nationalgrid

Donald Campbell
Project Manager

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.

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1.2 Subsurface Soils

1.2.1 Soil Borings

Fifty-six subsurface borings (WW-SB-01through 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 vibracore 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

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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.

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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-41both 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.

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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

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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

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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,

Donald Campbell
Project Manager

Attachments

c: B. Callaghan (NYSDOH)
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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	

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								
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-19 (40-50)	Evaluate groundwater quality above the suspected confining clay layer		X		X	X	X	X				X
WW-SB-20	35 Kent Avenue, within the gas holder footprint	**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	

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								
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)																					
Benz[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**
Dibenz[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	160 U	0.32 U	0.34 U	3.1 U	16 UJ
Butyl benzyl phthalate	NE	NE	0.3 U	150 U	0.31 UJ	61 U	61 U	33 U	0.3 U	**0.016 J**	140 U	0.29 U	0.65 U	350 U	0.32 U	6.6 U	160 U	0.32 U	0.34 U	3.1 U	16 UJ
Carbazole	NE	NE	0.3 U	150 U	0.31 UJ	61 U	61 U	33 U	0.3 U	**0.13 J**	140 U	0.29 U	**0.45 J**	350 U	0.32 U	**0.39 J**	160 U	0.32 U	0.34 U	**0.26 J**	16 UJ
Dibenzofuran	7	350	0.3 U	**16 J**	0.31 UJ	**4.4 J**	**6.6 J**	**4.2 J**	0.3 U	**0.069 J**	**26 J**	0.29 U	**0.18 J**	**27 J**	0.32 U	**1.2 J**	**14 J**	0.32 U	0.34 U	**1.8 J**	**4.5 J**
Dimethylphenol, 2,4-	NE	NE	0.3 U	150 U	0.31 UJ	61 U	61 U	33 U	0.3 U	0.27 U	140 U	0.29 U	0.65 U	350 U	0.32 U	6.6 U	160 U	0.32 U	0.34 U	3.1 U	16 UJ
Di-n-octyl phthalate	NE	NE	0.3 U	150 U	0.31 UJ	61 U	61 U	33 U	0.3 U	0.27 U	140 U	0.29 U	0.65 U	350 U	0.32 U	6.6 U	160 U	0.32 U	0.34 U	3.1 U	16 UJ
Methylphenol, 4-	0.33	500	0.3 U	150 U	0.31 UJ	61 U	61 U	33 U	0.3 U	**0.021 J**	140 U	0.29 U	0.65 U	350 U	0.32 U	6.6 U	160 U	0.32 U	0.34 U	3.1 U	16 UJ
Methylphenol,2-	0.33	500	0.3 U	150 U	0.31 UJ	61 U	61 U	33 U	0.3 U	0.27 U	140 U	0.29 U	0.65 U	350 U	0.32 U	6.6 U	160 U	0.32 U	0.34 U	3.1 U	16 UJ
Pentachlorophenol	0.8	6.7	1.9 U	950 U	2 UJ	380 U	380 U	210 U	1.9 U	1.7 UJ	890 UJ	1.8 UJ	4.1 U	2200 U	2 U	41 U	980 U	2 U	2.1 U	39 UJ	100 UJ
Phenol	0.33	500	0.3 U	150 U	0.31 UJ	61 U	61 U	33 U	0.3 U	0.27 U	140 U	0.29 U	0.65 U	350 U	0.32 U	6.6 U	160 U	0.32 U	0.34 U	3.1 U	16 UJ
Total Other SVOCs	NE	NE	**0.15**	**16**	ND	**4.4**	**6.6**	**4.2**	**0.031**	**0.446**	**26**	**0.089**	**0.84**	**27**	ND	**1.59**	**14**	ND	ND	**2.06**	**4.5**
Total SVOCs	NE	NE	**2.381**	**4371**	**0.235**	**1063**	**1576.6**	**1063.8**	**1.179**	**27.616**	**6173**	**2.181**	**71.41**	**6443**	**2.086**	**252.19**	**3866**	**0.899**	**0.541**	**165.96**	**429.7**
PCBs (mg/kg)																					
Aroclor 1254	NE	NE	0.019 U	NA	NA	0.019 U	0.019 U	NA	NA	**0.098 J**	NA	NA	0.021 U	NA	NA	0.021 UJ	NA	NA	NA	0.39 U	NA
Aroclor 1260	NE	NE	**0.012 J**	NA	NA	0.019 U	0.019 U	NA	NA	**0.056 J**	NA	NA	0.021 U	NA	NA	0.021 UJ	NA	NA	NA	0.39 U	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	**0.012**	NA	NA	ND	ND	NA	NA	**0.154**	NA	NA	ND	NA	NA	ND	NA	NA	NA	ND	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-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:	UNRESTRICTED	COMMERCIAL	WWMW-11	WWMW-11	WWMW-11	WWMW-12	WWMW-12	WWMW-13	WWMW-13	Duplicate of: WWMW-13	WWMW-14	Duplicate of: WWMW-14	WWMW-14	WWMW-14	WWMW-15	Duplicate of: WWMW-15	WWMW-15	WWMW-16	WWMW-16	Duplicate of: WWMW-16
Sample Depth (ft):	USE SCO	USE SCO	(3-5)	(11-14)	(39-40)	(0.5-3)	(9-10)	(2-5)	(5-10)	(5-10)	(3-5)	(3-5)	(36-37)	(55-57)	(1-4)	(1-4)	(12-13)	(2-3.5)	(20-21)	(20-21)
Sample Date:			8/21/2009	8/25/2009	8/25/2009	8/28/2009	8/28/2009	9/15/2009	9/15/2009	9/15/2009	9/1/2009	9/1/2009	9/2/2009	9/2/2009	9/24/2009	9/24/2009	9/28/2009	7/27/2009	8/10/2009	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	0.0059 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)																				
Benz[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**	**8.53**	**306**	**24.6**	1500	**490**	**110.6**	**3730**	**10.15**	**94.8**	**8.19**	**95.3**	**3.88**	**21.7**	**139.4**	ND
Total PAHs	NE	NE	ND	**59.61**	**1340.2**	**9.201**	**13.404**	**17.52**	**6392**	**42.02**	**33080**	**8802**	**259**	**83800**	**23.04**	**2362.8**	**14.403**	**1242.3**	**44.48**	**36.43**	**2796.4**	**23.51**
Other SVOCs (mg/kg)																						
Bis(2-ethylhexyl)phthalate	NE	NE	0.32 U	**0.44 J**	32 U	**0.73**	0.31 U	1.2 U	190 U	0.57 UJ	1400 U	330 U	3.3 U	3000 U	**1.4**	73 U	**0.23 J**	62 U	1.5 U	**1.3**	64 U	**0.36 J**
Butyl benzyl phthalate	NE	NE	0.32 U	1.3 U	32 U	0.61 U	0.31 U	1.2 U	190 U	0.57 U	1400 U	330 U	3.3 U	3000 U	0.29 U	73 U	0.32 U	62 U	1.5 U	0.31 U	64 U	1.7 U
Carbazole	NE	NE	0.32 U	**0.26 J**	32 U	0.61 U	0.31 U	1.2 U	190 U	**0.14 J**	1400 U	330 U	**2.7 J**	3000 U	**0.15 J**	73 U	**0.097 J**	62 U	1.5 U	**0.19 J**	64 U	1.7 U
Dibenzofuran	7	350	0.32 U	1.3 U	32 U	0.61 U	0.31 U	1.2 U	**24 J**	**0.14 J**	**120 J**	**41 J**	**1.8 J**	**370 J**	**0.14 J**	**9.6 J**	**0.068 J**	**4.8 J**	1.5 U	**0.092 J**	**15 J**	1.7 U
Dimethylphenol, 2,4-	NE	NE	0.32 U	1.3 U	32 U	0.61 U	0.31 U	1.2 U	190 U	0.57 U	1400 U	330 U	3.3 U	3000 U	0.29 U	73 U	0.32 U	62 U	1.5 U	0.31 U	64 U	**0.75 J**
Di-n-octyl phthalate	NE	NE	0.32 U	1.3 U	32 U	0.61 U	0.31 U	1.2 U	190 U	0.57 UJ	1400 U	330 U	3.3 U	3000 U	0.29 U	73 U	0.32 U	62 U	1.5 U	0.31 UJ	64 U	1.7 U
Methylphenol, 4-	0.33	500	0.32 U	1.3 U	32 U	0.61 U	0.31 U	1.2 U	190 U	0.57 U	1400 U	330 U	3.3 U	3000 U	0.29 U	73 U	0.32 U	62 U	1.5 U	**0.038 J**	64 U	**0.52 J**
Methylphenol,2-	0.33	500	0.32 U	1.3 U	32 U	0.61 U	0.31 U	1.2 U	190 U	0.57 U	1400 U	330 U	3.3 U	3000 U	0.29 U	73 U	0.32 U	62 U	1.5 U	0.31 U	64 U	**0.55 J**
Pentachlorophenol	0.8	6.7	2 U	8 U	200 U	3.9 U	1.9 U	7.5 U	1200 U	1.4 U	3500 U	810 U	21 U	19000 U	1.8 U	460 U	2 U	390 U	9.2 U	**2.3**	400 U	10 U
Phenol	0.33	500	0.32 U	1.3 U	32 U	0.61 U	0.31 U	1.2 U	190 U	0.57 U	1400 U	330 U	3.3 U	3000 U	0.29 U	73 U	0.32 U	62 U	1.5 U	0.31 U	64 U	1.7 U
Total Other SVOCs	NE	NE	ND	**0.7**	ND	**0.73**	ND	ND	**24**	**0.28**	**120**	**41**	**4.5**	**370**	**1.69**	**9.6**	**0.395**	**4.8**	ND	**3.92**	**15**	**2.18**
Total SVOCs	NE	NE	ND	**60.31**	**1340.2**	**9.931**	**13.404**	**17.52**	**6416**	**42.3**	**33200**	**8843**	**263.5**	**84170**	**24.73**	**2372.4**	**14.798**	**1247.1**	**44.48**	**40.35**	**2811.4**	**25.69**
PCBs (mg/kg)																						
Aroclor 1254	NE	NE	NA	0.02 U	NA	NA	0.019 U	NA	NA	0.018 U	NA	NA	0.021 U	NA	0.018 UJ	NA	0.04 U	NA	NA	0.019 U	NA	NA
Aroclor 1260	NE	NE	NA	0.02 U	NA	NA	**0.016 J**	NA	NA	0.018 UJ	NA	NA	0.021 U	NA	0.018 UJ	NA	0.04 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	**0.54**	NA	NA	NA	NA	NA
Total PCBs	0.1	1	NA	ND	NA	NA	**0.016**	NA	NA	ND	NA	NA	ND	NA	ND	NA	**0.54**	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-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**	**94.8**	**1900 J**	**381 J**	**95.9**	**651**	**291**	**720**	**59.4 J**	**33.1**	**33.4**	**90.6 J**	**36.1**	**127**
Other (mg/kg)																						
Free Cyanide	27	27	0.239 U	0.235 U	0.234 U	0.228 U	0.228 U	0.219 U	**1.56**	0.209 UJ	**0.334 J**	**0.12 J**	0.245 U	**0.277**	0.217 U	0.27 U	0.233 U	0.229 U	0.271 U	**0.359**	0.238 U	0.246 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-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)																					
Benz[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	**0.14 J**	0.34 U	0.32 U	**2.3 J**	**13 J**	0.32 U	**1.5 J**	**2.5 J**	66 U	**1.8 J**	**3.1 J**	**0.4 J**	**1.9 J**	0.34 U	16 U	0.74 U	0.31 U	0.33 U	0.32 U
Dibenzofuran	7	350	**0.075 J**	0.34 U	0.32 U	**2.2 J**	**43 J**	0.32 U	**7.4 J**	**9.6 J**	**9.9 J**	**2.8 J**	**7.9 J**	**1.4 J**	**6.9**	0.34 U	**2.3 J**	**0.092 J**	0.31 U	0.33 U	0.32 U
Dimethylphenol, 2,4-	NE	NE	0.62 U	0.34 U	0.32 U	16 U	150 U	0.32 U	16 U	16 U	66 UJ	3.3 UJ	20 UJ	5.6 U	6.7 U	0.34 U	16 U	**0.051 J**	0.31 U	0.33 U	0.32 U
Di-n-octyl phthalate	NE	NE	0.62 U	0.34 U	0.32 U	16 UJ	150 U	0.32 U	16 U	16 U	66 U	3.3 U	20 UJ	5.6 U	6.7 U	**0.27 J**	16 U	0.74 U	0.31 U	0.33 U	0.32 U
Methylphenol, 4-	0.33	500	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	**1.2 J**	0.34 U	16 U	**0.055 J**	0.31 U	0.33 U	0.32 U
Methylphenol,2-	0.33	500	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	**0.42 J**	0.34 U	16 U	**0.046 J**	0.31 U	0.33 U	0.32 U
Pentachlorophenol	0.8	6.7	3.9 U	2.2 U	2 U	99 U	970 UJ	2 UJ	100 U	100 U	420 U	21 U	130 U	35 U	42 U	2.1 U	100 U	4.7 U	1.9 U	2.1 U	2 U
Phenol	0.33	500	0.62 U	**0.1 J**	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
Total Other SVOCs	NE	NE	**0.288**	**0.1**	**0.042**	**4.5**	**56**	ND	**8.9**	**12.1**	**9.9**	**5.35**	**11**	**1.8**	**10.42**	**0.27**	**2.3**	**0.244**	ND	ND	ND
Total SVOCs	NE	NE	**41.416**	**1.035**	**0.042**	**909.1**	**4780**	**0.869**	**729.8**	**1120.4**	**2194.9**	**461.45**	**1062.1**	**88.7**	**332.72**	**0.427**	**430.3**	**17.474**	ND	**0.691**	**0.855**
PCBs (mg/kg)																					
Aroclor 1254	NE	NE	0.019 U	NA	NA	0.02 U	NA	NA	0.04 U	0.04 U	NA	0.44 U	NA	0.037 U	NA	0.021 U	NA	NA	0.02 U	NA	NA
Aroclor 1260	NE	NE	0.019 U	NA	NA	0.02 U	NA	NA	0.04 U	0.04 U	NA	0.44 U	NA	0.037 U	NA	0.021 U	NA	NA	0.02 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	NA
Total PCBs	0.1	1	ND	NA	NA	ND	NA	NA	ND	ND	NA	ND	NA	ND	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	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
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
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 U	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)																					
Benz[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
Dibenz[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

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
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
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
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:	NYS	WWSB-03	WWSB-05	WWSB-07	WWSB-19	WWSB-19	Duplicate of: WWSB-19	WWSB-19	WWSB-21	Duplicate of: WWSB-21	WWSB-21	WWSB-21	WWSB-22	WWSB-22	WWSB-22	WWMW-01	WWMW-02	WWMW-03
Screen Interval (feet):		(5-10)	(3-8)	(2.5-7.5)	(5-15)	(25-35)	(25-35)	(40-50)	(4-14)	(4-14)	(15-25)	(40-50)	(6-16)	(35-45)	(55-65)	(13-23)	(7.4-17.4)	(4-14)
Sample Date:	AWQS	7/14/2009	7/15/2009	7/15/2009	7/28/2009	7/29/2009	7/29/2009	7/29/2009	7/8/2009	7/8/2009	7/22/2009	7/23/2009	7/8/2009	7/27/2009	7/27/2009	11/4/2009	11/4/2009	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:	NYS	WWSB-03	WWSB-05	WWSB-07	WWSB-19	WWSB-19	Duplicate of: WWSB-19	WWSB-19	WWSB-21	Duplicate of: WWSB-21	WWSB-21	WWSB-21	WWSB-22	WWSB-22	WWSB-22	WWMW-01	WWMW-02	WWMW-03
Screen Interval (feet):	AWQS	(5-10)	(3-8)	(2.5-7.5)	(5-15)	(25-35)	(25-35)	(40-50)	(4-14)	(4-14)	(15-25)	(40-50)	(6-16)	(35-45)	(55-65)	(13-23)	(7.4-17.4)	(4-14)
Sample Date:		7/14/2009	7/15/2009	7/15/2009	7/28/2009	7/29/2009	7/29/2009	7/29/2009	7/8/2009	7/8/2009	7/22/2009	7/23/2009	7/8/2009	7/27/2009	7/27/2009	11/4/2009	11/4/2009	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:		WWMW-04	Duplicate of: WWMW-04	WWMW-05	WWMW-06	WWMW-07	WWMW-08	WWMW-10	WWMW-11	WWMW-12	WWMW-13	WWMW-14	WWMW-15	WWMW-16	WWMW-17
Screen Interval (feet):	NYS	(10-20)	(10-20)	(4-14)	(0.3-10.3)	(0.3-10.3)	(0.3-10.3)	(4-14)	(4-14)	(5-15)	(4-14)	(4-14)	(4-14)	(4-14)	(4-14)
Sample Date:	AWQS	11/4/2009	11/4/2009	11/5/2009	11/4/2009	11/5/2009	11/5/2009	11/5/2009	11/5/2009	11/5/2009	11/6/2009	11/6/2009	11/6/2009	11/4/2009	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

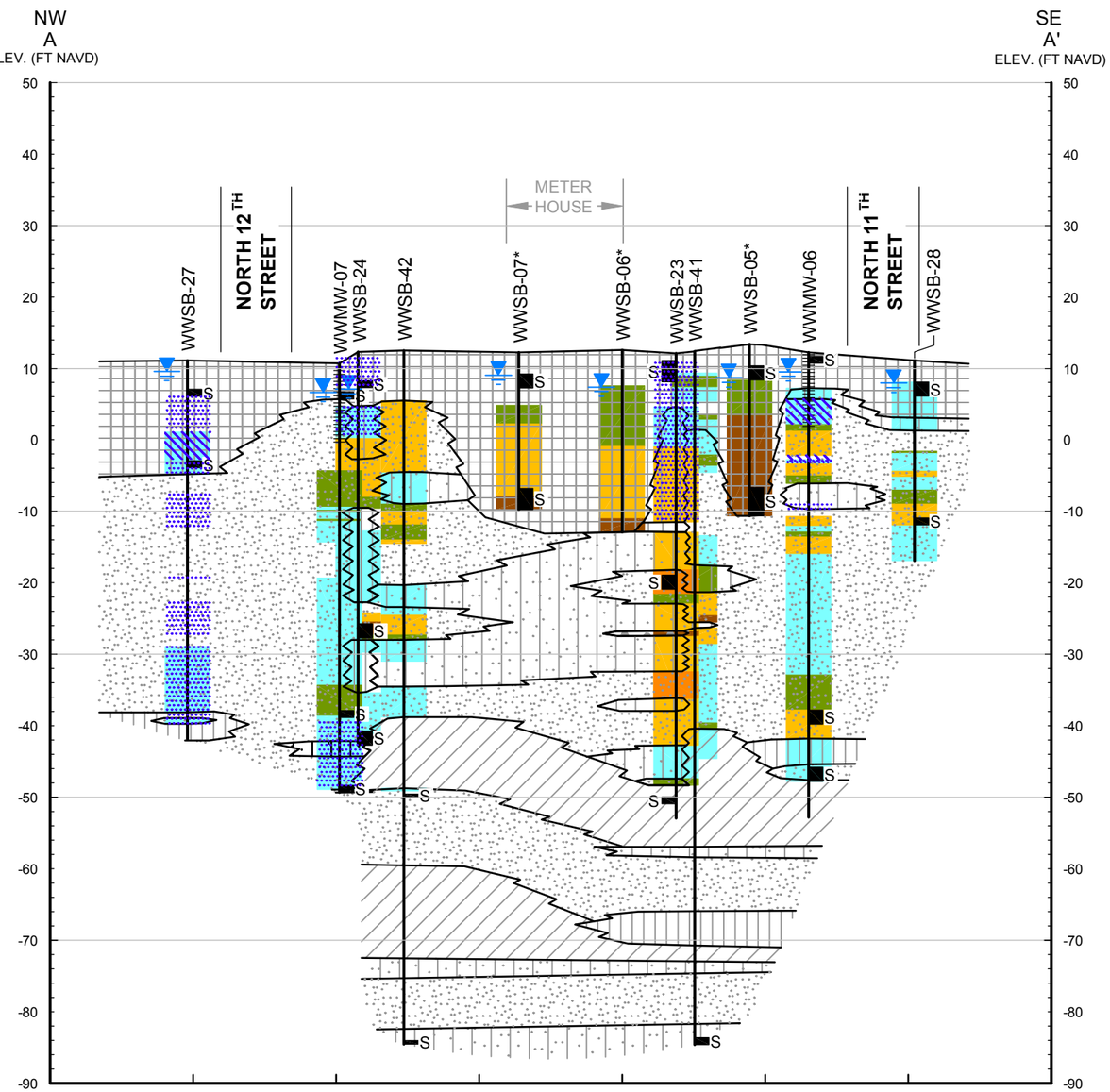
NYS AWQS - New York State Ambient Water Quality Standards and Guidance Values for GA groundwater
* indicates the value is a guidance value and not a standard

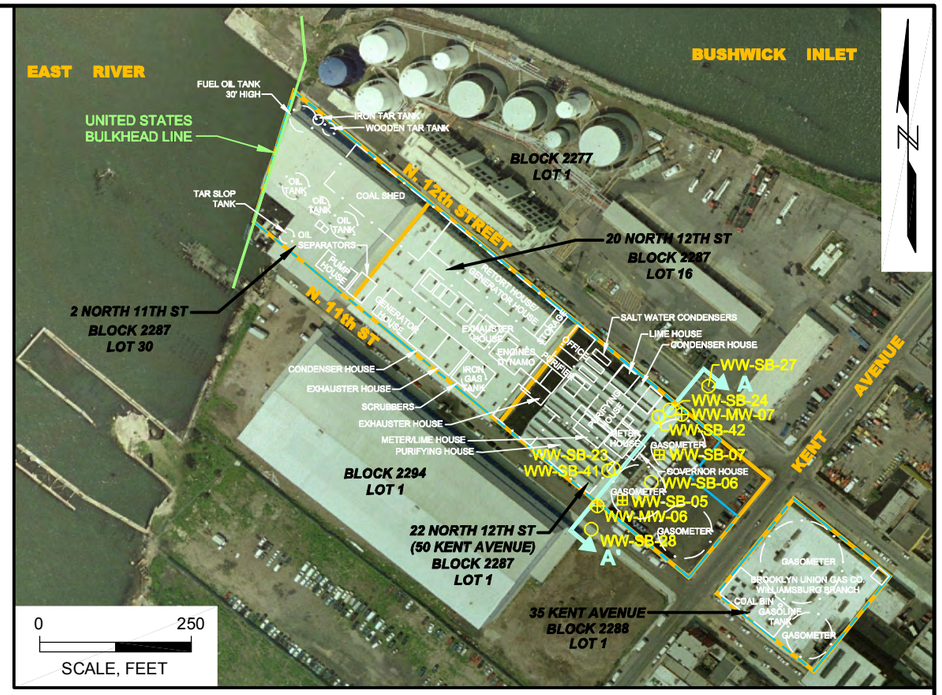
NE - not established
NA - not analyzed

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

CROSS SECTION LOCATION LEGEND

- A — A' : GEOLOGIC CROSS-SECTION LOCATION
- ⊕ WW-MW-06 : REMEDIAL INVESTIGATION (RI) MONITORING WELL LOCATION
- ○ WW-SB-06 : RI SOIL BORING LOCATION
- ⊞ WW-SB-05 : SOIL BORING WITH TEMPORARY GROUNDWATER SAMPLE LOCATION

CROSS SECTION LEGEND

GEOLOGIC UNIT
- FILL
- SAND
- SILT
- SILTY SAND
- CLAY
- GRAVEL

- OBSERVED APPARENT GROUNDWATER TABLE
- CONTACT
- BOUNDARY IS APPROXIMATED
- WWMW-14 : SOIL BORING OR MONITORING WELL IDENTIFICATION
- S : SAMPLE LOCATION
- WELL SCREEN INTERVAL

PHYSICAL OBSERVATIONS
- TAR SATURATED
- TAR STAINING, SHEEN AND TAR/NAPHTHA ODORS
- LENSES WITH TAR SATURATION AND TAR/NAPHTHA ODORS
- BLEBS, GLOBS, LENSES, COATINGS, SHEENS AND TAR/ NAPTHA ODORS
- TAR/NAPHTHALENE-LIKE ODORS
- PETROLEUM SHEEN/ STAINING ODORS
- PETROLEUM ODORS

NOTE:

* INDICATED THE BORING IS LOCATED WITHIN THE FORMER GASOMETER.

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SOURCES:

1. PHOTOGRAPH OBTAINED FROM BLUE SKY INTERNATIONAL LTD. ALL RIGHTS RESERVED. COPYRIGHT 2007.
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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.

20 — 0 VERTICAL SCALE, FEET

0 — 60 — 120 HORIZONTAL SCALE, FEET

VERTICAL EXAGGERATION = 3X

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WILLIAMSBURG WORKS FORMER MGP SITE
BOROUGH OF BROOKLYN, NEW YORK

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GEOLOGIC CROSS SECTION A-A'

Project 093060-1-1108 | August 2010 | Figure 1

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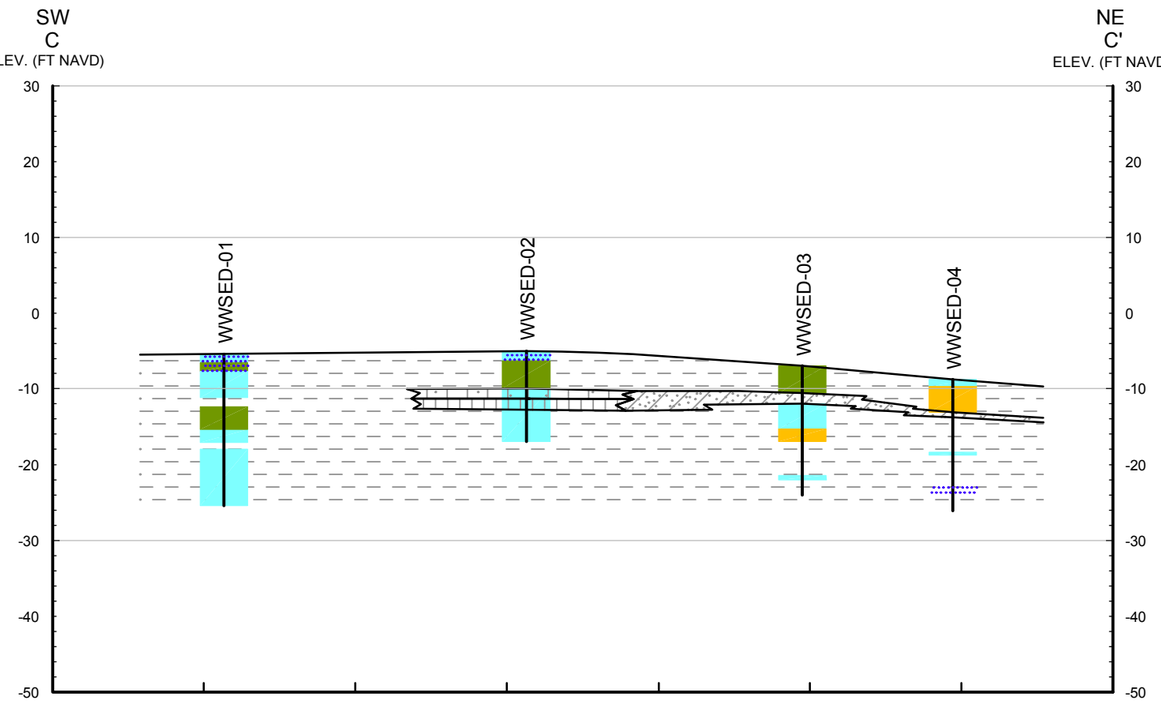

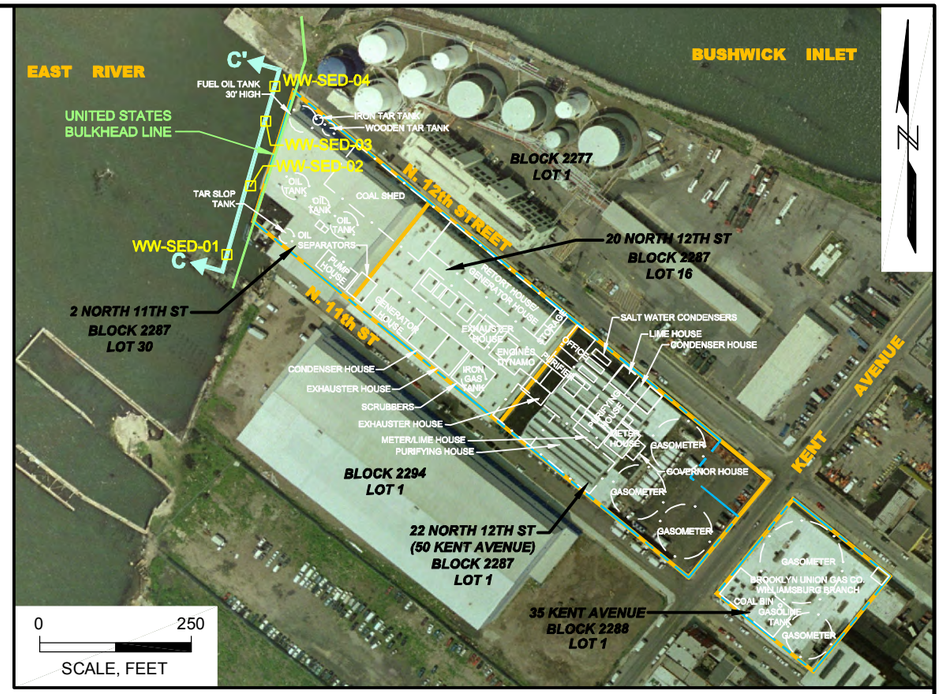

CROSS-SECTION LOCATION

CROSS SECTION LOCATION LEGEND

B — B' GEOLOGIC CROSS-SECTION LOCATION

WW-SED-01 SEDIMENT SAMPLE LOCATION

CROSS SECTION LEGEND

GEOLOGIC UNIT

- ORGANIC SOIL
- CLAYEY SAND
- SILT
- SILTY SAND

WWSED-05

- CONTACT
- BOUNDARY IS APPROXIMATED
- SEDIMENT CORING IDENTIFICATION
- SEDIMENT CORE

PHYSICAL OBSERVATIONS

- TAR SATURATED
- TAR STAINING, SHEEN AND TAR/NAPHTHA ODORS
- LENSES WITH TAR SATURATION AND TAR/NAPHTHA ODORS
- BLEBS, GLOBS, LENSES, COATINGS, SHEENS AND TAR/ NAPTHA ODORS
- TAR/NAPHTHALENE-LIKE ODORS
- PETROLEUM SHEEN/ STAINING ODORS
- PETROLEUM ODORS

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20 — 0 VERTICAL SCALE, FEET

0 — 60 — 120 HORIZONTAL SCALE, FEET

VERTICAL EXAGGERATION = 3X

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WILLIAMSBURG WORKS FORMER MGP SITE
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GEOLOGIC CROSS SECTION C-C'

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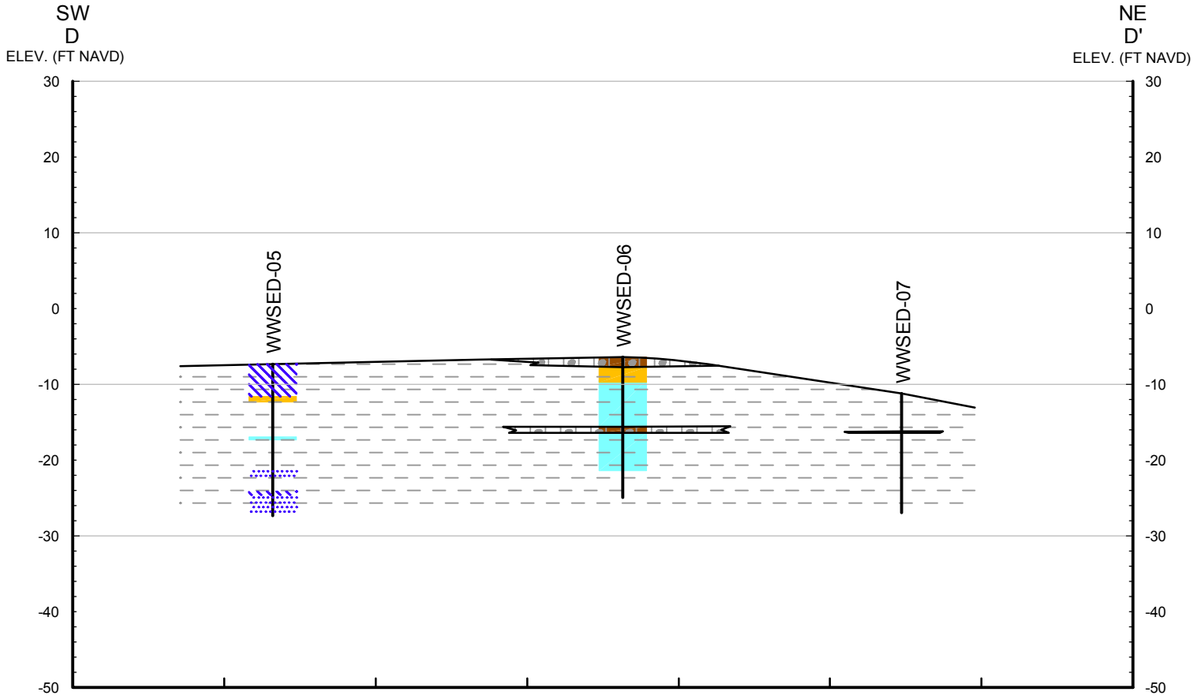

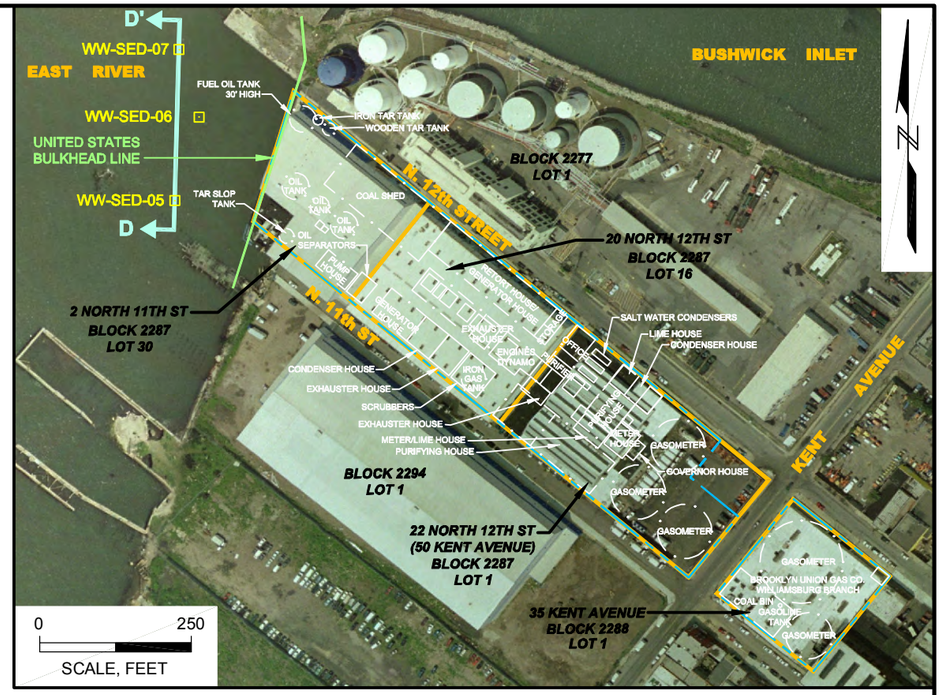

CROSS-SECTION LOCATION

CROSS SECTION LOCATION LEGEND

C — C'

WW-SED-05

GEOLOGIC CROSS-SECTION LOCATION

SEDIMENT SAMPLE LOCATION

CROSS SECTION LEGEND

GEOLOGIC UNIT

- ORGANIC SOIL
- CLAYEY SAND
- SILT
- SILTY SAND
- SILTY GRAVEL

WWSED-01

- CONTACT
- BOUNDARY IS APPROXIMATED
- SEDIMENT CORING IDENTIFICATION
- SEDIMENT CORE

PHYSICAL OBSERVATIONS

- TAR SATURATED
- TAR STAINING, SHEEN AND TAR/NAPHTHA ODORS
- LENSES WITH TAR SATURATION AND TAR/NAPHTHA ODORS
- BLEBS, GLOBS, LENSES, COATINGS, SHEENS AND TAR/ NAPTHA ODORS
- TAR/NAPHTHALENE-LIKE ODORS
- PETROLEUM SHEEN/ STAINING ODORS
- PETROLEUM ODORS

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20 — 0 VERTICAL SCALE, FEET

0 — 60 — 120 HORIZONTAL SCALE, FEET

VERTICAL EXAGGERATION = 3X

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WILLIAMSBURG WORKS FORMER MGP SITE
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GEOLOGIC CROSS SECTION D-D'

Project 093060-1-1108 | August 2010 | Figure 3

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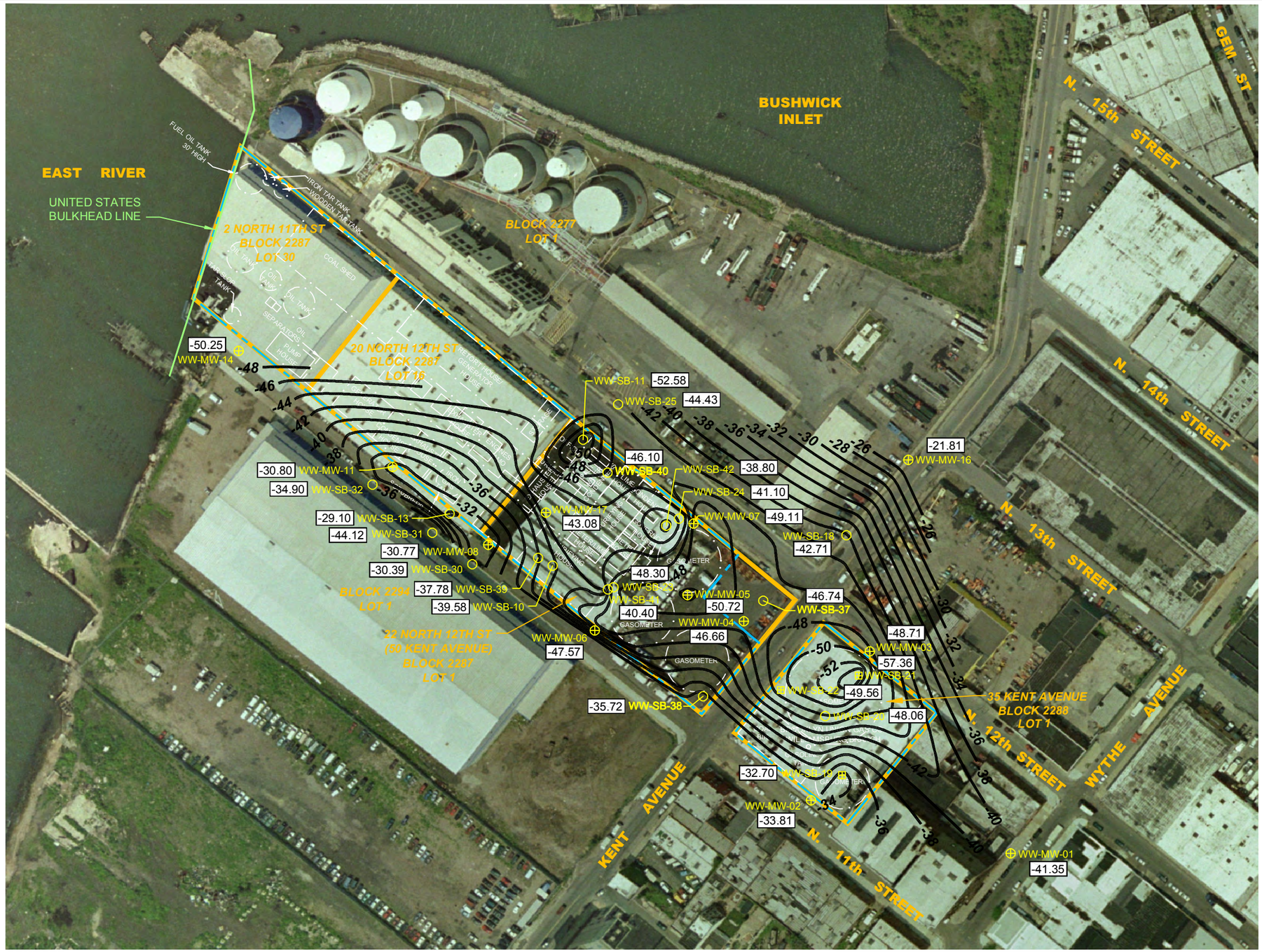

LEGEND

- APPROXIMATE CURRENT PROPERTY BOUNDARY
- APPROXIMATE BOUNDARY OF FORMER MANUFACTURED GAS PLANT (MGP) SITE
- HISTORIC STRUCTURE
- WW-MW-01 — REMEDIAL INVESTIGATION (RI) MONITORING WELL LOCATION
- WW-SB-10 — RI SOIL BORING LOCATION
- WW-SB-19 — SOIL BORING WITH TEMPORARY GROUNDWATER SAMPLE LOCATION
- -41.35 — CLAY ELEVATION (FEET)
- -40 — CLAY CONTOUR (FEET)

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SOURCES:

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0 150 300

SCALE, FEET

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WILLIAMSBURG WORKS FORMER MGP SITE
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CLAY CONTOUR MAP (FEET)

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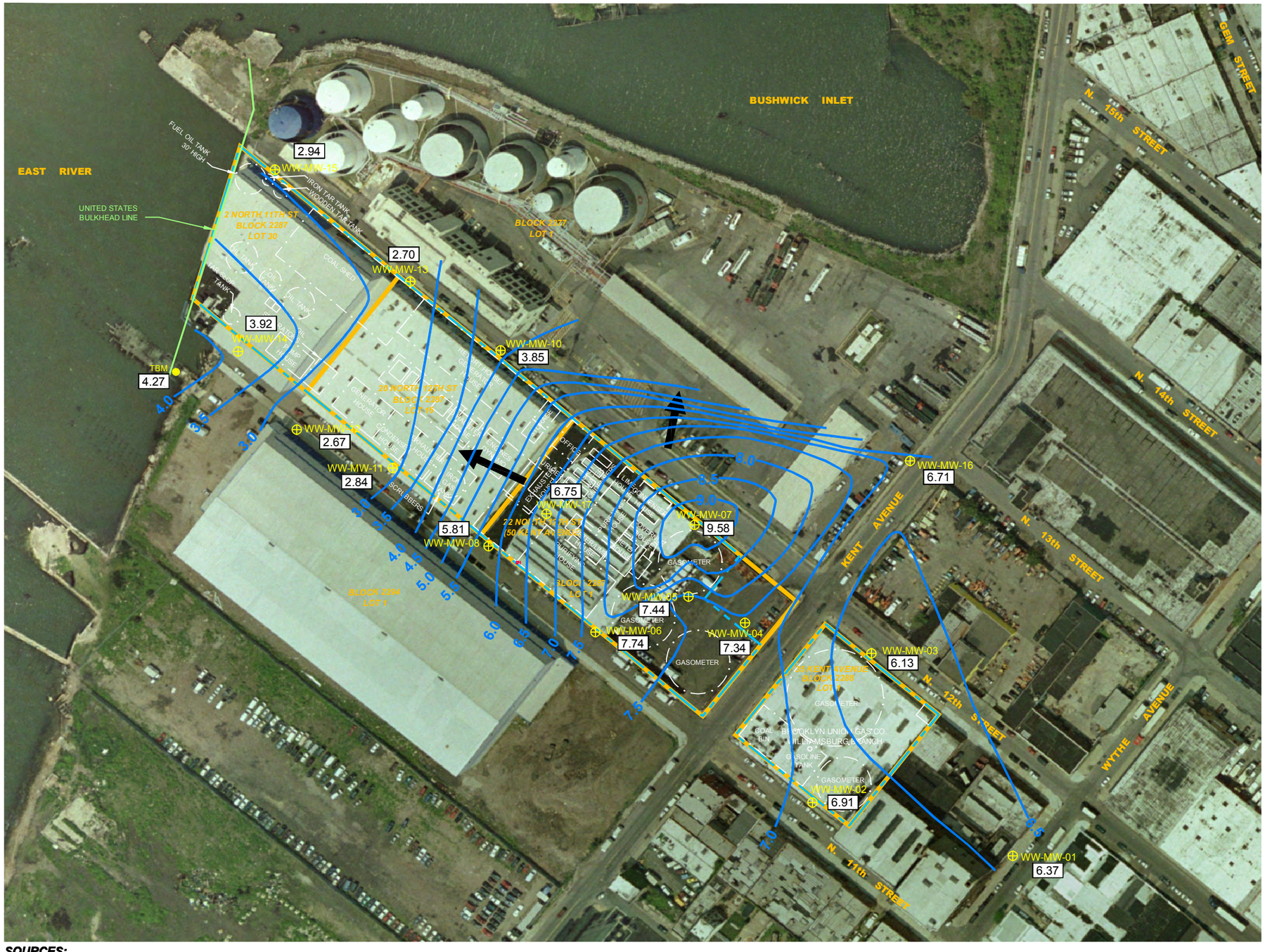

LEGEND

- APPROXIMATE CURRENT PROPERTY BOUNDARY
- APPROXIMATE BOUNDARY OF FORMER MANUFACTURED GAS PLANT (MGP) SITE
- HISTORIC STRUCTURE
- WW-MW-05 — REMEDIAL INVESTIGATION (RI) MONITORING WELL LOCATION
- 7.74 — GROUNDWATER ELEVATION (FEET)
- 6.5 — 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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0 150 300

SCALE, FEET

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WILLIAMSBURG WORKS FORMER MGP SITE
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HIGH TIDE GROUNDWATER CONTOURS (FEET)

August 2010 Figure 5

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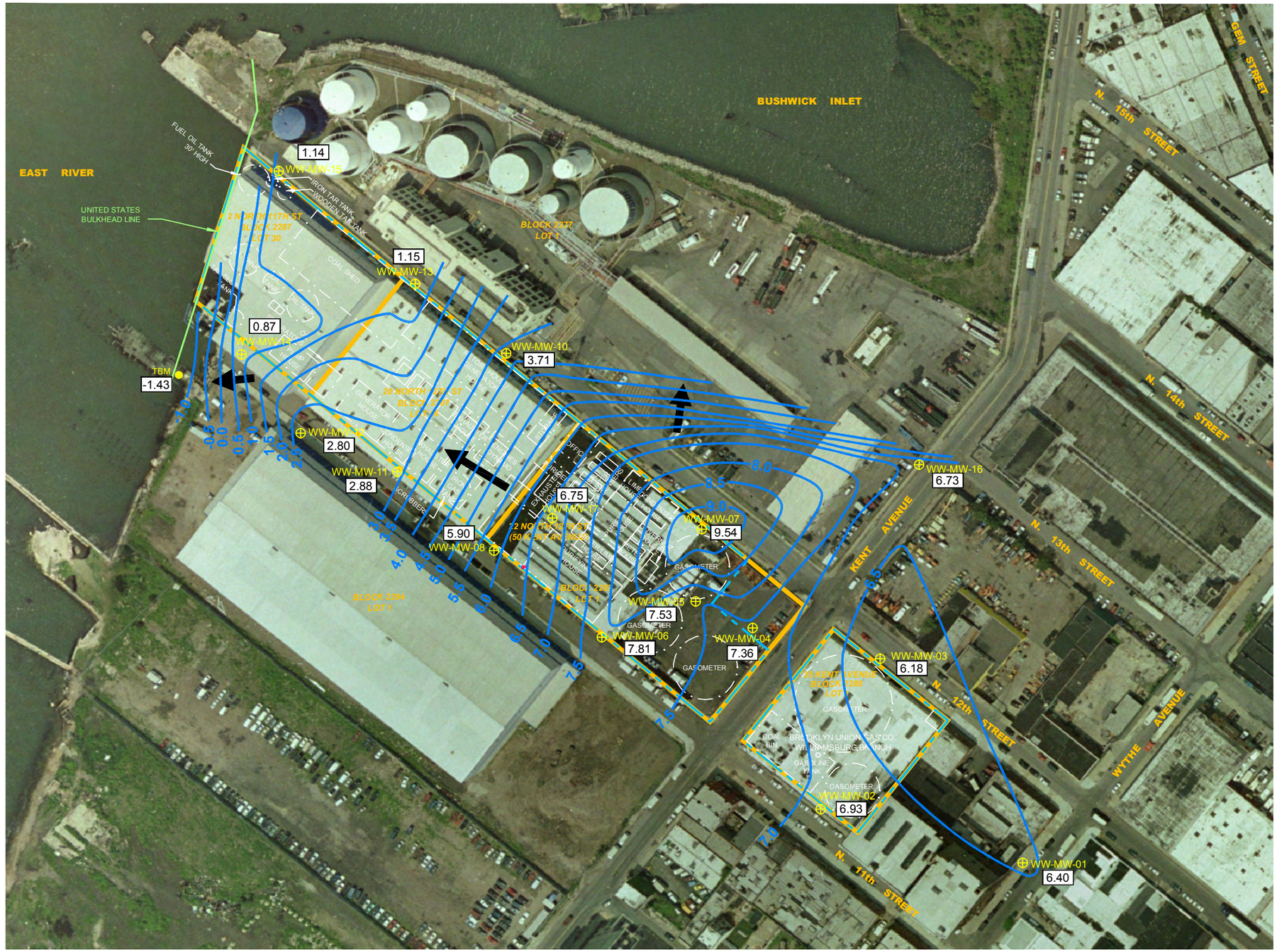

LEGEND

- APPROXIMATE CURRENT PROPERTY BOUNDARY
- APPROXIMATE BOUNDARY OF FORMER MANUFACTURED GAS PLANT (MGP) SITE
- HISTORIC STRUCTURE
- WW-MW-05 — REMEDIAL INVESTIGATION (RI) MONITORING WELL LOCATION
- 7.74 — GROUNDWATER ELEVATION (FEET)
- 6.5 — 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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0 150 300

SCALE, FEET

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WILLIAMSBURG WORKS FORMER MGP SITE
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LOW TIDE GROUNDWATER CONTOURS (FEET)

Project 093060-1-1108 | August 2010 | Figure 6

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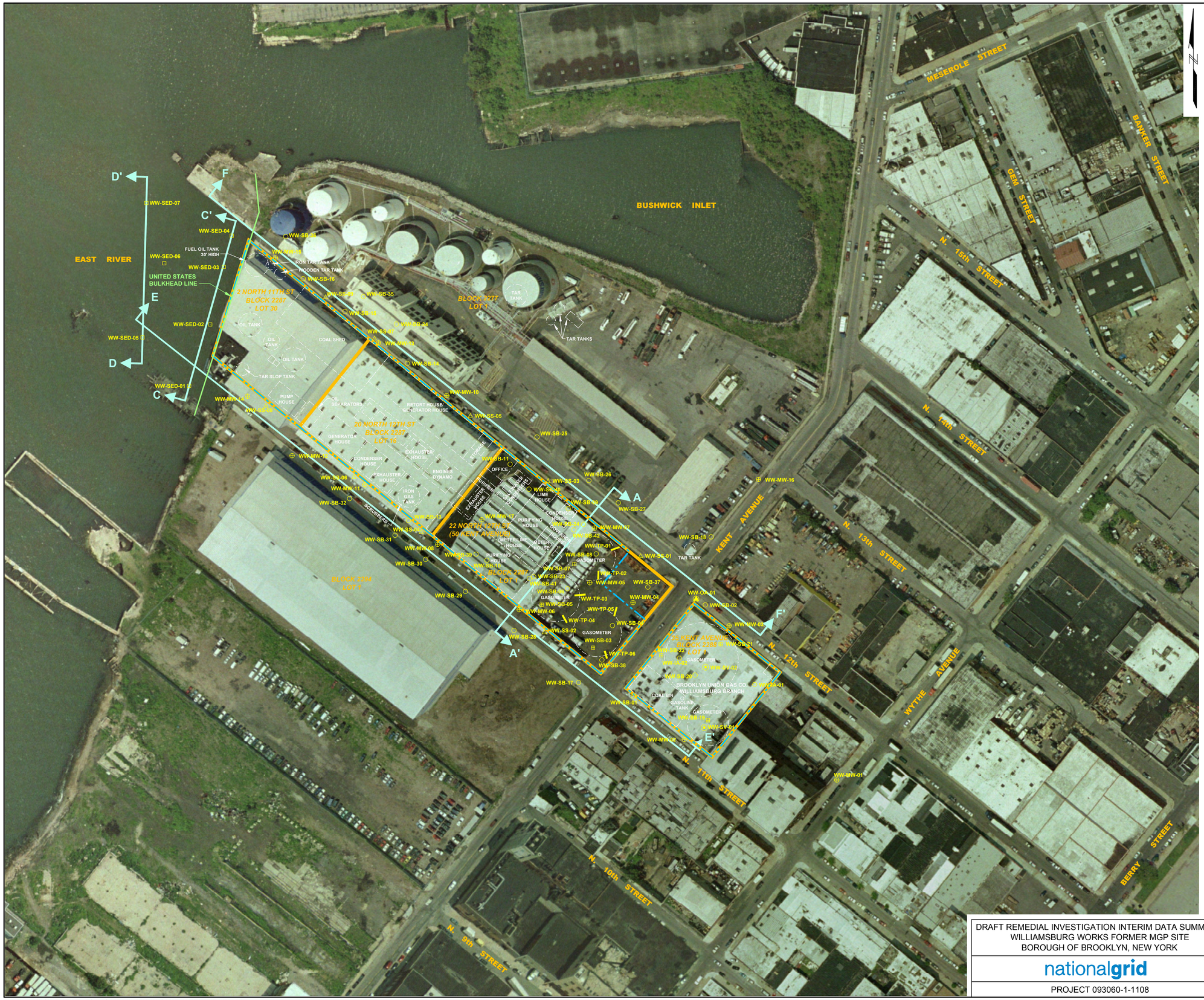

LEGEND

- APPROXIMATE CURRENT PROPERTY BOUNDARY
- APPROXIMATE BOUNDARY OF FORMER MANUFACTURED GAS PLANT (MGP) SITE
- HISTORIC STRUCTURE
- A — A' CROSS-SECTION LOCATION

EXISTING SAMPLES

- WW-MW-05 — REMEDIAL INVESTIGATION (RI) MONITORING WELL LOCATION
- WW-SB-01 — RI SOIL BORING LOCATION
- WW-SB-03 — SOIL BORING WITH TEMPORARY GROUNDWATER SAMPLE LOCATION
- WW-SS-01 — SURFACE SOIL SAMPLE LOCATION
- WW-SV-01 — SOIL VAPOR POINT
- WW-TP-01 — TEST PIT LOCATION
- WW-IA-01 — INDOOR AIR SAMPLE LOCATION
- WW-OA-01 — OUTDOOR AIR SAMPLE LOCATION
- WW-SED-01 — SEDIMENT SAMPLE LOCATION

NOTES:

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

0 80 160
SCALE, FEET

SOURCES:

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3. NEW YORK CITY OPEN ACCESSIBLE SPACE INFORMATION SYSTEM http://www.oasisnyc.net, ACCESSED JANUARY 2008.
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WILLIAMSBURG WORKS FORMER MGP SITE
BOROUGH OF BROOKLYN, NEW YORK

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455 WINDING BROOK DRIVE
SUITE 201
GLASTONBURY, CONNECTICUT 06033

SAMPLE LOCATIONS

August 2010 — Plate 1

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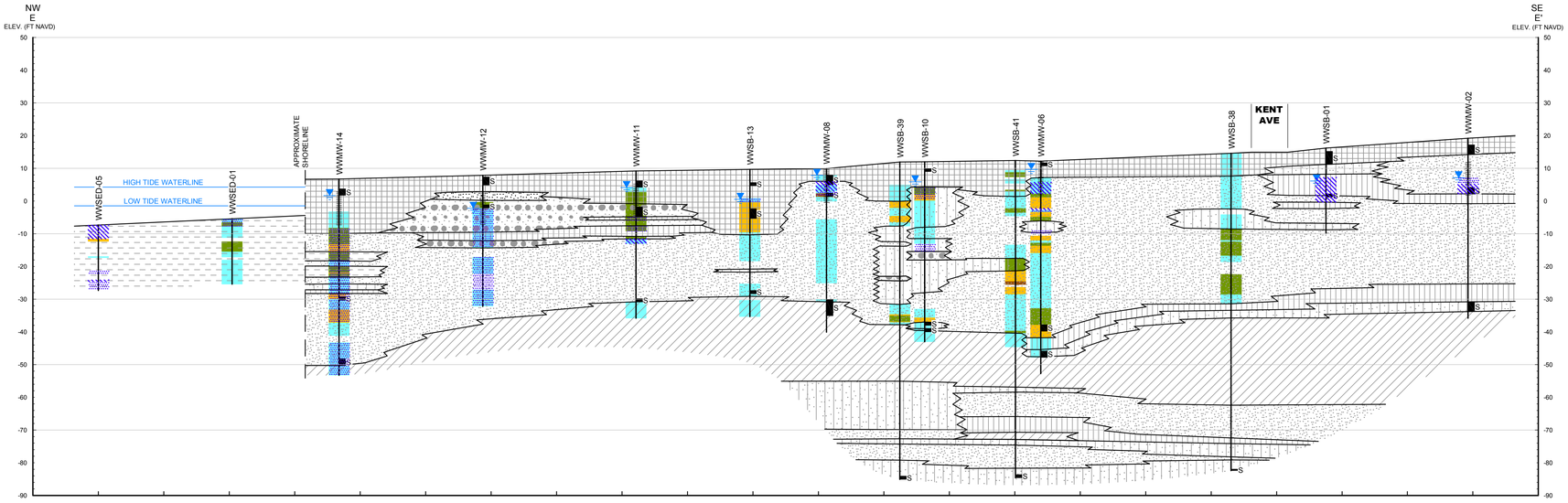
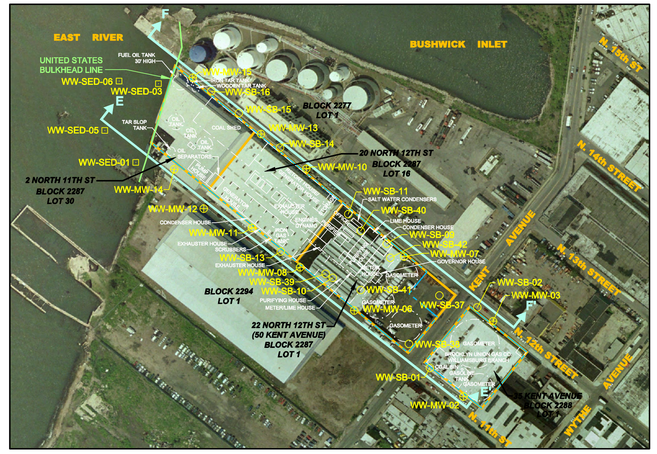




CROSS-SECTION LOCATION

0 200 400

SCALE, FEET

CROSS SECTION LOCATION LEGEND

D D'	GEOLOGIC CROSS-SECTION LOCATION
⊕ WW-MW-05	REMEDIAL INVESTIGATION (RI) MONITORING WELL LOCATION
○ WW-SB-01	RI SOIL BORING LOCATION
□ WW-SED-01	SEDIMENT SAMPLE LOCATION

CROSS SECTION LEGEND

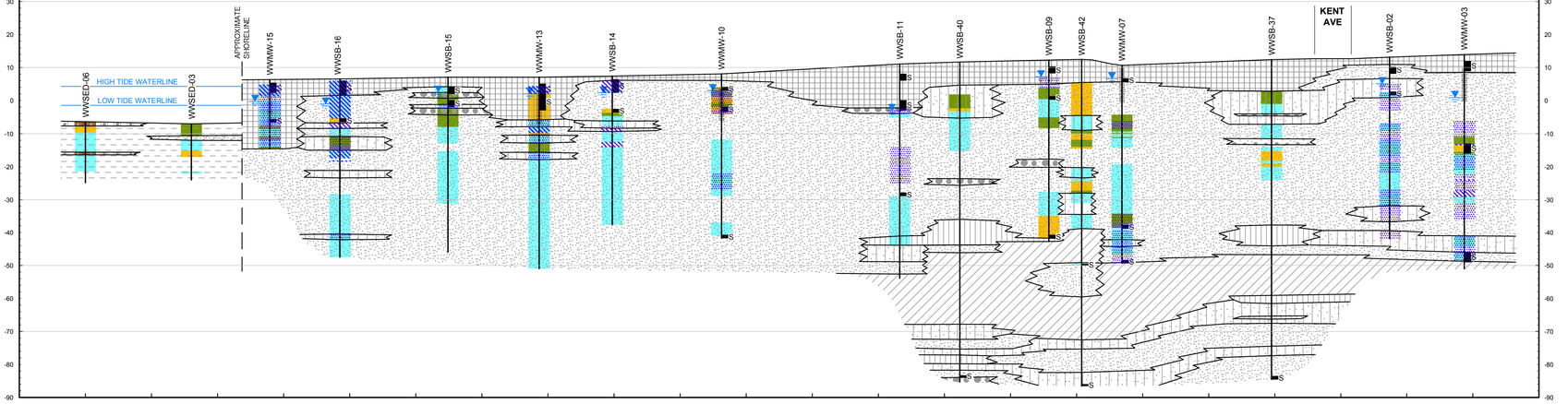
GEOLOGIC UNIT

- FILL
- SAND
- SILT
- SILTY SAND
- CLAY
- CLAYEY SAND
- SILTY GRAVEL
- ORGANIC SOIL
- GRAVEL

- OBSERVED APPARENT GROUNDWATER TABLE
- CONTACT
- BOUNDARY IS APPROXIMATED
- SOIL BORING, MONITORING WELL OR SEDIMENT CORING IDENTIFICATION (WWMW-14)
- SAMPLE LOCATION (S)
- WELL SCREEN INTERVAL

PHYSICAL OBSERVATIONS

- TAR SATURATED
- TAR STAINING, SHEEN AND TAR/NAPHTHA ODORS
- LENSES WITH TAR SATURATION AND TAR/NAPHTHA ODORS
- BLEBS, GLOBS, LENSES, COATINGS, SHEENS AND TAR/ NAPTHA ODORS
- TAR/ NAPHTHALENE-LIKE ODORS
- PETROLEUM SHEEN/ STAINING ODORS
- PETROLEUM ODORS



VERTICAL SCALE, FEET 40 20 0

HORIZONTAL SCALE, FEET 0 60 120

VERTICAL EXAGGERATION = 3X

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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

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

nationalgrid

PROJECT 093060-1-1108

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

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
WWMW-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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		0.4			WWMW-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		OLO		(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				(10'- 13.9') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; light brown, soap-like odor.
						SLO		(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		SLO	WWMW-01 (16-17)	(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. (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								

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

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BORING LOG
PAGE 2 of 3
WWMW-01

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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. (20.9'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown.
25	S6	5.0	3.67	1.2		SLO		(25'- 28.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown. (28.4'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight sulfur-like odor, black.
30	S7	5.0	3.25	0.7				(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	S8	5.0	3.33	0.5		OLO		(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	S9	5.0	3.25	0.8				(40'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown.

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BORING LOG

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WWMW-01

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
								(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	S12	5.0	3.67	1.1				(55'- 56.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; light brown.
								(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.
60	S13	5.0	3.25	0.9				
								(61.4'- 62.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; light brown.
							WWMW-01 (63-64)	(62.9'- 65') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; reddish brown.
65								Bottom of borehole at 65.0 feet.

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BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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	315			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.
									(17'- 20') SANDY SILT (ML); ~60% fines, ~35% sand, fine to coarse, ~5% gravel, fine; moist, reddish 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

WWMW-02

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
									(21.5'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; wet, brown, loose.
25	S6	5.0	4.25	7.8					
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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BORING LOG

WWMW-02

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	5.0	5	2.2					(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					WWMW-02 (50-53)	(50'- 53') SILTY SAND (SM); ~80% sand, fine to medium, ~20% fines; wet, grayish brown, dense. (53'- 55') SANDY LEAN CLAY (CL); moist, red and gray, very dense, cohesive.
55									Bottom of borehole at 55.0 feet.

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BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	2.0							(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				WWMW-03 (2-5)	
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.
▽									
							OLO		(14.1'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate organic-like odor.
15	S4	5.0	4.08	5.7					(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.
							OLO		
20									

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

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BORING LOG

WWMW-03

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S5	5.0		61.2			PLO		(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	>9999			NLO PLO NLO NLO	WWMW-03 (28-30)	(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. (27.2'- 27.5') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, low plasticity; moderate petroleum-like odor, wet, brown, black staining. (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. (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 PLO PLO PLO		(35'- 36.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown. (36.2'- 37.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, moist, brown. (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.
40	S9	5.0	3.5	149			PLO PLO		(38.2'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, moist, brown. (40'- 41.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, moist, brown. (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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BORING LOG

WWMW-03

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

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BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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') WIDELLY 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			PLO		(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.
							NLO		(11.5'- 12.4') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, medium plasticity; moderate naphthalene-like odor, wet, gray.
							PLO		(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			NLO		(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.
							PLO		(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.
							PLO		(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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MLO = MUSTY LIKE ODOR

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

GEI Consultants

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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 2 of 3
WWMW-04

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S4	5.0	3.33				PLO		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.
				1795			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			NLO	WWMW-04 (31-33)	(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		(33.5'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, sheen.
35	S7	5.0	3.42				NLO		(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.
40	S8	5.0	3.5	1845			NLO		(40'- 43.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.

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

BORING LOG
PAGE 3 of 3
WWMW-04

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
							NLO		(43.8'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown.
45	S9	5.0	2.58	58.5			NLO		(45'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.
50	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	S11	5.0	1.92	56.9			NLO		(52.9'- 56.7') SANDY SILT (ML); ~60% fines, low plasticity, ~40% sand, fine to medium; slight naphthalene-like odor, brown.
							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.
60	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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BORING LOG
PAGE 1 of 3
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 - 6/11/0209
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): ▽ 10.00 6/10/2009

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		377			NLO	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 NLO 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 t0 6.7 ft. (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.
▽ 10	S3	5.0	5	>9999			NLO NLO	WWMW-05 (12-13)	(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'- 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. (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 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. (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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PROJECT: Williamsburg MGP RI
CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093060

BORING LOG

WWMW-05

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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				NLO		(25'- 26.7') SILTY SAND (SM); ~80% sand, fine to coarse, ~20% fines, non plastic; slight naphthalene-like odor, reddish brown.
				479			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
PAGE 3 of 3
WWMW-05

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45							NLO		
	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.
				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.
50	S11	5.0	3.25				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.
				3595			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				NLO		(53.2'- 54.9') SILT (ML); ~90% fines, ~5% gravel, fine, ~5% sand, fine; moderate naphthalene-like odor, brown gray, dense.
				218			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.
									(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.
								WWMW-05 (63-64)	(63.2'- 65') LEAN CLAY (CL); ~95% fines, ~5% sand, fine; red and gray.
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
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
				581					
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.
				1601			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.
							PLO		(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.
15	S4	5.0	3				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.
				3194			NLO		(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.
							OLO		(18.3'- 19.3') SILTY SAND (SM); ~80% sand, fine, ~20% fines, non plastic; slight organic-like odor, brown, slight burnt/sulfur-like
20							OLO		

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BORING LOG

WWMW-06

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S5	5.0	3	2567			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.
							PLO		
							PLO		
							NLO		
							NLO		
							NLO		
25	S6	5.0	4.42	2310			NLO		
							NLO		
							NLO		
30	S7	5.0	3.75	2205			NLO		
35	S8	5.0	2.25	1300			NLO		
40	S9	5.0	1.92	286			NLO		(40'- 45') SILTY SAND (SP); ~70% sand, fine to medium, ~30% fines, medium plasticity; strong naphthalene-like odor, brown.

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

BORING LOG
PAGE 3 of 3
WWMW-06

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
							NLO		
45	S10	5.0	1.33	9316			NLO		(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	WWMW-06 (50-52)	(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.
							NLO		(54'- 55') SILT (ML); ~90% fines, medium plasticity, ~10% sand, fine; strong naphthalene-like odor, brown.
55	S12	5.0	2.25				NLO		(55'- 57.6') SILT (ML); ~90% fines, medium plasticity, ~10% sand, fine; moderate naphthalene-like odor, brown.
				94.9			NLO	WWMW-06 (58-60)	(57.6'- 59.1') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown.
							NLO		(59.1'- 59.8') SILT (ML); ~90% fines, medium plasticity, ~10% sand, fine; moderate naphthalene-like odor, brown.
60	S13	5.0	2.25	0.0			NLO		(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.
65									Bottom of borehole at 65.0 feet.

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BORING LOG
PAGE 1 of 3
WWMW-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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		2.3				WWMW-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.
				> 9999			NLO		(19.1'- 20') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, medium plasticity; strong naphthalene-like
20									

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BORING LOG

WWMW-07

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S5	5.0	1.67	3372			NLO		odor, wet, gray, sheen, tar-like staining.
							NLO		(20'- 20.5') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, dense.
							NLO		(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.
							NLO		(20.8'- 21.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown, dense.
25	S6	5.0	4.67	784					(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.
30	S7	5.0	4.67	1982			NLO		(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.
							NLO		(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			NLO		(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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BORING LOG

PAGE 3 of 3

WWMW-07

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
							NLO		
45	S10	5.0	4.42	> 9999			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.
							NLO		(49.2'- 50') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, brown.
50	S11	5.0	3.83	1269			NLO		(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.
							NLO		(52.8'- 54.1') SILTY SAND (SM); ~85% sand, fine, ~15% fines, medium plasticity; slight naphthalene-like odor, brown, slight petroleum-like odor.
							NLO		(54.1'- 54.3') WIDELY GRADED SAND (SW); fine to coarse; moderate naphthalene-like odor, brown, moderate petroleum-like odor.
55	S12	5.0	4	0.0			NLO		(54.3'- 55') SILTY SAND (SM); ~85% sand, fine, ~15% fines, medium plasticity; slight naphthalene-like odor, brown, slight petroleum-like odor.
							PLO		(55'- 57.1') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, slight pertoleum-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.
60								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.
									Bottom of borehole at 60.0 feet.

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BORING LOG
PAGE 1 of 3
WWMW-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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0		2.0							(0'- 2') FILL, hand cleared.
▽	S1	3.0	1.58	540			NLO	WWMW-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.
							NLO		
				3038			NLO	WWMW-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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BORING LOG

WWMW-08

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S5	5.0	1.58	221			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.
							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.
30	S7	5.0	2.67	178			NLO		(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					(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-08

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	5.0	1.58						(45'- 50') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; red, gray silt varves, higher silt content 5 to 15 inches.
50									Bottom of borehole at 50.0 feet.

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BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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	253			NLO		(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	119			NLO	WWMW-10 (10-11.5)	(12.2'- 18.5') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown, slightly silty lenses.
20				11.3			NLO		(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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CLIENT: National Grid
PROJECT: Williamsburg MGP RI
CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093060

BORING LOG

WWMW-10

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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 NLO		(35'- 35.7') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown. (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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BORING LOG

WWMW-10

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	4.0	3.75	6.2			NLO		(45'- 49') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown.
									Refusal at 49.0 feet. Bottom of borehole at 49.0 feet.

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BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		35.0				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	479			NLO NLO 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. (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	S3	5.0	2.42	608			NLO NLO	WWMW-11 (11-14)	(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. (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	S4	5.0	3.92	5.6			NLO NLO		(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. (18.4'- 20') SILT (ML); ~90% fines, low plasticity, ~10% sand, fine; moist, gray.
20									

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CITY/STATE: Brooklyn, New York
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BORING LOG

WWMW-11

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S5	5.0	5.08	4.3			NLO		(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.
25	S6	5.0	3.33	0.3			NLO		(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	S7	5.0		0.2					(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	S8	5.0	1.08	0.1				WWMW-11 (39-40)	(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	S9	5.0	4.92	0.3			NLO		(40'- 45') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; slight naphthalene-like odor, reddish gray.

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BORING LOG

WWMW-11

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45							NLO		Bottom of borehole at 45.0 feet.

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BORING LOG
PAGE 1 of 2
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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

WWMW-12

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	2						(0'- 0.5') CONCRETE.
								WWMW-13 (2-5)	(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		(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	3008			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	2463			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.
							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	377			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.
							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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BORING LOG

WWMW-13

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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			NLO		(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					
40	S9	5.0	2.92	24.2					

NOTES:

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IN. = INCHES
FT. = FEET

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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

GEI Consultants, Inc.
455 Winding Brook Road
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CLIENT: National Grid
PROJECT: Williamsburg MGP RI
CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093060

BORING LOG

WWMW-13

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

Refusal at 58.0 feet.
Bottom of borehole at 58.0 feet.

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BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0									(0'- 0.5') ASPHALT.
	S1	4.5	1						(0.5'- 1.7') FILL, wood fragments.
				5.0				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	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			NLO		(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.
15	S4	5.0	2.75				NLO		(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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PROJECT: Williamsburg MGP RI
CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093060

BORING LOG

WWMW-14

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							NLO		(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	S6	5.0	4.58	1345			NLO		(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.
							NLO		(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.
							NLO		(28.6'- 28.8') WIDELY GRADED SAND (SW); tar-like coating.
							NLO		(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.
30	S7	5.0	2.75	348			NLO		(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.
							NLO		(30'- 32.1') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown, slight petroleum-like odor.
							NLO		(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.
35	S8	5.0	2.92	1313			NLO	WWMW-14 (36-37)	(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.
							NLO		(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	S9	5.0	4.67	1044			NLO		(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.
							NLO		(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

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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 3 of 3
WWMW-14

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
							NLO		naphthalene-like odor, wet, brown, sheen, tar-like blebs, slight petroleum-like odor.
45	S10	5.0	4.5	100			NLO		(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.
50	S11	5.0	3.58	109			NLO		(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. (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	S12	5.0	4.42	55.3			NLO NLO	WWMW-14 (55-57)	(54.8'- 55') SANDY LEAN CLAY (CL); ~70% fines, medium plasticity, ~30% sand, fine; moist, reddish brown. (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. (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.
60									Bottom of borehole at 60.0 feet.

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BORING LOG
PAGE 1 of 2
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		323			NLO	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	1927			PLO NLO		(5'- 6.5') slight petroleum-like odor, FILL, wood fragments. (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	3102			NLO NLO 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. (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	1437			NLO NLO 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. (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. (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. (18.3'- 20') SANDY SILT (ML); ~70% fines, medium plasticity,
20									

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

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BORING LOG

WWMW-15

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

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BORING LOG
PAGE 1 of 3
WWMW-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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		1.3				WWMW-16 (2-3.5)	(0'- 0.9') CONCRETE. (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 ▽	S2	5.0	4.75	4843			PLO		(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. (5.6'- 10') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate petroleum-like odor, wet, brown.
10	S3	5.0	3.92	3520			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. (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	65.6			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.
							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

WWMW-16

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							PLO		(20.9'- 22') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate petroleum-like odor, wet, brown.
							OLO		(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.
							PLO		(22.8'- 23.6') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, non plastic; slight petroleum-like odor, moist, gray.
25	S6	5.0	4.5	81.2					(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.
30	S7	5.0	4.92						(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.
				0.8					(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	S8	5.0	3.83	5.7					(35'- 37.4') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, gray, slight fruit-like, possibly petroleum odor.
								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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MLO = MUSTY LIKE ODOR

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BORING LOG

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WWMW-16

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

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

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BORING LOG
PAGE 1 of 3
WWMW-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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		2.1				WWMW-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	WWMW-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	349			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.
									(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 NLO 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. (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. (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. (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.
							NLO NLO		
20									

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BORING LOG
PAGE 2 of 3
WWMW-17

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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. (23.3'- 25') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; brown gray.
25	S6	5.0	1.58	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.
30	S7	5.0	3.67	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.
35	S8	5.0	3.92	0					(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. (38'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; brown.
40	S9	5.0	3.42	6.2			OLO NLO		(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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BORING LOG

PAGE 3 of 3

WWMW-17

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	5.0	3.25	11.6			NLO		(46.8'- 49.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; brown, silty sand lenses.
50	S11	5.0	3.17	55			NLO NLO NLO NLO NLO	WWMW-17 (54-55)	(49.2'- 50') SILT (ML); ~80% fines, non plastic, ~20% sand, fine; brown. (50'- 50.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown. (50.3'- 50.7') SILTY SAND (SM); ~70% sand, fine, ~30% fines, non plastic; slight naphthalene-like odor, gray. (50.7'- 51.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown. (51.8'- 52.4') SANDY SILT (ML); ~60% fines, non plastic, ~40% sand, fine; slight naphthalene-like odor, gray. (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. (55'- 60') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; brown, reddish brown varves.
55	S12	5.0	1.67	1.4			NLO		
60									Bottom of borehole at 60.0 feet.

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BORING LOG
PAGE 1 of 2
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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	256			PLO		(5'- 8') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines; ~5% brick, moist, brown, loose. (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.
▽ 10	S3	5.0	3.58	524			PLO	WWSB-01 (14-15)	(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. (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.
20									

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BORING LOG

PAGE 2 of 2

WWSB-01

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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
PAGE 1 of 3
WWSB-02

GROUND SURFACE ELEVATION (FT): 13.19 **LOCATION:** N 12th Street
NORTHING: 688734.84 **EASTING:** 642160.11 **TOTAL DEPTH (FT):** 55.00
DRILLED BY: Zebra Environmental / Luke Caballero **DATUM VERT. / HORZ.:** NAVD 88 / NAD83 NY East Zone
LOGGED BY: Maura MacLeod **DATE START / END:** 7/8/2009 - 7/9/2009
DRILLING DETAILS: Geoprobe
WATER LEVEL DEPTHS (FT): ▽ 8.00 7/8/2009

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	1.5	5.5		OLO	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. (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		PLO PLO		(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. (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. (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		NLO NLO PLO PLO PLO	WWSB-02 (10.5-11.5)	(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. (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. (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. (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		PLO		(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. (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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BORING LOG
PAGE 2 of 3
WWSB-02

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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			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.
35	S8	5.0	3.33	761		NLO		(35'- 38.6') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown.
				1014		NLO		(38.6'- 40') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, brown.
40	S9	5.0	3.33	387		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.

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

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BORING LOG
PAGE 1 of 2
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
5	S2	5.0	1.5				NLO		(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.
▼				769			NLO		(7.5'- 10') BRICK; moderate naphthalene-like odor, wet, FILL, crushed brick with sand.
10	S3	5.0	1.83	1089			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.
15	S4	5.0	3.33	1777			NLO		(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.
20									

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BORING LOG

WWSB-03

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S5	2.0	1.75	3949			NLO NLO 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.

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BORING LOG
PAGE 1 of 2
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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		(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	WWSB-04 (18-20)	(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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BORING LOG

WWSB-04

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

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BORING LOG
PAGE 1 of 2
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
▽							NLO		
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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BORING LOG

PAGE 2 of 2

WWSB-05

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S5	4.0	3.83	4567			NLO	WWSB-05 (20-24)	

Refusal at 24.0 feet.
Bottom of borehole at 24.0 feet.

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BORING LOG
PAGE 1 of 2
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION
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			NLO	(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			NLO	(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.
							NLO	(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	S4	5.0	1.25	> 9999			NLO	(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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BORING LOG

WWSB-06

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION
20	S5	5.0	2	> 9999			NLO	
							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				Refusal at 25.5 feet. Bottom of borehole at 25.5 feet.

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BORING LOG
PAGE 1 of 2
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0									(0'- 3') hand cleared.
	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.
				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.
				> 9999					
15	S4	5.0	2.25						(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.
				> 9999				WWSB-07 (19-22)	
20									

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

BORING LOG

WWSB-07

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

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FT. = FEET

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

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

BORING LOG
PAGE 1 of 2
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		457				(0'- 3') CONCRETE; crushed concrete and asphalt, hand cleared.
▽							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.
5	S2	5.0	2.58				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

PAGE 2 of 2

WWSB-08

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	SOIL / BEDROCK DESCRIPTION
20	S5	4.0	3	9965			CrLO	(20'- 24') WIDELY GRADED SAND WITH GRAVEL (SW); ~75% sand, fine to coarse, ~20% gravel, ~5% fines; slight creosote-like odor, wet, dark gray to black, FILL, wood fragments and fuzzy paper-like material 22.5-23 feet, tar-like coating.
								Refusal at 24.0 feet. Bottom of borehole at 24.0 feet.

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BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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		(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.
							PLO		(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.
10				1805			NLO		(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.
							NLO	WWSB-09 (11-12)	(10.5'- 11.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, brown gray, sheen.
							NLO		(11.8'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown gray.
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.
							NLO		(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.
							NLO		(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,
20							NLO		

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BORING LOG

WWSB-09

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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. (32.5'- 37.8') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, low plasticity; gray.
35	S6	5.0	4.17	104					(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	S7	5.0	5	642			NLO		(40'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.

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BORING LOG

PAGE 3 of 3

WWSB-09

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
				592			NLO		
45	S8	10.0	6.5	3159			NLO		(45'- 47.3') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, brown.
							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	WWSB-09 (53-54)	(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.
									(54'- 55') SILT (ML); ~80% fines, medium plasticity, ~20% sand, fine; gray.
55									Bottom of borehole at 55.0 feet.

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BORING LOG
PAGE 1 of 3
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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	426			NLO		(15'- 20') SILTY SAND (SM); ~70% sand, ~30% fines, non plastic fines; moderate naphthalene-like odor, wet, brown to gray.
20									

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

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BORING LOG

WWSB-10

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

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WWSB-10

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
				9999			NLO	WWSB-10 (49-50)	(49'- 51') SANDY SILT (ML); ~60% fines, low plasticity, ~40% sand, fine; moderate naphthalene-like odor, gray.
50				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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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

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BORING LOG
PAGE 1 of 3
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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. (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 preservitive. (11'- 13.3') CONCRETE.
10				114				
▽ 15						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.
	S3	10.0	6.92	150		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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CLIENT: National Grid
PROJECT: Williamsburg MGP RI
CITY/STATE: Brooklyn, New York
GEI PROJECT NUMBER: 093060

BORING LOG

WWSB-11

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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								(39.4'- 40.1') WIDELY GRADED SAND (SW); ~90% sand, fine to coarse, ~5% gravel, ~5% fines; wet, orange brown. (40.1'- 42.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; slight naphthalene-like odor, gray brown.
				125		NLO		
						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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S6	10.0	8.92					
50				546		NLO	WWSB-11 (50-51)	
						NLO		(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				(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
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0							(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.
				4.2				WWSB-13 (4-5)	
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.
▽				765			NLO		(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.
10	S3	5.0	3.75				NLO		(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.
				1305				WWSB-13 (12-15)	(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						
				1021			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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BORING LOG

WWSB-13

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							NLO		(21.2'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, brown.
25	S6	5.0	3.92	84.1					(25'- 28') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, wet, brown.
							NLO		
									(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						(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.
				27.2					(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						(35'- 38.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, light brown.
				53.7			NLO	WWSB-13 (37-38)	
									(38.8'- 40') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; reddish gray.
40	S9	5.0	5	129					(40'- 45') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; slight naphthalene-like odor, reddish gray.
							NLO		

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BORING LOG

PAGE 3 of 3

WWSB-13

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45							NLO		Bottom of borehole at 45.0 feet.

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BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	2.42						(0'- 0.5') ASPHALT.
								WWSB-14 (1-5)	(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.
							PLO		(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, petorleum-like staining.
							PLO		(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, petorleum-like staining.
				213			NLO		(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, petorleum-like staining, moderate petroleum-like odor, hand cleared.
▽ 5	S2	5.0							(5'- 10') no recovery.
10	S3	5.0	4.75	373			NLO	WWSB-14 (10-11)	(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			NLO		(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.
							PLO		(15.8'- 16.8') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; slight petroleum-like odor, moist, black, possible petroleum-like staining.
							NLO		(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.
20									

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BORING LOG

WWSB-14

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
25	S6	5.0	3.83	32.0			NLO		
30	S7	5.0	3.5	8.8			NLO		(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	S8	5.0	4.67	3.1			NLO		(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	S9	5.0	2.67	1.2			NLO		(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.

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BORING LOG

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WWSB-14

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45							NLO		Refusal at 45.0 feet. Bottom of borehole at 45.0 feet.

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BORING LOG
PAGE 1 of 3
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							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.
▽				1445					
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.
							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.
				2637					(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.
							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.
10	S3	5.0	3.33	2283			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.
							NLO		
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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CLIENT: National Grid
PROJECT: Williamsburg MGP RI
CITY/STATE: Brooklyn, New York
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BORING LOG
PAGE 2 of 3
WWSB-15

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							NLO		(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.
							NLO		(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.
							NLO		(24.4'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, light brown.
25	S6	5.0	3	34.0			NLO		(25'- 30') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, light brown to gray.
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.
							NLO		(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	S8	5.0	2.75	759			NLO		(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.
									(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	S9	5.0	3.25	65.5					(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.

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BORING LOG

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WWSB-15

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	5.0	3.25	4.2					(45'- 53') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines; moist, brown.
50	S11	3.0	3.75	11.5					
									Refusal at 53.0 feet. Bottom of borehole at 53.0 feet.

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BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							NLO		
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		(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	WWSB-16 (12-13)	(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		(15'- 16.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, wet, black.
				2607			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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BORING LOG

WWSB-16

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S5	5.0	5.08	2286			NLO		black, organics, tar-like staining, modreate 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. (24'- 24.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, brown, slight spicy odor.
25	S6	5.0	3.5	28.5			NLO		(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. (27.7'- 30') SILTY SAND (SW-SM); ~70% sand, fine to coarse, ~30% fines, low plasticity; moist, light brown, dense, moderate spicy odor.
30	S7	5.0	4.33	28.7					(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.
35	S8	4.0		7.0					(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.
	S9	4.0	4.42				NLO		
40									

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BORING LOG

WWSB-16

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	4.0	4.67	18.7			NLO		
	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.
50							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.
	S12	3.0	4	29.3			NLO		(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
PAGE 1 of 3
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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					
	S4B	3.0	0						(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. (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. (17'- 20') FILL, no recovery.
20									

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BORING LOG

WWSB-17

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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			NLO		(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.
							NLO		(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	S7	5.0	4.83	8326			NLO		(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.
							NLO	WWSB-17 (32-33)	(33'- 35') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, wet, dark brown.
35	S8	5.0	4	8.2			NLO		(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			NLO		(40'- 43.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown.

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BORING LOG

WWSB-17

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	3.0	4.75	385			NLO	WWSB-17 (45-46)	(43.4'- 45') NARROWLY GRADED SAND (SP); ~95% sand, fine, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown to reddish brown.
							NLO		(45'- 46.8') SANDY SILT (ML); ~65% fines, low plasticity, slow dilatancy, ~35% sand, fine; slight naphthalene-like odor, wet, grayish brown, lenses of silty sand.
									(46.8'- 48') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; wet, brown, lense of sandy silt from 47.2 to 47.4 ft.
									Refusal at 48.0 feet.
									Bottom of borehole at 48.0 feet.

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IN. = INCHES
FT. = FEET

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

BORING LOG
PAGE 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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		3.7				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			NLO		(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. (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 petorleum-like odor.
10	S3	5.0	4	911			NLO	WWSB-18 (9-10)	(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'- 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.
15	S4	5.0	4	1.3			PLO PLO PLO PLO PLO		(12.2'- 13') SILTY SAND (SM); ~70% sand, fine, ~30% fines, non plastic; slight petroleum-like odor, light brown. (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. (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. (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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BORING LOG
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WWSB-18

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

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BORING LOG

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WWSB-18

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	5.0	4.67	102			NLO	WWSB-18 (51-53)	(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.
							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.
50	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
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0							(0'- 0.7') CONCRETE.
									(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.
								WWSB-19 (2-3)	
				23.5				WWSB-19 (4-5)	
5	S2	10.0	4.17						(5'- 10') rock in sample casing, no recovery.
10									(10'- 13') CONCRETE; ~95% sand, fine to coarse, ~5% fines; ~70% concrete fragments, max. size 3 in., light gray, FILL, loose, concrete-like odor.
									(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.
				119			PLO	WWSB-19 (14-15)	
▽ 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.
20							PLO		(19.6'- 20.6') WIDELY GRADED SAND (SW); ~95% sand, fine to

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BORING LOG

WWSB-19

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20				457			PLO		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	WWSB-19 (25-35)	(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.
									(28.5'- 30.7') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; wet, brown.
30									
									(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.
35	S5	10.0	9.67	2.3			PLO		(35'- 36.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; slight petroleum-like odor, brown, loose.
							PLO		(36.9'- 37.8') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines; slight petroleum-like odor, reddish brown.
							PLO		(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.
40									

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BORING LOG

WWSB-19

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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
PAGE 1 of 3
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		0.4				WWSB-20 (3-5)	(0'- 0.5') CONCRETE. (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

WWSB-20

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20				825			NLO		brown.
							NLO		(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.
							NLO		(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.
				377			NLO		(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	S5	10.0	9.33	347			PLO		(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.
30				313					
									(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	S6	10.0	4.67						(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.
				58			NLO		
40									

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BORING LOG
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WWSB-20

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
				1805			NLO		
45	S7	10.0	3.5						(45'- 52.6') WIDELY GRADED SAND (SW); ~100% sand, fine to medium; moderate naphthalene-like odor, wet, brown, loose.
							NLO		
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				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		
							NLO		(58'- 59.4') WIDELY GRADED SAND (SW); ~100% sand, medium to coarse; strong naphthalene-like odor, brown, very loose.
							NLO		(59.4'- 59.8') WIDELY GRADED SAND (SW); ~100% sand, fine to medium; moderate naphthalene-like odor, moist, brown.
60								WWSB-20 (62-63)	(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.
									(64'- 65') LEAN CLAY (CL); ~100% fines; red, very dense.
65									Bottom of borehole at 65.0 feet. Geoprobe refusal at 10' with Zebra Environmental, boring completed by Boart Longyear using sonic drilling methods.

NOTES:

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FT. = FEET

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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
PAGE 1 of 4
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		0.4			OLO	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			PLO		(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	S3	10.0	6	21.0			NLO		(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.
15				2538			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. (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.
20							NLO		

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BORING LOG

WWSB-21

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
									(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	S6	10.0	8.67	2114			NLO	WWSB-21 (33-34)	(30'- 33.2') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; slight naphthalene-like odor, moist, brown, loose.
							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.
35									(35.4'- 40') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; moderate naphthalene-like odor, moist, brown, loose.
							NLO		
40	S7	10.0	8				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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BORING LOG

WWSB-21

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
				799			NLO		(43.3'- 44.8') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; slight naphthalene-like odor, moist, brown, loose.
45									(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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BORING LOG

WWSB-21

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	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.
70									(69.6'- 73.1') LEAN CLAY (CL); ~100% fines; red and brown gray, dense.
				1.5					(73.1'- 78') SANDY SILT (ML); ~80% fines, ~20% sand, fine; moist, gray.
75									
									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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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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		1.2					(0'- 0.67') CONCRETE.
							NLO	WWSB-22 (3-4)	(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					(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	WWSB-22 (13-15)	(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					(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.
							PLO		
20									

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BORING LOG

WWSB-22

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

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BORING LOG
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WWSB-22

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
							OLO		
45	S9	10.0	8.08	15.5			NLO		(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							OLO		(48.4'- 55') SILTY SAND (SM); ~80% sand, fine, ~20% fines, non plastic; slight organic-like odor, brown.
55	S10	10.0	8.67				NLO		(55'- 56.9') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, brown.
				76.3			NLO		(56.9'- 60.6') SANDY SILT (ML); ~60% fines, low plasticity, ~40% sand, fine; slight naphthalene-like odor, brown.
60							PLO		(60.6'- 65') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, brown.
65	S11	5.0	4.08	9.2				WWSB-22 (65-65.5)	(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: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	4.5	4	188				WWSB-23 (1-4)	(0'- 0.7') CONCRETE.
							PLO		(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.
									(4.5'- 5') Rock.
5	S2	10.0	5.33	1081			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.
									(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.
10							NLO		
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

WWSB-23

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20							NLO		
									(23.6'- 25') SANDY SILT (ML); ~60% fines, ~40% sand, medium to coarse; dark gray, burnt-like odor.
25	S4	10.0	8.58				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							NLO		(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.
				452			NLO	WWSB-23 (31-33)	(30.3'- 33.6') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; strong naphthalene-like odor, brown, tar-like coating, partially tar saturated.
							NLO		(33.6'- 35') WIDELY GRADED SAND (SW); ~100% sand, fine to coarse; strong naphthalene-like odor, brown, tar-like stained.
35	S5	15.0	12.5	9259			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.
									(38.8'- 39.5') WIDELY GRADED GRAVEL WITH SAND (GW); ~70% gravel, coarse, ~30% sand, fine to coarse; max. size 5 in., tar saturated.
40							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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CITY/STATE: Brooklyn, New York
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BORING LOG
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WWSB-23

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45							NLO		(44.5'- 48.2') WIDELY GRADED SAND (SW); ~100% sand; gray, tar-like coating, lenses of tar-like saturation.
							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	S6	15.0	10.83						(50'- 54.8') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines; moderate naphthalene-like odor, brown, tar saturated lenses.
							NLO		
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.
							NLO		(59.5'- 60.4') WIDELY GRADED SAND (SW); ~100% sand, medium to coarse; strong naphthalene-like odor, wet, brown, sheen.
60							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.
65									Bottom of borehole at 65.0 feet.

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BORING LOG
PAGE 1 of 3
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		5.5				WWSB-24 (4-5)	(0'- 0.5') CONCRETE.
							PLO		(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						(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						
				6418			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									

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BORING LOG

WWSB-24

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20							NLO		(20.2'- 21.8') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines; moderate naphthalene-like odor, light brown, sheen.
				1326					(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						(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.
				>9999				WWSB-24 (38-40)	(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.
40									(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.
							NLO		(42'- 47.7') SANDY SILT (ML); ~70% fines, ~30% sand, fine to medium; moist, gray, occational sand lenses, slight burnt-like odor.

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BORING LOG

PAGE 3 of 3

WWSB-24

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S6	10.0	9.17	31.8			NLO	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.
50									(53.4'- 55') LEAN CLAY (CL); ~95% fines, ~5% sand; red, very small sand lenses.
55									Bottom of borehole at 55.0 feet.

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BORING LOG
PAGE 1 of 3
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							OLO		(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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BORING LOG

WWSB-25

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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 petorleum-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.
25	S6	5.0	4.75	3197			NLO		
							NLO		
							NLO		
							NLO		
30	S7	5.0	2.33	>15000			NLO	WWSB-25 (34-35)	
							NLO		
35	S8	5.0	1.67	116.6			NLO		
40	S9	5.0	2.5	180.7			NLO		(40'- 45') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight naphthalene-like odor, moist, brown gray.

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BORING LOG

WWSB-25

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45							NLO		
	S10	5.0	4.17	57.9			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.
							NLO		(48.6'- 50') SILT WITH SAND (ML); ~80% fines, low plasticity, ~20% sand, fine; slight naphthalene-like odor, brown gray, dense.
50	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, occational gray sand lenses, slight petorleum-like odor.
								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.
55									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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		>15000			PLO	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					(5'- 5.7') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; moist, brown, FILL.
							PLO		(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.
									(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.
20									

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MLO = MUSTY LIKE ODOR

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

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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

WWSB-26

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
30	S7	5.0	4.92	1083			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.
							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.
35	S8	5.0	4.42	6.5			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.
							PLO		(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.
40	S9	2.0	3.92	338.2			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.
									Refusal at 42.0 feet. Bottom of borehole at 42.0 feet.

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

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

BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	2.83	84.3			PLO	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	958			PLO 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. (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. (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	2045			NLO		(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	WWSB-27 (14-15)	(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. (17.7'- 18.4') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; greenish gray, moderate sweet/fruity-like odor. (18.4'- 18.9') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; slight petroleum-like odor, black,
20							PLO PLO		

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

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BORING LOG
PAGE 2 of 3
WWSB-27

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S5	5.0	4.92	3.6			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.
							PLO		(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	S6	5.0	4.83	5.0			PLO		(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	S7	5.0	4.92				PLO		(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.
				17.5			PLO		(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	S8	5.0	2.75				PLO		(35'- 38.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, moist, dark brown.
				79.4					(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	S9	5.0	3.33	229			NLO		(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.

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BORING LOG

WWSB-27

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	5.0	4.17	407			NLO		
							PLO		(49.2'- 50') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; slight petroleum-like odor, dry, brown.
50	S11	3.0	5	149			NLO		(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
PAGE 1 of 2
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	2.25	18.9					(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.
							OLO	WWSB-28 (3-5)	
▽ 5	S2	5.0	2	948					(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.
							NLO		
							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	S3	5.0	3.17	238					(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.
							NLO		
									(11.8'- 14.7') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; moist, gray.
15	S4	5.0	4.67	1633			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.
							NLO		(15'- 17.5') WIDLEY 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.
							NLO		(18.2'- 20') WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand, fine to medium, ~10% fines, non plastic; slight
20									

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BORING LOG

WWSB-28

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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			NLO		(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.
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 1 of 2
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0									(0'- 2') hand cleared.
	S1	3.0	1.75	101			PLO	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			NLO		(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			NLO		(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	1516			NLO NLO NLO NLO		(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							NLO		(19.6'- 20') WIDELY GRADED SAND (SW); ~90% sand, fine to

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

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BORING LOG

PAGE 2 of 2

WWSB-29

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							NLO		(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.
25	S6	3.0	1.33	315			NLO		(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.
									(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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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 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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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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BORING LOG

WWSB-30

DEPTH FT.	SAMPLE INFO TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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	113		PLO		(32.4'- 34.3') WIDEY 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.
35	S8	5.0	4.33	3.1				(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.
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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BORING LOG

PAGE 3 of 3

WWSB-30

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	5.0	5	10.1			WWSB-30 (45-50)	
50								Bottom of borehole at 50.0 feet.

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

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BORING LOG
PAGE 1 of 3
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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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 NLO NLO 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. (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. (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 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. (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.
15	S4	5.0	4.75	2274 754			NLO PLO	WWSB-31 (15-17)	(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'- 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 petroelum-like staining, moderate petroleum-like odor. (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. (17.9'- 19.1') WOOD; wood fragments, modreate wood preservative-like odor.
20							OLO		

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BORING LOG

WWSB-31

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

PAGE 3 of 3

WWSB-31

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45	S10	5.0	3.42	8.3			NLO		(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			NLO	WWSB-31 (52-54)	(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			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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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

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BORING LOG
PAGE 1 of 3
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0	2.33						(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	WWSB-32 (4-5)	(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		(7.1'- 7.8') WIDEY 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	WWSB-32 (10-11)	(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	1088			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.
							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

WWSB-32

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							NLO		(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.
							PLO		(22.6'- 25') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, moist, light brown.
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			PLO		(30'- 33.2') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; slight petroleum-like odor, moist, light brown.
									(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.
35	S8	5.0	2.92	29.6					(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.
40	S9	5.0	4.75				PLO		(40'- 43.6') 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, moist, light brown, dense, lenses of reddish-brown clay.

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NLO = NAPHTHALENE LIKE ODOR
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TLO = TAR LIKE ODOR
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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-32

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45				89.5			PLO	WWSB-32 (43-44)	(43.6'- 45') LEAN CLAY (CL); ~90% fines, medium plasticity, ~10% sand, fine; slight petroleum-like odor, moist, reddish gray, dense.
									Bottom of borehole at 45.0 feet.

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BORING LOG
PAGE 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 TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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		(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	WWSB-34 (10-13)	(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.
									(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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BORING LOG

PAGE 2 of 2

WWSB-34

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20	S5	5.0	0.58	83.2			NLO		
25	S6	1.5	2.5	70.8			NLO		(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.
							NLO		(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
PAGE 1 of 1
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							PLO		(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	S2	5.0	1.17	2342			PLO	WWSB-35 (8-10)	(5'- 8.2') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, brown. (8.2'- 10') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate petroleum-like odor, moist, brown, petroleum-like staining.
10									Refusal at 10.0 feet. Bottom of borehole at 10.0 feet.

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BORING LOG
PAGE 1 of 2
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	5.0		1.7				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				NLO		(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.
				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	S3	5.0	2.17				NLO		(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.
				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.
15	S4	5.0	4.08				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.
				1173			NLO		(18.9'- 20') WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); ~70% sand, fine to coarse, ~20% gravel, fine to
20									

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

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BORING LOG

PAGE 2 of 2

WWSB-36

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							NLO		(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.
							PLO		(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.
25	S6	5.0	3.17	65.5			NLO		(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	S7	4.0	3.83	18.7			NLO		(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.
							NLO		(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.
							NLO		(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.

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

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BORING LOG
PAGE 1 of 5
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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							NLO		(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.
				46.2					
	S3	5.0	8						(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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BORING LOG
PAGE 2 of 5
WWSB-37

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
									(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.
	S5	10.0	11				NLO		(27'- 28.4') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown, loose.
				3487			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.
30							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.
									(32.9'- 37') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown, loose.
35				148			NLO		
	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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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

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BORING LOG

WWSB-37

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45				6.3					coarse, ~5% fines, non plastic; moist, brown, loose. (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.
	S7	10.0	15						
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.
				105					
55									
	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									

NOTES:

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FT. = FEET

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PLO = PETROLEUM LIKE ODOR
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MLO = MUSTY LIKE ODOR

GEI Consultants

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

WWSB-37

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
				2.4					
	S9	10.0	12						(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					
70									
									(72'- 74.5') SILT WITH SAND (ML); ~80% fines, low plasticity, ~20% sand, fine; moist, gray, dense.
				1.6					
75									(74.5'- 75.8') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; dry, gray, dense, brittle.
									(75.8'- 78.3') SILTY SAND (SM); ~70% sand, fine to medium, ~30% fines, non plastic; moist, gray, dense.
	S10	10.0	11.5						
				1.4					(78.3'- 79.2') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine; moist, gray, dense.
80									(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.
				1.3					
85									
	S11	10.0	12						(87.4'- 90.3') SILTY SAND (SM); ~75% sand, fine to medium, ~25% fines, non plastic; moist, whitish gray, dense.
				1.4					
90									

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BORING LOG

WWSB-37

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
90									(90.3'- 92.8') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moist, whitish gray, loose.
									(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.
95									(94.5'- 95.3') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, dark gray, dense.
				1.4				WW-SB-37 (96-97)	(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
PAGE 1 of 5
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	7.0					NLO		(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									
	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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BORING LOG
PAGE 2 of 5
WWSB-38

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							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.
25							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.
				1476			NLO		(26.6'- 27') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; strong naphthalene-like odor, moist, brown.
	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.
30				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					
	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					
40							NLO		

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BORING LOG

WWSB-38

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
									(46'- 48') SANDY SILT (ML); ~70% fines, low plasticity, ~30% sand, fine to medium; moist, brown.
	S6	10.0	10.5						(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					
				2.9					
65									

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BORING LOG

WWSB-38

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	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.
70									
75				0.2					
	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.
80									
85				0.1					
	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,
90									

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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-38

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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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ENVIRONMENTAL BORING LOG WILLIAMSBURG.GPJ GEI CONSULTANTS.GDT 4/15/10

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BORING LOG
PAGE 1 of 5
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							NLO		(14'- 15') WIDELY GRADED SAND (SW); ~95% sand, fine to coarse, ~5% fines, non plastic; moderate naphthalene-like odor, moist, brown.
15				180			NLO		(15'- 16.5') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moderate naphthalene-like odor, moist, gray.
							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.
	S3	10.0	11.5				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.
				274			NLO		(18.3'- 19.6') WIDELY GRADED SAND (SW); ~95% sand, fine to
20									

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

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BORING LOG

WWSB-39

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
	S4	10.0	7						(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.
				4.3					
30									
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.
	S5	10.0	11.5						(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..
				81.5					
40									

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BORING LOG
PAGE 3 of 5
WWSB-39

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							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.
	S6	10.0	13				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 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. (48.9'- 49.7') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, non plastic; moderate naphthalene-like odor, brown, dense. (49.7'- 67') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; moist, red with gray, dense.
55				146					
	S7	10.0	11.5						
60				2.2					
65				0.7					

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

BORING LOG

WWSB-39

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	S8	10.0	12.5						(67'- 71') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines, low plasticity; moist, brown, dense.
70				0.1					
									(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.
75				0.0					
	S9	10.0	12.5						
80				0.0					
									(81.8'- 84.6') WIDELY GRADED SAND (SW); ~95% sand, fine to medium, ~5% fines, non plastic; moist, grayish brown.
85				0.0					(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.
	S10	10.0	13.5						(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.
90									(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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BORING LOG

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WWSB-39

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
90				0.0					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				WW-SB-39 (96-97)	
									Bottom of borehole at 97.0 feet.

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BORING LOG
PAGE 1 of 5
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0									
5									
	S1	10.0	7	1.5					(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							NLO		(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		(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.
15							NLO		(14.9'- 17') SILTY SAND (SM); ~85% sand, fine to medium, ~15% fines, non plastic; slight naphthalene-like odor, wet, brown, sheen.
	S2	10.0	10.5	48.2			NLO		(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.
20									

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BORING LOG

WWSB-40

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

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BORING LOG

WWSB-40

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
									(53.3'- 55.5') SANDY SILT (ML); ~60% fines, low plasticity, ~40% sand, fine to medium; moist, brown, lense of fine to coarse sand.
55				3.0					(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.
	S6	10.0	12						(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.
60				21.8					
65				1.4					

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BORING LOG

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DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
	S7	10.0	9.5	1.5					
70									
75				1.3					
	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.
80									(79.5'- 84.1') SILTY SAND (SM); ~60% sand, fine to medium, ~40% fines, low plasticity; light gray, dense.
				1.3					
85				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.
90									(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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BORING LOG

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WWSB-40

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

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BORING LOG
PAGE 1 of 5
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0	S1	3.0	3	3.8					(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. (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							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.
				28.2			NLO		(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.
	S3	10.0	10.5						(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.
				31.2					(7'- 8') WIDELY GRADED SAND (SW); ~99% sand, fine to coarse, ~1% fines, non plastic; wet, dark brown, FILL.
							NLO		(8'- 9') WOOD; FILL.
10							NLO		(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.
									(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.
							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.
15				793			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.
									(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.
				797			NLO		(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.
	S4	10.0	13						
20									

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BORING LOG

WWSB-41

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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					
25									(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.
							NLO		(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.
35				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.
	S6	10.0	11.5				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.
									(37.9'- 38.7') SILTY SAND (SM); ~70% sand, fine, ~30% fines, non plastic; brown, dense.
40				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.
				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 begining at 49.3'.

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FT. = FEET

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PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
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SLO = SULFUR LIKE ODOR
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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-41

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
45									
	S7	10.0	13				NLO		
50							NLO		(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. (52.8'- 57') LEAN CLAY (CL); ~95% fines, medium plasticity, ~5% sand, fine; slight naphthalene-like odor, red with gray, very dense.
				2447					
55							NLO		
				332					
	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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BORING LOG
PAGE 4 of 5
WWSB-41

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

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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-41

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
90				0.3					(92.4'- 94.1') WIDELY GRADED SAND (SW); ~95% sand, medium to coarse, ~5% fines, non plastic; wet, dark gray to light gray, loose.
95								WW-SB-41 (96-97)	(94.1'- 97') SILTY SAND (SM); ~85% sand, fine to coarse, ~15% fines, non plastic; dry, light gray, dense.
									Bottom of borehole at 97.0 feet.

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

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BORING LOG
PAGE 1 of 5
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0									
5									
10	S1	10.0	7	385			NLO		(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					
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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BORING LOG
PAGE 2 of 5
WWSB-42

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
20				2634			NLO		
							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.
							NLO		(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.
25							NLO		(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.
				876			NLO		(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.
	S3	10.0	9.5	884					(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.
30									
							NLO		(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							NLO		(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.
				1261					
	S4	10.0	13	3127			NLO		(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.
40							NLO		(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.
							NLO		(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.
							NLO		(42'- 43.5') SILT WITH SAND (ML); ~80% fines, low plasticity, ~20% sand, fine; slight naphthalene-like odor, brown, dense.

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

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BORING LOG
PAGE 3 of 5
WWSB-42

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

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

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BORING LOG
PAGE 4 of 5
WWSB-42

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

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BORING LOG

WWSB-42

DEPTH FT.	SAMPLE INFO: TYPE and NO.	SAMPLE INFO: PEN FT.	SAMPLE INFO: REC FT.	SAMPLE INFO: PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
90				1.4				WW-SB-42 (96.5-97)	coarse, ~5% fines, non plastic; wet, whiteish gray, color change at 90.3 feet to dark brown.
95									(94.9'- 97') SILTY SAND (SM); ~70% sand, fine to coarse, ~30% fines, non plastic; whiteish gray, dense.
									Bottom of borehole at 97.0 feet.

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BORING LOG
PAGE 1 of 2
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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		
							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	

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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-01

DEPTH FT.	SAMPLE INFO: 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.

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BORING LOG
PAGE 1 of 1
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							NLO		(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.
				1460				WW-SED-02 (4-5)	
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.
									(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							NLO		
				200				WW-SED-02 (11-12)	

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

NOTES:

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

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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 1 of 1
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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		
									(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.
5									(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.
							NLO		
				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									(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.
				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.
15									(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.
				48.8				WW-SED-03 (16.5-17)	Refusal at 17.0 feet. Bottom of borehole at 17.0 feet.

NOTES:

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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
PAGE 1 of 1
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							NLO		(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.
				760				WW-SED-04 (3-4)	
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.
				79.2			NLO		
10									(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.
							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.
15									ORGANIC SOIL WITH SAND (OL); ~85% fines, non plastic, ~15% sand, fine; ~5% organics, wet, black, wood and sticks.
				20.2				WW-SED-04 (16.75-17.3)	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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CITY/STATE: Brooklyn, New York
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BORING LOG
PAGE 1 of 2
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
							PLO		(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.
							PLO		(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, orgianics 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, orgianics 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.
							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.
15				26.4			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.
							PLO		(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.
20				29.3				WW-SED-05	

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MLO = MUSTY LIKE ODOR

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CITY/STATE: Brooklyn, New York
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BORING LOG

PAGE 2 of 2

WWSED-05

DEPTH FT.	SAMPLE INFO: 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.

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

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BORING LOG
PAGE 1 of 2
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. / 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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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									(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.
							NLO		
				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.
10									(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.
							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.
							NLO		
				87.3					
15								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.
				13.9			OLO		
20									

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BORING LOG

WWSED-06

DEPTH FT.	SAMPLE INFO: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
									Bottom of borehole at 20.0 feet. Bottom 1.5 ft lost due to fall out during recovery on the barge.

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BORING LOG
PAGE 1 of 1
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: TYPE and NO.	PEN FT.	REC FT.	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
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.
						OLO		
				125			WW-SED-07 (4-4.5)	
5						OLO		(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.
						OLO		
				59.3				
10								(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							WW-SED-07 (15-15.7)	
				7.6				Refusal at 15.7 feet. Bottom of borehole at 15.7 feet.

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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, NY
GEI PROJECT NUMBER: 093060-1-1108

TEST PIT LOG

PAGE 1 of 2

WW-TP-01

GROUND SURFACE ELEVATION (FT):
NORTHING: **EASTING:**
OBSERVED BY: Maura MacLeod
CHECKED BY: Amy Malsbary
EQUIPMENT:
WEATHER: Overcast, 55 F

LOCATION: 50 Kent Avenue
TOTAL LENGTH: ~14.3 ft
TOTAL WIDTH: ~2.8 ft
TOTAL DEPTH: ~3.0 ft
DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone
DATE START / END 10/29/2009

DEPTH FT.	PID (ppm)	ANALYZED SAMPLE ID	SOIL DESCRIPTION
			(0' - 0.3') ASPHALT (0.3'-1') CONCRETE
▽			(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.
	17.3	WW-TP-01 (2-2.5)	(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:
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ppm = PARTS PER MILLION
IN. = INCHES
FT. = FEET

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

TEST PIT LOG

PAGE 2 of 2

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

NOTES:

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

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CLIENT:	National Grid	TEST PIT LOG	
PROJECT:	Williamsburg MGP RI	PAGE 1 of 2	WW-TP-02
CITY/STATE:	Brooklyn, NY		
GEI PROJECT NUMBER:	093060-1-1108		

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'-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.
	1.9	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., slight naphthalene-like odor, wet, brown, brick, and concrete fragments.
5			Bottom of test pit at 3.0 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-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

Photo 2: Facing East

NOTES:

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)
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IN. = INCHES
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TEST PIT LOG

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WW-TP-03

GROUND SURFACE ELEVATION (FT):		LOCATION:	50 Kent Avenue
NORTHING:	EASTING:	TOTAL LENGTH:	~20.1 ft
OBSERVED BY:	Maura MacLeod	TOTAL WIDTH:	~2.8 ft
CHECKED BY:	Amy Malsbary	TOTAL DEPTH:	~4.0 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'-3.5') WIDELY GRADED SAND WITH GRAVEL (SW); ~60% sand, fine to coarse, ~35% gravel, fine to coarse, ~5% fines, non plastic; max. size3 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. size3 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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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

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

DEPTH FT.	PID (ppm)	ANALYZED SAMPLE ID	SOIL DESCRIPTION
			(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.
5	**6.1**	WW-TP-06 (4.5-5)	(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)
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IN. = INCHES
FT. = FEET

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TEST PIT LOG

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WW-TP-04

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

PHOTOGRAPH

Photo 1: Facing Southeast

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:

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TEST PIT LOG

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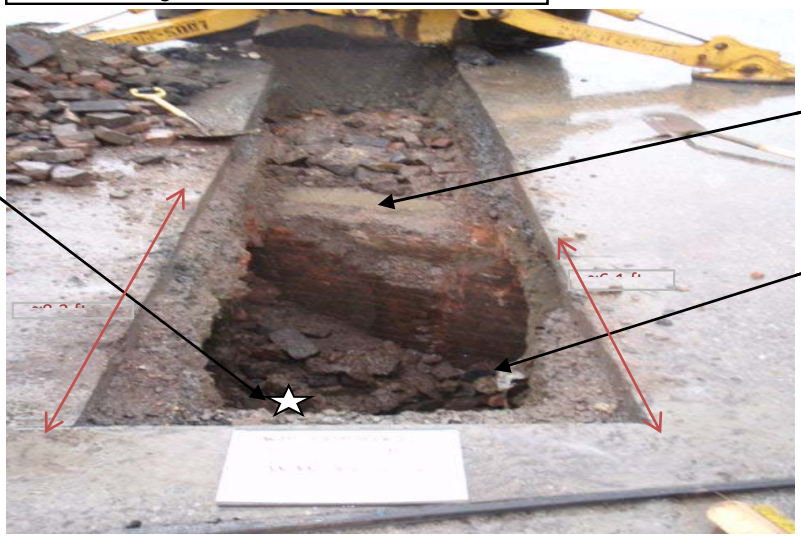
WW-TP-05

GROUND SURFACE ELEVATION (FT):	0	LOCATION:	50 Kent Avenue
NORTHING:	0	EASTING: 0	TOTAL DEPTH: ~17.3 ft
OBSERVED BY:	Maura MacLeod	TOTAL LENGTH:	~3.1 ft
CHECKED BY:	Amy Malsbary	TOTAL WIDTH:	~6.5 ft
EQUIPMENT:	0	DATUM VERT. / HORZ.:	NAVD 88 / NAD83 NY East Zone
WEATHER:	Rain, 55 F	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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WW-TP-06

GROUND SURFACE ELEVATION (FT):		LOCATION:	50 Kent Avenue
NORTHING:	EASTING:	TOTAL LENGTH:	~14.8 ft
OBSERVED BY:	Maura MacLeod	TOTAL WIDTH:	~3.5 ft
CHECKED BY:	Amy Malsbary	TOTAL DEPTH:	~6.5 ft
EQUIPMENT:		DATUM VERT. / HORZ.:	NAVD 88 / NAD83 NY East Zone
WEATHER:	Partly sunny, 50 F	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			
			(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.
	0.2	WW-TP-06 (6-6.5)	
			Bottom of test pit at 6.5 feet.

NOTES:

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TEST PIT LOG

WW-TP-06

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

PHOTOGRAPH

Photo 1: Facing Southeast

NOTES:

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