medium; moist, brown, lense of fine to coarse sand.
	S6	10.0	12						(55.5'- 57.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown, loose, 2 inch lense with black staining and petroleum-like odor at 55.7 feet.
60				21.8					(57.8'- 78.3') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; red and gray, gray only from 64.5 to 67 and 77 to 78.3 feet, very dense.
65				1.4					

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WWSB-40

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
70	S7	10.0	9.5	1.5					
75				1.3					
80	S8	10.0	12						(78.3'- 79.5') SANDY LEAN CLAY (CL); ~60% fines, medium plasticity, ~40% sand, fine to medium; light gray, very dense.
85				1.3					(79.5'- 84.1') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines, low plasticity; light gray, dense.
90				1.2					(84.1'- 87') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; wet, light gray, color change to gray at 86.2 feet.
	S9	10.0	11						(87'- 88.8') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; moist, dark gray, dense.
									(88.8'- 91.5') LEAN CLAY WITH SAND (CL); ~80% fines, medium plasticity, ~20% sand, fine to medium; light gray, very dense.

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GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-40

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
90				1.1					
									(91.5'- 93.4') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, low plasticity; light gray with white, seams of black.
									(93.4'- 95.6') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, angular, ~5% fines, non plastic; max. size 2.5 in., light gray with white, seams of black.
95				1.1				WW-SB-40 (95-95.5)	(95.6'- 97') COBBLE; gray.

Bottom of borehole at 97.0 feet.

NOTES:

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HEADSPACE)

ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR



GEI Consultants, Inc.
455 Winding Brook Road
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(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSB-41

GROUND SURFACE ELEVATION (FT): 12.4

LOCATION: 50 Kent Ave

NORTHING: 688783.6 EASTING: 641834.12

TOTAL DEPTH (FT): 97.00

DRILLED BY: Boart Longyear / Craig Marsh

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Amy Malsbary

DATE START / END: 12/21/2009 - 12/22/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	3.0	3						(0'- 0.2') CONCRETE. (0.2'- 1') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~50% sand, fine to coarse, ~40% gravel, fine to coarse, subangular to subrounded, ~10% fines, non plastic; max. size 2 in., moist, light brown to brown, FILL.
				3.8					(1'- 3') SILTY SAND (SM); ~75% sand, fine to coarse, ~15% fines, non plastic, ~10% gravel, fine to coarse, subrounded; ~30% brick fragments, max. size 1.5 in., moist, brown with red, FILL.
	S2	4.0	5				NLO		(3'- 3.5') SILTY SAND (SM); ~75% sand, fine to coarse, ~15% fines, non plastic, ~10% gravel, fine to coarse, subrounded; ~30% brick fragments, max. size 1.5 in., slight naphthalene-like odor, moist, brown with red, FILL.
5				28.2			NLO		(3.5'- 5') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to medium, subrounded, ~5% fines, non plastic; max. size 0.5 in., moderate naphthalene-like odor, wet, black, FILL, sheen.
	S3	10.0	10.5						(5'- 5.75') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~35% gravel, fine, subangular to subrounded, ~5% fines, non plastic; ~70% brick fragments, max. size 0.25 in., moist, red, FILL.
				31.2			NLO		(5.75'- 7') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, subrounded, ~5% fines, non plastic; max. size 3 in., slight naphthalene-like odor, wet, dark gray, FILL.
10							NLO		(7'- 8') WIDELY GRADED SAND (SW); ~99% sand, fine to coarse, ~1% fines, non plastic; wet, dark brown, FILL.
									(8'- 9') WOOD; FILL.
									(9'- 9.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; ~80% wood fragments, moderate naphthalene-like odor, wet, brown to gray, FILL, sheen, slight tar-like staining.
							NLO		(9.5'- 11') WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand, fine to coarse, ~25% gravel, fine to coarse, subrounded, ~15% fines, non plastic; ~10% wood fragments, max. size 1 in., moderate naphthalene-like odor, moist, dark gray to brown, FILL.
15				793			NLO		(11'- 14.5') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, rounded, ~5% fines, non plastic; max. size 1 in., slight naphthalene-like odor, dark gray with brown.
							NLO		(14.5'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, moist, dark gray, sheen.
				797			NLO		(15'- 16') WIDELY GRADED SAND WITH GRAVEL (SW); ~55% sand, fine to coarse, ~40% gravel, fine to coarse, subangular to subrounded, ~5% fines, non plastic; max. size 4 in., strong naphthalene-like odor, moist, dark gray, sheen.
	S4	10.0	13						(16'- 17') WIDELY GRADED SAND (SW); ~85% sand, fine to coarse, ~10% gravel, fine to coarse, rounded, ~5% fines, non plastic; max. size 1 in., moderate naphthalene-like odor, light brown, dense.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

PAGE
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WWSB-41

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20				199					(17'- 23.2') WIDELY GRADED SAND (SW); ~90% sand, fine to medium, ~10% gravel, coarse, rounded; max. size 3 in., light brown, dense.
				483					(23.2'- 25.8') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, coarse, rounded, ~5% fines, non plastic; max. size 5 in., brown.
25									(25.8'- 27') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, medium to coarse, rounded, ~5% fines, non plastic; max. size 1.5 in., moderate naphthalene-like odor, moist, grayish brown.
	S5	10.0	10.5				NLO		(27'- 29.9') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to medium, ~10% fines, non plastic, ~5% gravel, medium to coarse, rounded; max. size 1.5 in., slight naphthalene-like odor, grayish brown.
30				3368			NLO		(29.9'- 33.7') SILTY SAND (SM); ~60% sand, fine, ~40% fines, low plasticity; strong naphthalene-like odor, moist, brown, dense, seam of fine to coarse sand with tar-like staining and coating.
				580			NLO		(33.7'- 37') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, subangular to subrounded, ~5% fines, non plastic; max. size 2.5 in., strong naphthalene-like odor, moist, brown, tar-like staining with pockets of coating to 36 feet, heavy staining with coating from 36 to 37 feet.
35							NLO		(37'- 37.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, wet, reddish brown, tar saturated.
	S6	10.0	11.5				NLO		(37.9'- 38.7') SILTY SAND (SM); ~70% sand, fine, ~30% fines, non plastic; brown, dense.
				2533			NLO		(38.7'- 40.9') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, fine to coarse, ~5% fines, non plastic; max. size 0.75 in., strong naphthalene-like odor, seams of tar-like staining and coating.
40				437			NLO		(40.9'- 52') WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand, fine to coarse, ~15% gravel, fine to coarse, subrounded to rounded, ~5% fines, non plastic; max. size 2.5 in., strong naphthalene-like odor, brown, odor decreasing with depth, very dense, 6 inch lense of gravel up to 4 inches beginning at 49.3'.

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BORING LOG

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WWSB-41

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45									
	S7	10.0	13				NLO		
50									
							NLO		
				2447					(52'- 52.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, reddish brown, loose, dense silty lenses, tar-like staining.
55				332			NLO		(52.8'- 57') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; slight naphthalene-like odor, red with gray, very dense.
	S8	10.0	12						(57'- 69.3') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; red with gray, color change at 64.5 feet to gray, very dense.
60				108					
65				20.2					

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WWSB-41

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
70	S9	10.0	13	0.7					(69.3'- 70.8') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; dry, brown, dense.
				0.3					(70.8'- 75.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; dry, brown, dense.
75	S10	10.0	11.5	0.4					(75.8'- 76.4') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, fine to coarse, subangular to subrounded, ~5% fines, non plastic; max. size 1.5 in., dry, light brown.
				0.3					(76.4'- 77') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines, non plastic; dry, grayish brown, streaks of dark gray, dense.
80	S11	10.0	12	0.2					(77'- 78.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; wet, brown.
				0.3					(78.3'- 83.1') SILT (ML); ~95% fines, non plastic, ~5% sand, fine; dark gray, very dense.
85									(83.1'- 85.3') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; light gray, very dense.
									(85.3'- 87') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; dark gray, dense.
90									(87'- 92.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, grayish brown.

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BORING LOG

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WWSB-42

GROUND SURFACE ELEVATION (FT): 12.5

LOCATION: 50 Kent Ave

NORTHING: 688873.64 EASTING: 641916.78

TOTAL DEPTH (FT): 97.00

DRILLED BY: Boart Longyear / Craig Marsh

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Amy Malsbary

DATE START / END: 12/22/2009 - 12/22/2009

DRILLING DETAILS: Sonic Coring

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0									
5									
10	S1	10.0	7	385					(7'- 17') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to coarse, ~10% fines, non plastic; strong naphthalene-like odor, moist to wet, brown, sheen, seams of tar-like staining and blebs, coating from 14.5 to 15.6 feet, brick at 17 feet.
15				1921			NLO		
20	S2	10.0	11				NLO		(17'- 21.5') SILTY SAND (SM); ~75% sand, fine to coarse, ~20% fines, non plastic, ~5% gravel, fine to coarse, subangular; max. size 3.5 in., moderate naphthalene-like odor, moist.

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WWSB-42

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
20				2634			NLO		(21.5'- 22.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, wet, brown, heavy sheen. (22.5'- 24.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, reddish brown with light brown, sheen, tar-like staining and coating. (24.3'- 26.5') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to coarse, ~10% gravel, fine to coarse, ~10% fines, non plastic; max. size 1 in., strong naphthalene-like odor, moist, reddish brown, sheen. (26.5'- 27') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; strong naphthalene-like odor, brown, seams of tar-like coating. (27'- 32.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand, fine to coarse, ~10% fines, non plastic, ~5% gravel, fine to coarse, subangular; max. size 3 in., moist, brown, dense. (32.8'- 35.9') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; moderate naphthalene-like odor, brown, dense, one large 4 inch cobble. (35.9'- 37') WIDELY GRADED SAND (SW); ~90% sand, fine to medium, ~10% gravel, fine to coarse, subrounded; max. size 1 in., moderate naphthalene-like odor, moist, reddish brown, two large 5 inch cobbles. (37'- 39.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, wet, brown, loose, sheen, tar-like staining, blebs from 37 to 37.8 feet, coating from 38.5 to 39.7 feet. (39.7'- 40.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; ~15% cobbles, strong naphthalene-like odor, moist, brown, loose, slight tar-like staining. (40.5'- 42') SILTY SAND (SM); ~55% sand, fine to coarse, ~35% fines, non plastic, ~10% gravel, fine to coarse; slight naphthalene-like odor, brown, dense. (42'- 43.5') SILT WITH SAND (ML); ~80% fines, low plasticity, ~20% sand, fine; slight naphthalene-like odor, brown, dense.
							NLO		
							NLO		
							NLO		
25				876			NLO		
							NLO		
	S3	10.0	9.5	884					
30									
				1261			NLO		
	S4	10.0	13	3127			NLO		
							NLO		
40							NLO		
							NLO		
							NLO		

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BORING LOG

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WWSB-42

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
45				886					(43.5'- 47') SILTY SAND (SM); ~60% sand, fine to coarse, ~40% fines, low plasticity; moist, brown, dense.
50	S5	10.0	10.5	554			NLO		(47'- 51.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown, loose.
55				112					(51.3'- 57') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; red with gray, dense.
60	S6	10.0	12						(57'- 61.2') LEAN CLAY WITH SAND (CL); ~85% fines, medium plasticity, ~15% sand, fine; brown with gray, dense.
65				838			NLO	WW-SB-42 (62-62.5)	(61.2'- 61.6') WIDELY GRADED SAND WITH SILT (SW-SM); ~80% sand, fine to medium, ~10% gravel, fine to coarse, angular, ~10% fines, non plastic; max. size 0.75 in., slight naphthalene-like odor, gray. (61.6'- 72') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, gray.

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BORING LOG

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WWSB-42

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
70	S7	10.0	12	6.3					
				21.6					
75				2.3					(72'- 85') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; gray, dense.
80	S8	10.0	12.5	1.8					
85				1.8					(85'- 87.8') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, low plasticity; moist, light gray, very dense.
90	S9	10.0	12	1.8					(87.8'- 89.5') WIDELY GRADED SAND (SW); ~95% sand, medium to coarse, ~5% fines, non plastic; wet, whiteish gray, loose.
									(89.5'- 94.9') WIDELY GRADED SAND (SW); ~95% sand, fine to

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BORING LOG

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WWSED-01

GROUND SURFACE ELEVATION (FT): -5.4

LOCATION: East River

NORTHING: 689140.1923 EASTING: 641204.9297

TOTAL DEPTH (FT): 20.00

DRILLED BY: Ocean Surveys, Inc. / Dave Kowaleski

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Kari Weber

DATE START / END: 9/30/2009 - 9/30/2009

DRILLING DETAILS: Vibracore

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	20.0	17.2	649			NLO	WW-SED-01 (0-0.5)	(0'- 1.2') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; ~30% organics, slight naphthalene-like odor, wet, black, slight petroleum-like odor, wood, sticks, and fibers.
				841			NLO	WW-SED-01 (1-2)	
									(1.2'- 2.3') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; ~30% organics, moderate naphthalene-like odor, wet, black, slight petroleum-like odor, wood, sticks, and fibers, tar-like staining.
							NLO		(2.3'- 5.8') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; ~30% organics, moderate naphthalene-like odor, wet, black, wood, sticks, and fibers.
5				653					(5.8'- 7') SANDY ORGANIC SOIL (OL); ~70% fines, non plastic, ~30% sand, fine to medium; ~30% organics, wet, black, wood, sticks, and fibers.
							NLO		(7'- 8.2') SANDY ORGANIC SOIL (OL); ~70% fines, non plastic, ~30% sand, fine to medium; ~30% organics, moderate naphthalene-like odor, wet, black, wood, sticks, and fibers, moderate tar-like staining.
							NLO		(8.2'- 10') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; ~30% organics, slight naphthalene-like odor, wet, black, wood, sticks, and fibers, slight tar-like staining.
10							NLO		(10'- 11.7') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; ~30% organics, slight naphthalene-like odor, wet, black, wood, sticks, and fibers.
									(11.7'- 12.6') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; ~30% organics, wet, black, wood, sticks, and fibers.
									(12.6'- 17.8') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; ~40% organics, slight naphthalene-like odor, wet, black, wood, sticks, and fibers, slight tar-like staining, layer of wood chips from 17.5 to 17.8 ft.
15				187			NLO		
									(17.8'- 20') ORGANIC SOIL (OL); ~90% fines, non plastic, ~10% sand, fine; ~5% organics, slight naphthalene-like odor, wet, black, very soft, fibers and wood.
20				35.0				WW-SED-01	

NOTES:

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ALO = ASPHALT LIKE ODOR

CrLO = CREOSOTE LIKE ODOR
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SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

	GEI Consultants, Inc. 455 Winding Brook Road Glastonbury, CT 06033 (860) 368-5300		CLIENT: National Grid		BORING LOG	
	PROJECT: Williamsburg MGP RI		PAGE 2 of 2			
	CITY/STATE: Brooklyn, New York		GEI PROJECT NUMBER: 093060		WWSED-01	

SAMPLE INFO					STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION				
DEPTH FT.	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)									
(19.5-20)										Bottom of borehole at 20.0 feet.			



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PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSED-02

GROUND SURFACE ELEVATION (FT): -5 LOCATION: East River
NORTHING: 689253.5564 EASTING: 641243.7441 TOTAL DEPTH (FT): 12.00
DRILLED BY: Ocean Surveys, Inc. / Dave Kowaleski DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
LOGGED BY: Kari Weber DATE START / END: 9/30/2009 - 9/30/2009
DRILLING DETAILS: Vibracore
WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	12.0	12	457			NLO	WW-SED-02 (0-0.5)	(0'- 1.3') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine to medium; ~40% organics, slight naphthalene-like odor, wet, black, slight petroleum-like odor, wood, fibers, and sticks.
				1460			NLO	WW-SED-02 (4-5)	(1.3'- 5') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine to medium; ~40% organics, moderate naphthalene-like odor, wet, black, wood, fibers, and sticks, slight tar-like staining.
5							NLO		(5'- 6.3') SILTY SAND (SM); ~75% sand, fine to medium, ~20% fines, non plastic, ~5% gravel, fine; ~25% organics, slight naphthalene-like odor, wet, black, wood and sticks, slight sewage-like odor.
							NLO		(6.3'- 7.8') GRAVELY SILT WITH SAND (ML); ~55% fines, non plastic, ~30% gravel, fine to coarse, ~15% sand, fine; max. size 1.5 in., slight naphthalene-like odor, wet, dark gray.
							NLO		(7.8'- 12') SANDY ORGANIC SOIL (OL); ~70% fines, non plastic, ~25% sand, fine to medium, ~5% gravel, fine; ~40% organics, max. size 0.5 in., slight naphthalene-like odor, wet, black, wood, fibers, and sticks.
10				200			NLO	WW-SED-02 (11-12)	

Refusal at 12.0 feet.
Bottom of borehole at 12.0 feet.

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSED-03

GROUND SURFACE ELEVATION (FT): -7

LOCATION: East River

NORTHING: 689360.1653 EASTING: 641268.8145

TOTAL DEPTH (FT): 17.00

DRILLED BY: Ocean Surveys, Inc. / Dave Kowaleski

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Kari Weber

DATE START / END: 9/30/2009 - 9/30/2009

DRILLING DETAILS: Vibracore

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	17.0	17	143				WW-SED-03 (0-0.5)	(0'- 3.6') SANDY ORGANIC SOIL (OL); ~60% fines, non plastic, ~35% sand, fine to medium, ~5% gravel, fine, subangular; ~30% organics, max. size 0.25 in., strong naphthalene-like odor, wet, black, wood and sticks, tar-like staining.
				269			NLO		
5									(3.6'- 5') CLAYEY SAND WITH GRAVEL (SC); ~50% sand, fine to medium, ~30% gravel, fine to coarse, subrounded, ~20% fines, medium plasticity; max. size 2.5 in., moist, tannish brown, dense.
							NLO		(5'- 8.3') ORGANIC SOIL WITH SAND (OL); ~80% fines, low plasticity, ~20% sand, fine; ~30% organics, slight naphthalene-like odor, wet, black, wood, sticks, and glass pieces.
10				866			NLO	WW-SED-03 (9-10)	(8.3'- 10') SANDY ORGANIC SOIL (OL); ~65% fines, non plastic, ~35% sand, fine to medium; ~20% organics, strong naphthalene-like odor, wet, black, wood and sticks, 4 inch cobble at the top, lenses of heavy coating.
									(10'- 14.4') ORGANIC SOIL WITH SAND (OL); ~80% fines, low plasticity, ~20% sand, fine to medium; ~30% organics, wet, black, wood, sticks, and glass pieces.
15				49.0			NLO		(14.4'- 15') ORGANIC SOIL WITH SAND (OL); ~80% fines, low plasticity, ~20% sand, fine to medium; ~30% organics, slight naphthalene-like odor, wet, black, wood, sticks, and glass pieces.
				48.8				WW-SED-03 (16.5-17)	(15'- 17') ORGANIC SOIL WITH SAND (OL); ~80% fines, low plasticity, ~20% sand, fine to medium; ~30% organics, wet, black, wood, sticks, and glass pieces, sewage-like odor from 15-16 ft.
									Refusal at 17.0 feet. Bottom of borehole at 17.0 feet.

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

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WWSED-04

GROUND SURFACE ELEVATION (FT): -8.8

LOCATION: East River

NORTHING: 689417.8726 EASTING: 641283.5805

TOTAL DEPTH (FT): 17.30

DRILLED BY: Ocean Surveys, Inc. / Dave Kowaleski

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Kari Weber

DATE START / END: 9/30/2009 - 9/30/2009

DRILLING DETAILS: Vibracore

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	17.3	17.3	203			NLO	WW-SED-04 (0-0.5)	(0'- 0.9') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; ~50% organics, slight naphthalene-like odor, wet, black, wood, sticks, and plastic pieces.
				760			NLO	WW-SED-04 (3-4)	(0.9'- 4.3') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; ~50% organics, slight naphthalene-like odor, wet, black, lenses of medium to coarse sand with staining, moderate to heavy tar-like coating.
5									(4.3'- 5') CLAYEY SAND WITH GRAVEL (SC); ~55% sand, fine to medium, ~25% fines, medium plasticity, ~20% gravel, fine to coarse, subrounded; max. size 1.5 in., moist, tannish brown, dense, fabric liner at 4.5 to 5 ft interface.
							OLO		(5'- 9.6') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; ~10% organics, slight organic-like odor, wet, black, wood, sticks, foil and plastic pieces.
10				79.2			NLO		(9.6'- 10') SANDY ORGANIC SOIL (OL); ~60% fines, non plastic, ~30% sand, fine to medium, ~10% gravel, fine, subangular; ~20% organics, max. size 0.25 in., moderate naphthalene-like odor, wet, black, wood and sticks.
				12.8					(10'- 13.8') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; ~5% organics, wet, black, wood and sticks.
15							PLO		(13.8'- 15') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; ~5% organics, slight petroleum-like odor, wet, black, wood and sticks.
				20.2				WW-SED-04 (16.75-17.3)	ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; ~5% organics, wet, black, wood and sticks.
									Refusal at 17.3 feet. Bottom of borehole at 17.3 feet.

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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BORING LOG

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WWSED-05

GROUND SURFACE ELEVATION (FT): -7.3

LOCATION: East River

NORTHING: 689229.562 EASTING: 641118.5146

TOTAL DEPTH (FT): 20.00

DRILLED BY: Ocean Surveys, Inc. / Dave Kowaleski

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Kari Weber

DATE START / END: 9/29/2009 - 9/29/2009

DRILLING DETAILS: Vibracore

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	20.0	19	172				WW-SED-05 (0-0.5)	(0'- 2.5') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; wet, black, organics including sticks and fibers, plastic pieces from 0-1.5 ft, sheen.
									(2.5'- 2.7') ORGANIC SOIL WITH GRAVEL (OL); ~80% fines, non plastic, ~20% gravel, fine, angular; moderate petroleum-like odor, wet, black, organics including sticks and fibers, sheen.
									(2.7'- 4.3') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; moderate petroleum-like odor, wet, black, organics including sticks and fibers, sheen.
5				729			NLO	WW-SED-05 (4.5-5)	(4.3'- 5') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; moderate naphthalene-like odor, wet, black, organics including sticks and fibers, sheen, tar-like coating and staining.
				26.5			OLO		(5'- 9.6') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; slight organic-like odor, wet, black, organics including wood, grass, and roots.
10							NLO		(9.6'- 10') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; slight naphthalene-like odor, wet, black, organics including wood, grass, and roots.
							OLO		(10'- 13.8') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; slight organic-like odor, wet, black, organics decreasing with depth, occasional lenses with up to 40% fine sand.
15				26.4			PLO		(13.8'- 15') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; slight petroleum-like odor, wet, black, organics decreasing with depth, occasional sandy lenses.
							OLO		(15'- 16.8') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; slight organic-like odor, wet, black, shell fragments, organics decreasing with depth, occasional sandy lenses.
							PLO		(16.8'- 17.3') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; moderate petroleum-like odor, wet, black, shell fragments, organics decreasing with depth, occasional sandy lenses, spotty sheen.
20				29.3			PLO	WW-SED-05	(17.3'- 20') ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; slight petroleum-like odor, wet, black, shell fragments, organics decreasing with depth, occasional sandy lenses.

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MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

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(860) 368-5300

CLIENT: National Grid

PROJECT: Williamsburg MGP RI

CITY/STATE: Brooklyn, New York

GEI PROJECT NUMBER: 093060

BORING LOG

PAGE
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SAMPLE INFO

DEPTH
FT.

**TYPE
and
NO.**

**PEN
FT.**

REC
FT.

PID
(ppm)

STRATA

VISUAL IMPACTS

ODOR

**ANALYZED
SAMPLE
ID**

SOIL / BEDROCK DESCRIPTION

(19.5-20) | Bottom of borehole at 20.0 feet.

NOTES:

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BORING LOG

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WWSED-06

GROUND SURFACE ELEVATION (FT): -6.4

LOCATION: East River

NORTHING: 689367.1217 EASTING: 641158.5653

TOTAL DEPTH (FT): 20.00

DRILLED BY: Ocean Surveys, Inc. / Dave Kowaleski

DATUM VERT. / HORIZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Kari Weber

DATE START / END: 9/29/2009 - 9/29/2009

DRILLING DETAILS: Vibracore

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)					
0	S1	20.0	18.5	345			NLO	WW-SED-06 (0-0.5)	(0'- 1.3') SILTY GRAVEL WITH SAND (GM); ~60% gravel, fine to coarse, subangular, ~20% sand, fine to medium, ~20% fines, non plastic; ~30% organics, max. size 1.75 in., strong naphthalene-like odor, wet, black, roots, wood, leaves, tar saturated.
							NLO		(1.3'- 3.3') SANDY ORGANIC SOIL WITH GRAVEL (OL); ~60% fines, non plastic, ~25% sand, fine, ~15% gravel, fine to coarse, subrounded; max. size 2 in., moderate naphthalene-like odor, dark gray to black, organics including wood, roots, and debris, lenses of tar-like coating.
							NLO		(3.3'- 5') SANDY ORGANIC SOIL WITH GRAVEL (OL); ~60% fines, non plastic, ~25% sand, fine, ~15% gravel, fine to coarse, subrounded; max. size 2 in., slight naphthalene-like odor, dark gray to black, organics including wood, roots, and debris.
5							NLO		(5'- 9.2') SANDY ORGANIC SOIL (OL); ~70% fines, non plastic, ~25% sand, fine, ~5% gravel, fine; max. size 0.5 in., slight naphthalene-like odor, wet, black, organics including wood and root fibers.
				315			NLO	WW-SED-06 (9-10)	(9.2'- 10') SILTY GRAVEL WITH SAND (GM); ~60% gravel, fine to coarse, subangular, ~25% fines, non plastic, ~15% sand, fine to medium; max. size 1.75 in., strong naphthalene-like odor, wet, black, tar saturated.
							NLO		(10'- 12') SANDY ORGANIC SOIL (OL); ~70% fines, non plastic, ~30% sand, fine; slight naphthalene-like odor, wet, black, organics including wood and fibers, slight organic-like odor.
				87.3			NLO		(12'- 15') SANDY ORGANIC SOIL (OL); ~70% fines, non plastic, ~30% sand, fine; slight naphthalene-like odor, wet, black, organics including wood and fibers.
15				13.9			OLO	WW-SED-06 (15-18.5)	(15'- 18.5') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; moderate organic-like odor, wet, black, odor decreasing with depth.
20									

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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10



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CITY/STATE: Brooklyn, New York

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BORING LOG

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WWSED-07

GROUND SURFACE ELEVATION (FT): -11.2

LOCATION: East River

NORTHING: 689478.6128 EASTING: 641125.5299

TOTAL DEPTH (FT): 15.70

DRILLED BY: Ocean Surveys, Inc. / Dave Kowaleski

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: Kari Weber

DATE START / END: 9/29/2009 - 9/29/2009

DRILLING DETAILS: Vibracore

WATER LEVEL DEPTHS (FT):

DEPTH FT.	SAMPLE INFO				STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	TYPE and NO.	PEN FT.	REC FT.	PID (ppm)				
0	S1	15.7	15.05	15.7			WW-SED-07 (0-0.5)	(0'- 5') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; slight organic-like odor, wet, black, organics including roots and sticks, lenses of medium to coarse sand.
5				125			WW-SED-07 (4-4.5)	(5'- 5.2') SANDY SILT (ML); ~60% fines, non plastic, ~35% sand, fine, ~5% gravel, fine; max. size 0.5 in., slight organic-like odor, wet, gray. (5.2'- 10.4') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; slight organic-like odor, wet, black, organics including roots and sticks, lenses of medium to coarse sand.
10				59.3				(10.4'- 15.7') ORGANIC SOIL WITH SAND (OL); ~80% fines, non plastic, ~20% sand, fine; wet, black, sewage-like odor from 10.4 to 11.5 ft.
15				7.6			WW-SED-07 (15-15.7)	Refusal at 15.7 feet. Bottom of borehole at 15.7 feet.

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FT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

CrLO = CREOSOTE LIKE ODOR
OLO = ORGANIC LIKE ODOR
SLO = SULFUR LIKE ODOR
MLO = MUSTY LIKE ODOR

ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

GEI Consultants, Inc.
455 Winding Brook Drive
Glastonbury, CT 06033
(860) 368-5300

CLIENT:	<u>National Grid</u>
PROJECT:	<u>Williamsburg MGP RI</u>
CITY/STATE:	<u>Brooklyn, NY</u>
GEI PROJECT NUMBER:	093060-1-1108

TEST PIT LOG	
PAGE 1 of 2	WW-TP-01

GROUND SURFACE ELEVATION (FT):		LOCATION:	50 Kent Avenue
NORTHING:	EASTING:	TOTAL LENGTH:	~14.3 ft
OBSERVED BY:	Maura MacLeod	TOTAL WIDTH:	~2.8 ft
CHECKED BY:	Amy Malsbary	TOTAL DEPTH:	~3.0 ft
EQUIPMENT:		DATUM VERT. / HORZ.:	NAVD 88 / NAD83 NY East Zone
WEATHER:	Overcast, 55 F	DATE START / END	10/29/2009

DEPTH FT.	PID (ppm)	ANALYZED SAMPLE ID	SOIL DESCRIPTION
			(0' - 0.3') ASPHALT (0.3'-1') CONCRETE
▽	17.3	WW-TP-01 (2-2.5)	(1'-1.7') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; max. size 3 in., dry, brown, brick, and concrete fragments. (1.7'-3') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; max. size 3 in., slight naphthalene-like odor, wet, brown, brick, and concrete fragments.
			Bottom of test pit at 3.0 feet. Water level encountered inside the holder only.
5			

NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

IN. = INCHES

FT. = FEET



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TEST PIT LOG

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WW-TP-01

GROUND SURFACE ELEVATION (FT):	0	LOCATION:	50 Kent Avenue
NORTHING: 0	EASTING: 0	TOTAL DEPTH:	~14.3 ft
OBSERVED BY: Maura MacLeod		TOTAL LENGTH:	~2.8 ft
CHECKED BY: Amy Malsbary		TOTAL WIDTH:	~3.0 ft
EQUIPMENT: 0		DATUM VERT. / HORZ.:	NAVD 88 / NAD83 NY East Zone
WEATHER: Overcast, 55 F		DATE START / END	10/29/2009

PHOTOGRAPH

Photo 1: Facing West



Soil Sample

Brick holder wall
~2.1 ft thick

NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)
ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET



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TEST PIT LOG

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WW-TP-02

GROUND SURFACE ELEVATION (FT):	LOCATION:	50 Kent Avenue
NORTHING:	EASTING:	TOTAL LENGTH: ~16.3 ft
OBSERVED BY: Maura MacLeod	TOTAL WIDTH:	~2.6 ft
CHECKED BY: Amy Malsbary	TOTAL DEPTH:	~3.0 ft
EQUIPMENT:	DATUM VERT. / HORZ.:	NAVD 88 / NAD83 NY East Zone
WEATHER: Overcast, 55 F	DATE START / END	10/29/2009

DEPTH FT.	PID (ppm)	ANALYZED SAMPLE ID	SOIL DESCRIPTION
			(0' - 0.3') ASPHALT (0.3'-1') CONCRETE
1.9		WW-TP-02 (2-2.5)	(1'-3') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 3 in., moist, brown, brick, and concrete fragments. (1'-3') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, fine to coarse, ~25% sand, fine to coarse, ~5% fines, non plastic; max. size 3 in., slight naphthalene-like odor, wet, brown, brick, and concrete fragments.
Bottom of test pit at 3.0 feet.			
5			

NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)
ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET



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TEST PIT LOG

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WW-TP-02

GROUND SURFACE ELEVATION (FT):	0	LOCATION:	50 Kent Avenue
NORTHING: 0	EASTING: 0	TOTAL DEPTH:	~16.3 ft
OBSERVED BY: Maura MacLeod		TOTAL LENGTH:	~2.6 ft
CHECKED BY: Amy Malsbary		TOTAL WIDTH:	~3.0 ft
EQUIPMENT: 0		DATUM VERT. / HORZ.:	NAVD 88 / NAD83 NY East Zone
WEATHER: Overcast, 55 F		DATE START / END	10/29/2009

PHOTOGRAPH

Photo 1: Facing Southwest



Soil Sample
WW-TP-02 (2-2.5)

Metal fragment



Photo 2: Facing East

NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

IN. = INCHES

FT. = FEET



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TEST PIT LOG

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WW-TP-03

GROUND SURFACE ELEVATION (FT):	LOCATION:	50 Kent Avenue
NORTHING:	TOTAL LENGTH:	~20.1 ft
OBSERVED BY: <u>Maura MacLeod</u>	TOTAL WIDTH:	~2.8 ft
CHECKED BY: <u>Amy Malsbary</u>	TOTAL DEPTH:	~4.0 ft
EQUIPMENT:	DATUM VERT. / HORZ.:	NAVD 88 / NAD83 NY East Zone
WEATHER: <u>Overcast, 55 F</u>	DATE START / END	10/29/2009

DEPTH FT.	PID (ppm)	ANALYZED SAMPLE ID	SOIL DESCRIPTION
			(0' - 0.3') ASPHALT (0.3'-1') CONCRETE
			(1'-3.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~35% gravel, fine to coarse, ~5% fines, non plastic; max. size 3 in., slight to moderate naphthalene-like odor, dry, brown, wood, brick, and concrete fragments.
36.7		WW-TP-03 (3.5-4)	(3.5'-4') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~35% gravel, fine to coarse, ~5% fines, non plastic; max. size 3 in., moderate naphthalene-like odor, wet, brown, wood, brick, and concrete fragments, sheen on water surface.
5			Bottom of test pit at 4.0 feet.

NOTES:

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ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET



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TEST PIT LOG

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WW-TP-03

GROUND SURFACE ELEVATION (FT):	0	LOCATION:	50 Kent Avenue
NORTHING: 0	EASTING: 0	TOTAL DEPTH:	~20.1 ft
OBSERVED BY: Maura MacLeod		TOTAL LENGTH:	~2.8 ft
CHECKED BY: Amy Malsbary		TOTAL WIDTH:	~4.0 ft
EQUIPMENT: 0		DATUM VERT. / HORZ.:	NAVD 88 / NAD83 NY East Zone
WEATHER: Overcast, 55 F		DATE START / END	10/29/2009

PHOTOGRAPH

Photo 1: Facing Southwest



Soil Sample

Metal fragment 3x3 ft pulled out by

Collapsed brick layer, likely former holder wall
~8.3 ft thick



Photo 2: Facing Northwest

NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

IN. = INCHES

FT. = FEET



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TEST PIT LOG

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WW-TP-04

GROUND SURFACE ELEVATION (FT):	_____	LOCATION:	<u>50 Kent Avenue</u>
NORTHING: _____	EASTING: _____	TOTAL LENGTH:	_____
OBSERVED BY: <u>Maura MacLeod</u>		TOTAL WIDTH:	_____
CHECKED BY: <u>Amy Malsbary</u>		TOTAL DEPTH:	<u>~5.0 ft</u>
EQUIPMENT:		DATUM VERT. / HORZ.:	<u>NAVD 88 / NAD83 NY East Zone</u>
WEATHER: <u>Rain, 60 F</u>		DATE START / END	<u>10/26/2009 - 10/27/2009</u>

DEPTH FT.	PID (ppm)	ANALYZED SAMPLE ID	SOIL DESCRIPTION
5	6.1	WW-TP-06 (4.5-5)	(0' - 0.3') ASPHALT (0.3'-0.7') CONCRETE; gravely concrete. (0.7'-3') WIDELY GRADED SAND WITH GRAVEL (SW); ~50% sand, fine to coarse, ~35% gravel, fine to coarse, ~10% cobbles, ~5% fines, non plastic; max. size 6 in., dry, brown, brick and concrete fragments. (3'-4.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; max.size 3 in., dry, brown, brick and concrete fragments. (4.5'-5') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse ~35% sand, fine to coarse, ~5% fines, non plastic; Max. size 3 in., wet, brown, brick and concrete fragments.

Bottom of test pit at 5.0 feet.

NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

IN. = INCHES

FT. = FEET



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TEST PIT LOG

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WW-TP-04

GROUND SURFACE ELEVATION (FT):	<u>0</u>	LOCATION:	<u>50 Kent Avenue</u>
NORTHING:	<u>0</u>	EASTING:	<u>0</u>
OBSERVED BY:	<u>Maura MacLeod</u>	TOTAL DEPTH:	<u> </u>
CHECKED BY:	<u>Amy Malsbary</u>	TOTAL LENGTH:	<u> </u>
EQUIPMENT:	<u>0</u>	TOTAL WIDTH:	<u>~5.0 ft</u>
WEATHER:	<u>Rain, 60 F</u>	DATUM VERT. / HORZ.:	<u>NAVD 88 / NAD83 NY East Zone</u>
		DATE START / END	<u>10/26/2009 - 10/27/2009</u>

PHOTOGRAPH

Photo 1: Facing Southeast



Soil Sample

Brick holder wall
~1.7 ft thick

NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

IN. = INCHES

FT. = FEET



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TEST PIT LOG

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WW-TP-05

GROUND SURFACE ELEVATION (FT):	LOCATION:	50 Kent Avenue
NORTHING:	EASTING:	TOTAL LENGTH: ~17.3 ft
OBSERVED BY: Maura MacLeod	TOTAL WIDTH:	~3.1 ft
CHECKED BY: Amy Malsbary	TOTAL DEPTH:	~6.5 ft
EQUIPMENT:	DATUM VERT. / HORZ.:	NAVD 88 / NAD83 NY East Zone
WEATHER: Rain, 55 F	DATE START / END	10/27/2009 - 10/28/2009

DEPTH FT.	PID (ppm)	ANALYZED SAMPLE ID	SOIL DESCRIPTION
			(0' - 0.3') ASPHALT (0.3'-1') CONCRETE; gravely concrete.
			(1'-6') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; dry, brown, brick and concrete fragments.
5			
	188	WW-TP-05 (6-6.5)	(6'-6.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, wet, brown, brick and concrete fragments.
			Bottom of test pit at 6.5 feet.

NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

IN. = INCHES

FT. = FEET



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TEST PIT LOG

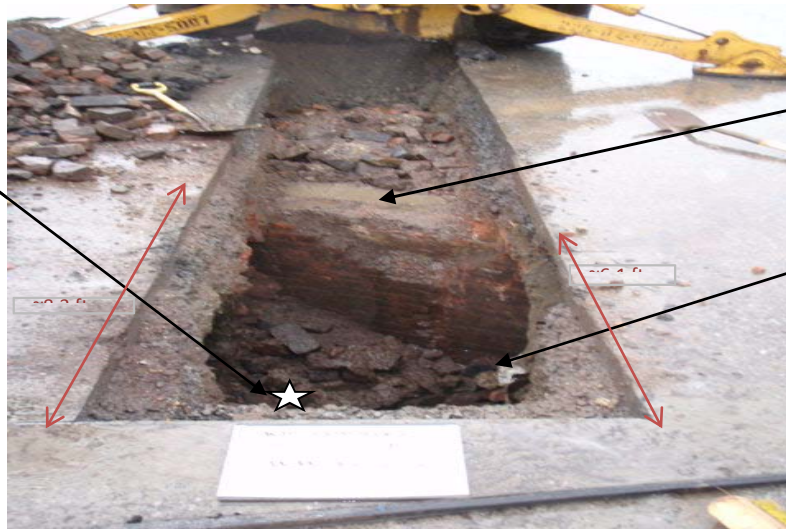
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WW-TP-05

GROUND SURFACE ELEVATION (FT):	0	LOCATION:	50 Kent Avenue
NORTHING:	0	EASTING:	0
OBSERVED BY:	Maura MacLeod	TOTAL DEPTH:	~17.3 ft
CHECKED BY:	Amy Malsbary	TOTAL LENGTH:	~3.1 ft
EQUIPMENT:	0	TOTAL WIDTH:	~6.5 ft
WEATHER:	Rain, 55 F	DATUM VERT. / HORZ.:	NAVD 88 / NAD83 NY East Zone
		DATE START / END	10/27/2009 - 10/28/2009

PHOTOGRAPH

Photo 1: Facing Northeast



NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)
ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET



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TEST PIT LOG

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WW-TP-06

GROUND SURFACE ELEVATION (FT):

NORTHING:

EASTING:

OBSERVED BY: Maura MacLeod

CHECKED BY: Amy Malsbary

EQUIPMENT:

WEATHER: Partly sunny, 50 F

LOCATION:

50 Kent Avenue

TOTAL LENGTH:

~14.8 ft

TOTAL WIDTH:

~3.5 ft

TOTAL DEPTH:

~6.5 ft

DATUM VERT. / HORZ.:

NAVD 88 / NAD83 NY East Zone

DATE START / END

10/26/2010

DEPTH FT.	PID (ppm)	ANALYZED SAMPLE ID	SOIL DESCRIPTION
			(0' - 0.3') ASPHALT (0.3'-1') CONCRETE; gravely concrete.
			(1'- 3') WIDELY GRADED SAND WITH GRAVEL (SW); ~50% sand, fine to coarse, ~30% gravel, fine to coarse, ~25% cobbles, ~5% fines, non plastic; max. size 6 in., dry, brown, brick and concrete fragments.
			(3'-5.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~65% sand, fine to coarse, ~30% gravel, fine to coarse, ~5% fines, non plastic; max.size 3 in., dry, brown, brick and concrete fragments.
5			
	0.2	WW-TP-06 (6-6.5)	(5.5'-6.5') WIDELY GRADED GRAVEL WITH SAND (GW); ~60% gravel, fine to coarse ~35% sand, fine to coarse, ~5% fines, non plastic; Max. size 3 in., moist, grayish-white, ash, brick and concrete fragments.

Bottom of test pit at 6.5 feet.

NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

IN. = INCHES

FT. = FEET



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TEST PIT LOG

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WW-TP-06

GROUND SURFACE ELEVATION (FT):		LOCATION:	<u>50 Kent Avenue</u>
NORTHING:		TOTAL DEPTH:	<u>~14.8 ft</u>
EASTING:		TOTAL LENGTH:	<u>~3.5 ft</u>
OBSERVED BY:	<u>Maura MacLeod</u>	TOTAL WIDTH:	<u>~6.5 ft</u>
CHECKED BY:	<u>Amy Malsbary</u>	DATUM VERT. / HORZ.:	<u>NAVD 88 / NAD83 NY East Zone</u>
EQUIPMENT:		DATE START / END	<u>10/26/2009</u>
WEATHER:	<u>Partly sunny, 50 F</u>		

PHOTOGRAPH

Photo 1: Facing Southeast



NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

IN. = INCHES

FT. = FEET