



**PERIODIC REVIEW REPORT
2021-2024 MONITORING PERIOD**

**Bush Terminal Landfill Piers 1-4
Brooklyn, New York
NYSDEC Site No. B00031**

Prepared for

**New York City
Department of Parks and Recreation**
New York, New York

Prepared by

TRC Engineers, Inc.
Windsor, Connecticut



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TRC Project No. 435627

December 2024

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ENGINEER OF RECORD CERTIFICATION

I, James Peronto, am currently a registered professional engineer licensed by the State of New York and this Periodic Review Report was prepared in accordance with all applicable statutes and regulations and in substantial accordance with the Department-approved Site Management Plan for the Bush Terminal Landfill Piers 1-1 Site, Brooklyn, New York (NYSDEC Site No. B00031).

For each institutional or engineering control identified for the Site, except as noted below, I certify that all the following statements are true:

- (a) the institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by DER;
- (b) nothing has occurred that would impair the ability of such control to protect public health and the environment;
- (c) nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control;
- (d) access to the site will continue to be provided to DER to evaluate the remedy, including access to evaluate the continued maintenance of this control; and
- (e) if a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for their intended purpose under the document.

Exceptions to the above certification of the institutional and engineering controls include the following:

- 1. Pond bottom surveys conducted in 2019/2020 and again in 2023/2024 indicate that there are several locations within the central portions of the two on-site tidal ponds where the pond bottoms have a measured sand cover thickness less than the 1- to 2-foot thick specified cover; with a minimum measured sand cover thickness of 6 to 10 inches.
- 2. The eroded portion of the gravel/sand cover at the end of the gravel trail (where underlying, orange-colored demarcation fabric and black-colored geotextile fabric are exposed) leading down to the pond/wetland area requires repair/replacement.

All use restrictions, institutional controls, engineering controls and/or any operation and maintenance requirements applicable to the site are contained in a deed restriction created and recorded pursuant to ECL 71-3605 and that any affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.



12/16/2024
Date


Signature

NYS PE#83861

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.



1.0 INTRODUCTION

TRC Environmental Corporation (TRC) was retained by the New York City Economic Development Corporation (EDC) to conduct annual periodic reviews and prepare the Periodic Review Report (PRR) for the former Bush Terminal Landfill Piers 1-4 (hereafter referred to as the Site) in Brooklyn, New York. TRC previously conducted the annual inspections and prepared PRRs for the Site under contract to the New York City Department of Parks and Recreation (DPR) for the period of 2015 to 2021. In 2023, a new Memorandum of Understanding (MOU) was developed between EDC and DPR that reassigned the responsibility for the environmental site management including the maintenance and monitoring of the Site remedy components and complying with the NYSDEC-approved Site Management Plan (SMP) requirements from DPR to EDC. A copy of the MOU is provided in Appendix M. This PRR is prepared for the period of July 27, 2021 to October 15, 2024, 2024.

The location of the Site is shown on Figure 1. The Site which is now known as the Bush Terminal Park is the former Bush Terminal Landfill Piers 1-4 Site previously assigned NYSDEC Site No. B00031. The Site was remediated in accordance with the NYSDEC issued Record of Decision (ROD) dated March 2004 and State Assistance Contract (SAC) # C30324, Site # B00031-2, which was executed on April 30, 2007 and last amended on December 21, 2012.

A SMP that specifies the requirements for properly managing remaining Site contamination was prepared by TRC and dated October 2014. An Environmental Easement for the Site requires compliance with the SMP and all engineering controls (ECs) and institutional controls (ICs) placed on the Site. The ICs place restrictions on the Site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. The SMP includes a plan to maintain ICs and ECs (IC/EC Plan) and a plan for monitoring the performance and effectiveness of the selected remedy (Monitoring Plan). A Final Engineering Report documenting the completion of the Site remedy was prepared by TRC for the Site and dated April 2015. A Certificate of Completion was issued by NYSDEC for the Site on May 28, 2015.

The PRR is required to be completed and submitted annually to NYSDEC in accordance with the SMP. As specified in the SMP, the PRR must include the following information:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site;
- Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the Site during the reporting period in electronic format;
- A summary of any monitoring data and/or information generated during the reporting period with comments and conclusions;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, landfill gas), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A site evaluation, which includes the following:
 - The compliance of the remedy with the requirements of the site-specific ROD;
 - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
 - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
 - The overall performance and effectiveness of the remedy.

The PRR provides the information necessary to document the basis for the IC/EC certification. Following the last inspection of the annual reporting period, a qualified environmental professional or New York State-licensed Professional Engineer must complete and sign a certification for each IC and EC that confirms that all Site management requirements are being met. The signed certifications of ECs and ICs for the Site for this reporting period are included at the beginning of this report and in Appendix A.

The Periodic Review Report was provided to NYSDEC in electronic Adobe pdf format uploaded by TRC as a ZIP file using NYSDEC's File Transfer Service (FTS).

Section 2 of this report provides an overview of the Site remedy including the EC and ICs. Section 3 presents a summary of the Site monitoring plan requirements specified in the SMP. Section 4 presents the findings of the Site monitoring events conducted during this reporting period. Conclusions regarding the certification and any required maintenance activities and corrective measures are provided in Section 5.

2.0 PRIOR SITE INVESTIGATION FINDINGS

The following provides a summary of prior site investigation findings as presented in the SMP. Table 1 from the SMP and Figures 4 through 15 from the ROD are provided in Appendix B and present a summary of the previously detected contamination types and levels. Generally, the prior Site investigations determined that surface and subsurface soils/fill material, groundwater, and sediments were impacted by the presence of polycyclic aromatic hydrocarbons (PAHs) and metals in the landfill material. Methane was also present in soil gas as a result of the landfill operations. As a whole, the petroleum-related compounds, solvents, PAHs, and metals detected in the environmental media at the site are consistent with the alleged dumping of plating wastes and oil sludges at the site during the 1970s. Some PAHs may also be associated with demolition-type wastes, such as asphalt and roofing materials in the fill materials. The presence of methane within the soil gas at the site is also typical of waterfront landfill conditions.

Since the Site has been regraded with clean cover materials placed over the site, contaminated materials are no longer present at the surface of the site, and the contaminated surface soils/fill materials previously present on the surface of the site were redistributed during regrading. In addition, due to the regrading and cover placement, contaminated subsurface fill materials are now at greater depths than previously detected and reported. In all cases, the contaminated fill materials are below the clean cover materials associated with the Site remedy and described in Section 3.0.

The below summary provides additional details from the SMP on the site contamination prior to Site remediation. In addition, copies of several tables and figures presenting contamination information and referenced below from the project Record of Decision (ROD) are provided in Appendix B.

Surface Soil

Semivolatile organic compounds (SVOCs, mainly PAHs) and metals were the main contaminants of concern in surface soil. As indicated in Figure 4 from the ROD and in Appendix B, PAHs and iron were present at elevated levels throughout the site surface soils, with arsenic, cadmium, and/or lead also present at elevated levels at select locations. As indicated in Table 1 in Appendix B, individual PAHs were detected at levels as high as 100 ppm (pyrene). Iron was detected at levels ranging from 7,920 ppm to 59,500 ppm. Other metals commonly detected at elevated levels but

not identified as constituents of concern within the Site Investigation report include chromium, copper, mercury, nickel and zinc.

Subsurface Soil

SVOCs and metals were the main contaminants of concern in both the unsaturated and saturated soils. As indicated in Figures 5 and 6 from the ROD and in Appendix B, PAHs were present at elevated levels throughout the subsurface soils, with arsenic and/or lead also present at elevated levels at select locations. As indicated in Table 1 in Appendix B, individual PAHs were detected at levels as high as 140 ppm (fluoranthene in a saturated soil sample). The detection of 31,900 ppm lead at soil boring SB-7 (see Figure 6 in Appendix B) prompted the subsequent installation of three additional borings, which did not confirm the presence of a lead hot spot in this area. In general, higher levels of contamination were detected in the saturated subsurface soils than in the unsaturated subsurface soils. Other metals commonly detected at elevated levels in the subsurface soils but not identified as constituents of concern within the Site investigation report include beryllium, cadmium, chromium, copper, iron, mercury, nickel and zinc.

Sediments

Sediments sampled during the investigations included shoreline sediments (of which three of the 21 samples were more representative of soils than sediments and are therefore described as shoreline soils), pier sediments and pond sediments. Effects Range - Low (ERL) (lower 10th percentile) and Effects Range - Median (ERM) levels were the standards, criteria, and guidance (hereafter called SCGs) used in evaluating the sediment contaminant levels, as described in more detail in a footnote to Table 1 in Appendix B. As indicated in Figures 7 (based on ERLs) and 8 (based on ERMs) in Appendix B, SVOCs and metals were the main contaminants of concern in the sediments. In general, the highest SVOC concentrations were detected in the shoreline soil samples while the highest metals levels were generally detected in the pier sediment samples. The maximum concentration of an individual PAH was 4,200 ppm for fluoranthene in a shoreline soil sample. PAH levels in shoreline, pier and pond sediments were significantly less (i.e., less than 100 ppm for individual compounds). All of the metals detected in the sediments were generally present at levels less than 400 ppm, with the exception of 4,840 ppm lead in one pond sediment sample. Other constituents detected at elevated levels included 4, 4-DDT in shoreline soil samples

(concentrations ranged from 0.03 to 0.064 ppm) and polychlorinated biphenyls (PCBs) in one pond sample (at a concentration of 0.92 ppm).

Site Groundwater

The groundwater was previously evaluated with respect to both groundwater criteria based on use of the water as a drinking water supply (GA criteria) (even though the water is saline and is not used as a source of drinking water) and surface water criteria (Class I criteria), due to the potential discharge of groundwater directly into the Bay. A summary of the site groundwater data exceeding these criteria as presented in Table 2 from the ROD and in Appendix B.

As indicated on Figures 9, 10, and 11 in Appendix B, volatile organic compounds (VOCs), SVOCs and metals were the main contaminants of concern in shallow, intermediate and deep groundwater when compared to GA groundwater criteria. As indicated in Figures 12, 13, and 14 in Appendix B, when groundwater quality was compared to surface water criteria, the same groups of contaminants present at levels exceeding SCGs, but to a lesser extent than when the data were compared to the GA criteria. Individual VOC concentrations were generally less than 100 ppb and individual SVOC concentrations were generally less than 150 ppb. While numerous metals were present in unfiltered samples at levels exceeding the SCGs, a smaller subset of metals was present at elevated levels in the filtered groundwater samples. Few metals were detected at levels exceeding SCGs when groundwater samples were collected using low flow sampling methods. Such sampling methods reduce the amount of suspended particles in the groundwater samples. Given the reduction in metals levels in both the filtered samples and the samples collected using low flow methodologies, it can be concluded that the majority of the elevated metals concentrations were attributable to the presence of suspended soil particles, rather than dissolved metals.

The identified VOCs consisted mainly of petroleum compounds and solvents (chlorinated hydrocarbons) and were detected at levels exceeding SCGs in some groundwater samples. VOCs are relatively mobile in the environment, so they would be expected to leach into the groundwater. However, they typically volatilize from surface water and the low VOC concentrations in groundwater and low estimated rates of groundwater discharge indicate that it is unlikely that they



would pose a significant environmental threat, should the affected groundwater discharge to the adjacent Bay.

The SVOCs of concern mainly consist of PAHs, such as benzo(a)pyrene, benzo(a)anthracene and others. These compounds were detected above SCGs mainly in the soils and sediments, with a lesser frequency of exceedances detected in the shallow and deep groundwater samples. PAHs are known to persist in the soils and sediments and do not tend to leach into the surface water or groundwater.

Site Soil Vapor

Methane, a common landfill gas component, was previously detected in on-site soil gas samples. Generally, the highest methane levels were detected in the south central (between Piers 1 and 2) and west central (between Piers 2 and 3) portions of the site. Detected methane levels ranged from 0.5 to 18% and LEL readings ranged from 47 to 100%. Landfill operating requirements (6NYCRR 360-2.17) require that methane and other explosive gases must not exceed 25% of the LEL within structures and must not exceed the LEL at or beyond the property line.

3.0 SITE REMEDY

The Site remedy is fully described in the Final Engineering Report (FER) prepared for the Site dated April 2015. The entire set of as-built drawings presenting the constructed details of the remedy components are provided in Appendix E of the FER. A copy of the as-built drawing that presents the overall as-built site plan including the various site cover components is provided in Appendix C. As presented in the FER, the following provides a description of the components of the remedy:

1. Construction and maintenance of a site cover system consisting of a two-foot thick cover of soil, concrete pavers, synthetic turf/rubber shock pad, and/or associated gravel subgrade in the park lawn and wooded areas and a one- to two- foot thick soil cover in the wetlands, pond shore and pond bottom areas. All inland cover systems are underlain by a white-colored nonwoven geotextile demarcation fabric. The wetlands area and pond bottom cover systems are underlain by an orange-colored nonwoven geotextile demarcation fabric. The park lawn and wooded area cover system prevents human exposure to contaminated soil/fill remaining at the site, whereas the wetland and pond area cover system prevents human and ecological exposure to remaining contaminated soil/fill in this area.
2. Construction and maintenance of a riprap armor stone cover system along the site landfill shoreline consisting of a 4-foot thick primary armor stone layer, underlain by a 2-foot thick secondary armor layer, underlain by a 1-foot thick bedding stone layer, over a black-colored woven geotextile filter fabric. The shoreline riprap cover system prevents human and ecological exposure to remaining contaminated soil/fill along the site shoreline and provides shoreline stabilization to prevent the erosion of the landfill materials into the adjacent Bay. Stone riprap was also placed along the stone dikes located along western edges of the outer and inner tidal ponds to stabilize the dikes and provide further protection of the tidal pond area. Additional stone riprap recovered from the outer collapsed portion of Pier 1 was also placed on top of existing riprap along the south side of Pier 1, the south side of Pier 2, and the north side of Pier 4 to further stabilize the site's shoreline pier edges.
3. Passive landfill gas management to control landfill gas migration, and landfill gas monitoring to ensure that unsafe vapor intrusion conditions do not develop in the future. The passive system consists of a vent trench constructed of a high density polyethylene (HDPE) geogrid vent layer and gravel backfill along the eastern inland limit of the

landfill to intercept and safely vent landfill gas that may migrate off site (in an inland direction). In addition, a passive vent system consisting of vent wells and interconnected solid piping network was installed beneath much of the site, primarily including athletic field area, to provide a preferential pathway for landfill gas to safely vent to the atmosphere. This passive vent well/piping network is also connected by solid piping to a remote fenced vent location in the northwest corner of the adjacent on-site wooded area to allow for conversion of the passive system to an active venting/blower system if needed in the future.

The base of the one existing on-site 1,280 square foot Comfort Station building is a concrete pier-supported structure that does not directly contact the landfill grade; instead, there is a continuous 6- to 12-inch open air gap below the building. The interior base of most of the Comfort Station building, including the bathrooms, mechanical room, park maintenance office space, and employee locker rooms and lavatory consists of the following cross section from top to bottom: approximately 1/8-inch-thick epoxy-mortar coated floor, one layer of 1/2-inch thick cement board, and two layers of plywood (1/2" to 3/4" thick and 1" thick). In addition, the entire building exterior base is provided with approximate 4.5-inch thick layer of closed-cell polyurethane spray foam insulation (between exterior steel support girders), and a 2-inch thick covering layer of polystyrene foam insulation board. In the storage area part of the building, which is accessed through separate large exterior doorways and where there are no flooring penetrations, the interior floor or base of the building consists of two layers of plywood (1/2" to 3/4" thick and 1" thick) with the plywood floor edges along the walls sealed with silicone caulking. A separate electrical closet is located off one of the storage rooms and has a floor penetration for the main electrical supply conduit. The electrical closet interior floor consists of a 1.5-inch thick poured cement floor that is epoxy painted and lies over a 1-inch thick layer of plywood. The storage areas, which share a common open ceiling, are provided with several small wall vent holes as well as one large fixed open louvered grille-type vent and no mechanically operated heating, venting and air conditioning (HVAC) system. The rest of the building, including all public spaces, is provided with a mechanically operated HVAC system. The 160-sf mechanical room, which is situated between the public restrooms, is also provided with fixed open louvered grill-type wall vents. The remaining 800 sf of the building, including all public spaces, is provided with a mechanically operated HVAC system.

A subsurface house trap that extends from the building floor and into the underlying ground is provided for sanitary sewer piping in the mechanical room of the Comfort

Station building. This approximate 3-foot wide by 4-foot long by 3-foot deep trap was constructed by pouring concrete directly around the sewer piping that was installed in advance. The trap is constructed with a galvanized steel top frame and cover flush with the interior floor. The concrete interior of the sump is sealed with epoxy paint. The electrical and water service pipes for the building pass directly through the open-air space below the building without any associated open conduits, vault, sump, or other physical pathway for potential landfill gas migration into the building. Although the water piping is provided with a pipe (tube) foam insulation that extends around the pipe from inside the building to below grade for freeze protection, the pipe insulation is an elastomeric expanded closed-cell foam that does not transmit water or vapors. The water service pipe utility floor penetration is also sealed at the interior floor with the epoxy mortar floor coating. Gas utility services do not enter the building through the floor. Given the above as-built building conditions, it is highly unlikely that any landfill gases would migrate from underlying soils/fill material, across the 6- to 12-inch air gap below the building, through a minimum 8-inch thick building floor or into the sealed concrete sewer house trap and into the Comfort Station building.

4. Any future buildings with slab on-grade foundations, crawl spaces, basements or other features that extend below grade and present an area where gas accumulation may pose a hazard will require an active sub-slab depressurization and venting system unless otherwise approved by NYSDEC.
5. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the site.
6. Development and implementation of the SMP for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, and (3) reporting;
7. Periodic certification of the institutional and engineering controls listed above.

The Site remedy includes a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the controlled property are:

1. The property may only be used for restricted residential use (which includes active recreational uses as defined in 6 NYCRR subparagraph 375-1.8(g)(2)(ii)) provided that



- the long-term Engineering and Institutional Controls included in this SMP are employed.
2. The property may not be used for a higher level of use, such as unrestricted or residential use as defined in 6 NYCRR subparagraph 375-1.8(g) without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
 3. All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
 4. The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
 5. The potential for vapor intrusion must be evaluated for any buildings developed on the landfill site and any potential impacts that are identified must be monitored or mitigated;
 6. Vegetable gardens and farming on the property are prohibited;
 7. The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by a New York State licensed Professional Engineer or qualified environmental professional that the NYSDEC finds acceptable.

4.0 SITE MONITORING PLAN

The following presents a summary of the Site monitoring plan requirements specified in the SMP. The SMP should be referenced for specific details on the monitoring requirements and takes precedent over the below summary.

Inspections of all remedy components at the Site are to be conducted at the frequency specified in the SMP Monitoring Plan schedule presented in Table 1. The monitoring activities that cover the 2021-2024 monitoring period and are described in this report are listed in Table 1a.

A comprehensive site-wide inspection is required annually, regardless of the frequency of the PRR.

The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system.

Inspections are to be conducted in accordance with the schedule and procedures set forth in the Site Monitoring Plan section of the SMP.

Annual monitoring consisting of visual inspections of the integrity of the cover system is to be conducted for the first two years following the approval of the SMP. Site-wide inspections will be performed on a regular schedule at a minimum of once a year. In the initial 2015 to 2016 monitoring period, site inspections were conducted in May 2015 and March 2016. During the 2016 to 2017 monitoring period, a site-wide inspection was conducted in June 2017 with a follow-up site visit in July 2017. In the 2017-2018 monitoring period, the site-wide inspection was conducted in August 2018. For the 2019-2020 monitoring period, the site-wide inspection was conducted in October 2019. For the 2020-2021 monitoring period, the site-wide inspection was conducted in July 2021. Site-wide inspections are also performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. Due to COVID-19 pandemic travel and work restrictions, a site-wide inspection was not performed in 2020. For the



2022-2024 monitoring period, the site-wide inspections were conducted in November 2022, November 2023, and September 2024.

Groundwater monitoring was to be conducted on a quarterly basis (planned seasonally for January, April, July, and October) for the parameters indicated in Table 1 for the first year and annually thereafter, unless otherwise approved by NYSDEC based on prior monitoring results. In the initial 2015 to 2016 monitoring period, groundwater monitoring was conducted in May 2015 and March 2016. During the 2016 to 2017 monitoring period, groundwater monitoring was conducted in October 2016, March 2017, and June 2017. In the 2017 to 2018 monitoring period, groundwater monitoring began to be conducted on an annual basis and was performed in August 2018. During the 2019-2021 period, groundwater monitoring was performed in October 2019 and March 2021. Due to COVID-19 pandemic travel and work restrictions, groundwater monitoring was not performed in 2020. For the 2022-2024 period, groundwater monitoring was performed in August 2022, September/October 2023, and September 2024.

Landfill gas monitoring was to be conducted for methane and organic vapors on a quarterly basis (planned seasonally for January, April, July, and October) for the first two (2) years. After two years of landfill gas monitoring, the NYSDEC may be petitioned for its approval to discontinue or reduce monitoring, if conditions are warranted based on prior monitoring results. In the initial 2015 to 2016 monitoring period, landfill gas monitoring was conducted in May 2015 and March 2016. In the 2016 to 2017 monitoring period, landfill gas monitoring was conducted in October 2016, March 2017, and June 2017. In 2017 to 2018, based on the results of the first two years of monitoring, landfill gas monitoring began to be conducted on an annual basis during this period and was performed in August 2018. For the 2018 to 2019 reporting period, the landfill gas monitoring was performed in October 2019. During the 2020-2021 period, landfill gas monitoring was performed in June 2021. Due to COVID-19 pandemic travel and work restrictions, landfill gas monitoring was not performed in 2020. For the 2022-2024 period, landfill gas monitoring was performed in August 2022, September 2023, and September 2024.

Wetlands monitoring consisting of visual inspections of the plantings was to be conducted on a semiannual basis during the first two years and then annually thereafter for the next 3 years. The

frequency of monitoring thereafter will be determined by NYSDEC. In the initial 2015 to 2016 monitoring period, wetlands monitoring was conducted in May 2015 and March 2016. In the 2016 to 2017 monitoring period, wetlands monitoring was conducted in December 2016 and May 2017 with an additional post-storm wetlands monitoring event conducted in January 2017. In 2017-2018, wetlands monitoring began to be conducted on an annual basis, however, it was conducted in both March 2018 (post storm event) and July 2018. For this 2019 to 2021 period, wetlands inspections were conducted in August 2019, September 2020, and February 2021. For the 2022-2024 period, wetlands inspections were conducted in July 2022, October 2023, and October 2024.

The Monitoring Plan summarized below describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site, the cover system, and all affected site media identified below. All monitoring will be conducted in accordance with the protocols presented in the Field Sampling Plan in the SMP.

Site Cover: A qualified environmental professional will conduct a yearly inspection of the various site covers during the annual site inspection program. An as-built drawing depicting the various site cover types is presented as drawing L-2ASB in Appendix C. This inspection will include, at a minimum, visual inspection of the covers to determine if they are intact and free from damage and to verify that the underlying demarcation fabric is not visible. The Annual Site Inspection Log contained in the SMP will be completed for each annual inspection to document the condition of the various cover systems as well as other remedy components.

Groundwater: Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy. A network of eighteen (18) groundwater monitoring wells has been installed to monitor both up-gradient and down-gradient groundwater conditions at the Site. Six well nests with three wells each (shallow, intermediate, deep) were installed at four on-site locations and two upgradient off-site locations. The as-built groundwater well construction details are summarized in Table 2 with copies of the well construction logs provided in the SMP. A copy of the as-built Site drawing L-6ASB with the installed groundwater monitoring well locations is provided in Appendix C. Groundwater samples

will be analyzed for the following parameters: TCL VOCs (USEPA Method 8260; most current version), TCL SVOCs (USEPA Method 8270; most current version), and TAL metals (USEPA Methods 6010/7000; most current version). Groundwater samples will also be analyzed for total chloride to assess salt water intrusion. A listing of all of the compounds/analytes analyzed for in the groundwater samples along with established groundwater criteria is presented as Table 3. If non-aqueous phase liquid (NAPL) is encountered in a well and there is sufficient thickness/volume for sampling, it will be sampled and analyzed for TCL VOCs and TCL SVOCs as well as petroleum fingerprint identification (USEPA Method 8015B). The Groundwater Monitoring Log contained in the SMP will be completed to document the groundwater monitoring activities and well conditions.

Landfill Gas: Landfill gas monitoring will be performed on a periodic basis to assess the performance of the remedy. The network of gas monitoring wells has been installed to monitor landfill gas conditions directly upgradient of and adjacent to the site. The four wells VP-1 through VP-4 were installed directly upgradient of and along the edge of the landfill site, whereas well VP-5 was installed just north of the site and along the Bush Terminal shoreline to assess background subsurface gas conditions for this historic shoreline setting.

During the May 2015 site inspection, it was determined that three of the gas monitoring wells, VP-1, VP-2, and VP-5, were missing and had likely been destroyed during the park landscape phase paving activities at the Site. As a result, these three wells were replaced in February 2016 with new equivalent gas monitoring wells in close proximity to the prior well locations. The locations of the gas monitoring wells are shown on Figure 2 which includes the locations of the three new replacement wells VP-1R, VP-2R, and VP-5R.

The gas samples will be field tested for methane, carbon dioxide, oxygen and organic vapors. In addition to the measurement of landfill gases at the gas monitoring wells, ambient air gas monitoring will be conducted at the three on-site passive vents located adjacent to the athletic fields and within the on-site comfort station building to assess the

presence of any landfill gases inside the building. The Gas Monitoring Log contained in the SMP will be completed to document the landfill gas monitoring activities as well as the gas monitoring well, vent, and comfort station floor conditions.

Wetlands: The on-site wetlands area vegetation will be visually inspected by a qualified environmental professional for signs of disease, predation, or other disturbance. The overall general condition of the planted wetlands plants species *Spartina alterniflora* will be observed. The presence of any non-desirable invasive or non-native species will be documented to evaluate for eradication. The presence of any debris in the area will also be documented.

5.0 SITE MONITORING RESULTS

This section presents the findings of the implementation of the Site monitoring plan during the 2022-2024 reporting period. TRC conducted Site monitoring including three site inspections, three rounds of groundwater monitoring, and three rounds of landfill gas monitoring. In addition, DPR (2022) and TRC (2023 and 2024) conducted three wetland area inspections. As presented in Table 1a, the SMP-specified monitoring changed from quarterly to annual monitoring for the groundwater, landfill gas, and wetlands. The findings of the 2022-2024 monitoring events are presented below.

5.1 Cover System Monitoring

Annual site-wide inspections were conducted by TRC on November 18, 2022, November 11, 2023, and September 19, 2024. The 2022 site inspection was conducted by Ms. Aine Chalmer of TRC under Mr. Peronto's direction. The 2023 and 2024 site inspections were conducted by Michael Kensell of TRC under Mr. Peronto's direction. Mr. Peronto is a New York State licensed Professional Engineer (PE license number 083861). Copies of the Site Inspection Logs completed for the inspections are provided in Appendix D.

This section also presents a summary of the conduct of monitoring during site and park maintenance activities to ensure continued compliance with the management, monitoring and reporting requirements of the SMP. This included the conduct of inspections and monitoring during several park maintenance projects that penetrated the site cover. This Site work included the construction of sports field light pole foundations, the Pier 2 walkway restoration activities, and the installation of a new buried electrical ductbank for the comfort station.

As indicated by the completed 2022, 2023, and 2024 site-wide inspection logs, several deficiencies requiring park maintenance were observed. Several deficiencies were corrected during this period; however, the following remaining deficiencies have not yet been fully addressed based on the information provided to TRC or observed during subsequent site visits.

1. Stressed vegetation and bare soil patches present east of the south sports field and near the entrance to Pier 2 and along the walkway adjacent to north field.

2. Extensive vegetation growing along the wooded area fence line and across the wooded area requires cutting to maintain the integrity of the fence and to prevent the wooded area from being overgrown such that it cannot be monitored by Park personnel for public safety concerns. There is evidence of unauthorized public use of this restricted area (including debris, possible temporary shelters, signs of bonfires). The 4-foot high, wood-slat snow fencing along the pathway requires repair/replacement. More permanent durable rigid fencing (e.g., steel picket fence or chain-link fence) that is higher should be installed here to restrict public access to this area. A locking gate should also be provided in the fence to provide restricted/controlled access for park maintenance and Site monitoring personnel.
3. The fencing inland of the protected wetland/pond area requires repair to prevent public access to the ecologically sensitive wetland/pond area. The temporary fence opening/gate established off of the park pathway (near north edge of wooded area) must be closed and replaced with a permanent locking gate to restrict public access to the sensitive wetland/pond area while providing controlled access to authorized personnel (e.g., Billion Oyster Project (BOP), DPR Natural Resource Group). The open public access at this location has created multiple undesirable pathways through the area resulting in the destruction of wetland plantings and wear/erosion of the sand and gravel covers.
4. Asphalt pavement cracks in the park walkway and on the Pier 4 asphalt pavement surface require repair at several locations to maintain the long-term asphalt cover physical integrity. Pathway pavement cracks identified in prior years have been filled and this issue will likely require continued maintenance.
5. Along the south eastern edge of the Site, a small sink hole (approx. 2 feet wide by 2 feet long) is present just south of the Pier 2 gate entrance in the paved surface along the eastern edge of the concrete curb that runs along the eastern side of the Site. A prior much larger sink hole near this location had previously been filled/patched. This new small sink hole requires repair before it gets larger and undermines the curbing and adjacent site soil cover and perimeter fencing.
6. Small tears were observed in the artificial/synthetic turf on both the north and south sports fields. The tears require repair to maintain the integrity of the turf cover.
7. Several hairline cracks are present on the concrete floor of the women's and men's restroom and the office in the comfort station. These cracks should be repaired/sealed before they get larger to restrict potential sub-building landfill gas migration into the building.
8. Extensive vegetation growing along the gravel vent trench in the southeast edge of the park (east of south field) should be removed. The vegetation roots and detritus will clog the gravel vent trench reducing its permeability and thereby reduce the gas venting potential.
9. The outer pond upper shoreline area may require additional suitable coastal area, sandy soil plantings to maintain the long-term integrity of the sand cover in this area. The area was initially provided with erosion control blankets and coastal grass seeding, however, some of the coastal grass seed did not propagate and the erosion control blankets are deteriorating. To address this issue, DPR NRG planted herbaceous plugs and shrubs in

this area in 2017, 2018, and 2019. The monitoring of the plant growth in this area must continue to determine if additional plantings are necessary. The vegetation condition in this area has recently become a greater concern with the increased public foot traffic and resulting eroded trails in this area.

10. Several of the ground water monitoring wells require new padlocks for the well casing plugs and bolts for the flush-mount protective steel covers.
11. Floatable debris, including large wood timbers, requires removal from the wetland area and adjacent toe of the upland slope to minimize potential damage to the wetlands and upland sand slope. Other debris identified in this area in prior site-wide and wetland inspections has since been removed during multiple DPR NRG cleanup actions and this issue will require continued maintenance.

Although the site-wide inspections identified the need for continued maintenance of the Site cover system engineering controls, there are generally sufficient restrictions and a cover system in place to protect public health and the environment. Where the underlying demarcation layer has been exposed due to increased public access to the wetland/pond area, the cover must be reestablished at this location and public access restricted with more robust fencing. In addition, the long-term Site inspection and monitoring program and environmental easement with institutional control restricting land use, should ensure that the cover system for the Site soils and sediments continue to be effective in protecting public health and the environment.

Sports Fields High Mast Light Pole Foundations

In 2021, NYCEDC retained AECOM as the design engineer and construction manager for the installation of new footings for two of the sports field lighting posts located on the eastern edge of the south sports field and to install the high mast light poles for both sports fields on the site. The prior adjacent pole footings at the two locations, that reportedly had unacceptable settlement, were also removed and those locations backfilled to grade. Prior to the new foundation work, AECOM retained Craig Geotechnical Drilling of Mays Landing, New Jersey for the completion of geotechnical borings at the two new light pole locations on June 28 and 29, 2021. In advance of the borings and footing installation, which penetrated the clean soil cover, AECOM submitted written notifications of this work to NYSDEC in accordance with the SMP requirements. Copies of the written advanced notifications submitted to NYSDEC by AECOM for the geotechnical borings and pole foundations are provided in Appendix E. The foundation construction activities were completed from March 30, 2022 to April 13, 2022 by Gateway Demo of Hicksville, New



York under contract to NYCEDC. Daily logs prepared by AECOM during this work, including photo logs, were submitted to NYSDEC and copies of the logs are provided in Appendix E. During this work, TRC performed site visits on June 28 and 29, 2021 and April 4, 2022 to observe the activities. Copies of daily reports completed by TRC for these site visits are also provided in Appendix E. The construction of the new drilled shaft pole foundations was completed on April 8, 2022. The steel poles for all of the new field lighting were installed on May 5, 2022. Following the completion of the new light pole foundations, AECOM provided NY PE-stamped, as-built drawings for the new foundations. Copies of the as-built drawings are provided in Appendix E.

During the completion of the geotechnical borings and new light pole foundations, wastes were generated that required offsite disposal. The waste included excavated soil and water from the drilling operations. The soil was transported off site by Cardella Trucking of North Bergen, New Jersey to the Clean Earth of North Jersey facility in Kearny, New Jersey. Whereas, the wastewater was transported by McVac Environmental Services of New Haven, Connecticut to the Clean Earth of North Jersey facility in Kearny, New Jersey. The associated waste transport and disposal documentation is provided in Appendix E. The clean cover soil removed from above the demarcation layer at each location was segregated and reused during the backfilling of the locations. Where appropriate, new white-colored geotextile demarcation layer was installed below the 2-foot thick, clean soil cover at the new and backfilled foundation locations. Sand was imported to the site from Eastern Concrete Materials in Quinton, New Jersey for use as clean backfill. A NYSDEC Request to Import Form was completed and submitted on March 25, 2022 with NYSDEC email approval provided on March 28, 2022. The associated borrow material documentation is provided in Appendix E.

Pier 2 Paved Walkway Restoration

In 2021, NYCEDC retained AECOM as the design engineer and construction manager for the repair of the waterfront edge of the Pier 2 asphalt paved walkway that had partially deteriorated and was reported by TRC in prior annual site inspection findings. AECOM completed an engineering design for the repairs which included the removal of up to an 8'-9" width of the existing asphalt pavement and underlying base course and restoration with new paving and a



concrete edge beam along the southern and western edges of approximately 350 linear feet of the pier walkway.

A tidal wetlands permit (under NYS Environmental Conservation Law (ECL) Article 25) was obtained by NYCEDC for the project. In addition, a Work Permit was obtained from the NYC Department of Small Business Services (SBS) for the construction activities on the City-owned waterfront property. Copies of both permits and associated notifications are provided in Appendix F.

In advance of the asphalt pavement restoration, which included the replacement of site cover materials, AECOM submitted a written notifications of this work to NYSDEC in accordance with the SMP requirements. Copies of the written advanced notifications and associated submittals to NYSDEC are provided in Appendix F. The restoration construction activities were completed from January 13, 2023 to April 13, 2023 by EIC Associates, Inc. of Hicksville, New York and Empire Construction of Brooklyn, New York under contract to NYCEDC. Daily logs prepared by AECOM during this work, including photo logs, were submitted to NYSDEC and copies of the logs are provided in Appendix F. The installation of a shoreline railing at this location is currently under consideration. As a result, the as-built drawings for the project will be completed after a decision has been made concerning the railings. Copies of the as-built drawings will be provided with the next PRR.

Dense graded aggregate (DGA) was imported for the new pavement subbase from the Tilcon Mt. Hope Quarry in Wharton, New Jersey. A NYSDEC Request to Import Form was completed and submitted on February 1, 2023 with NYSDEC email approval provided on February 1, 2023. The associated borrow material documentation is provided in Appendix F.

During the completion of the pavement restoration, wastes were generated that required offsite disposal. The waste included excavated asphalt pavement, soil, and wash water from the pavement restoration. The asphalt pavement was transported off site by Cardella Trucking of North Bergen, New Jersey to the PPark facility in Prospect Park, New Jersey. The soil was transported off site by Munoz Trucking of North Arlington, New Jersey to the Clean Earth of Carteret in Carteret,



New Jersey. The wash water was transported off site by ACV Environmental to Cycle Chem in Elizabeth, New Jersey. The associated waste transport and disposal documentation is provided in Appendix F.

Comfort Station Electrical Conduit Interconnect

In 2023, NYCEDC retained Gilbane as the general contractor for the installation of a new underground electrical supply conduit ductbank designed by Dewberry Engineers for the comfort station building located on the Site. The new electrical ductbank enters the Bush Terminal Complex at the intersection of 1st Avenue and 43rd Street. The southern most portion of the new ductbank that runs approximately 500 feet from an existing underground electrical manhole north of the comfort station to the north side of Pier 4 (approximately 80 feet from the southern pier edge) is located on the Site. The new conduit was installed directly below an existing asphalt paved park pathway. The remaining portion of the new duct bank to the north is located outside of the Site limits. The conduit installation required the on Site excavation of a 5-foot wide by 3.5-foot deep trench for the ductbank and two 5 foot by 5-foot square by 6-foot deep excavations for associated manholes. The existing asphalt pavement and underlying base course and soil were removed from the trench and segregated for offsite disposal.

In advance of the duct bank construction, which included the removal, penetration and replacement of Site cover materials, Gilbane submitted a written advanced notification of this work to NYSDEC on November 10, 2023 in accordance with the SMP requirements. Copies of the written advanced notification and associated submittals to NYSDEC are provided in Appendix G. The duct bank construction activities were completed by New York Concrete Corporation of Staten Island, New York. The intrusive construction activities below the pavement/subbase cover were completed on the Site from December 28, 2023 to January 8, 2024. TRC conducted perimeter dust monitoring and organic vapor monitoring of excavated soils. The concrete encasement was poured on January 9, 2024 with the stone backfill completed later. The asphalt paving of the trench was completed in the Spring on April 8, 2024. Daily logs prepared by TRC during the trench excavation work, including the dust monitoring records and photo logs, were submitted electronically to NYSDEC and copies of the logs are provided in Appendix G.



The concrete-encased conduit was constructed in the bottom 1 foot of the trench with a new orange demarcation layer (polyethylene safety fence) placed along the top of cured concrete and the sides of the trench between the concrete encasement and asphalt/subbase cover. A 1-foot 1-3/4 inch thick layer of stone backfill was placed above the concrete encasement. The stone source was the Eastern Concrete Materials quarry located at 3620 Route 23N in Hamburg, New Jersey (referred to as the Hamburg Stone Quarry). Eastern Concrete Materials is the Aggregates Division of the Vulcan Materials Company. A NYSDEC Request to Import Form for the stone source was completed by Gilbane and submitted on January 4, 2024 with a NYSDEC email approval of the stone provided on January 5, 2024. The stone was covered with a 4½ inch thick layer of asphalt. Following the completion of the duct bank construction, Gilbane provided TRC a submission with copies of the stone backfill delivery tickets, concrete delivery tickets, asphalt delivery tickets, photographs (installed demarcation layer, stone backfill, asphalt paving), demarcation layer material product specification sheet, and a NY PE-stamped as-built drawing for the Site work. Copies of the backfill and cover materials documentation for this project are provided in Appendix G.

Soil excavated from the utility trench required off-site disposal. Prior to removal, TRC collected three soil samples from the soil stockpile on January 10, 2024 for laboratory waste disposal characterization analyses for the off-site disposal. The soil was transported off site by D&A Contracting of Parsippany, New Jersey to the former NJ Zinc site (managed by Phase III Environmental) located at 1120 Mauch Chunk Road, Palmerton, Pennsylvania. The Phase III Environmental site is permitted to accept the soil for beneficial use by the Pennsylvania Department of Environmental Protection General Permit for Processing/Beneficial Use of Residual Waste (Permit No. WBGR096-NE003). Approval for the soil disposal at the Phase III Environmental NJ Zinc facility was provided by Impact Environmental, the authorizing engineer for the facility, in a letter dated January 18, 2024. The associated waste characterization, transport and disposal documentation for this project is provided in Appendix G.

5.2 Groundwater Monitoring

Groundwater monitoring was conducted by TRC on October 17-19, 2016; March 13, 16-17, 2017; June 13-15 and July 31, 2017, August 8-10, 2018, October 1-3, 2019, March 22-24, 2021, August



16-18, 2022, September 27-28 and October 2, 2023, and September 17-19, 2024. Generally, the groundwater monitoring was conducted on a quarterly basis for the first two years in 2016 and 2017 in accordance with the SMP. However, a monitoring round planned in July 2016 was not performed due to a delay in DPR funding for the monitoring program. In accordance with the SMP plan to conduct quarterly monitoring the first two years and annual thereafter, annual groundwater monitoring began in 2018. However, groundwater monitoring was not conducted in 2020 due to COVID-19 pandemic travel and work restrictions. This reporting period includes the results from the annual monitoring performed in 2022, 2023, and 2024.

The groundwater monitoring was conducted in accordance with the procedures established in the site-specific Field Sampling Plan (FSP) contained in the SMP. The locations of the eighteen (18) Site groundwater monitoring well locations are shown on as-built drawing L-6ASB in Appendix C. Copies of the Groundwater Monitoring Logs completed for the groundwater monitoring events are provided in Appendix D.

The groundwater samples were analyzed for TCL VOCs, TCL SVOCs, TAL metals, and total chloride except when a non-aqueous phase liquid layer was found floating in one well (MW-4S) and the groundwater in that well was not sampled. Copies of the laboratory data reports for the August 2022, September/October 2023, and September 2024 monitoring events conducted during this reporting period including NYS Analytical Services Protocol (ASP) Category B data deliverables are provided in Appendix H. Electronic copies of the NYSDEC EQuIS electronic data deliverables (EDDs) for these annual groundwater monitoring events can be provided separately to NYSDEC.

The groundwater data was validated by TRC, a party independent from the laboratory in accordance with the project Quality Assurance Project Plan (QAPP) contained in the SMP. The QAPP specifies that at least fifty (50) percent of the groundwater data be validated. At least 50 percent of the groundwater data from all six monitoring events was validated. For each event, the data validation results are presented in two Data Usability Summary Reports (DUSRs), one for the organic analyses (VOCs and SVOCs) and another for the inorganic analyses (metals and chloride). The DUSRs completed for the two events conducted during this monitoring period are provided

in Appendix I. Per the QAPP, the DUSRs were produced in accordance with the May 2010 NYSDEC Technical Guidance for Site Investigation and Remediation (DER-10), Appendix 2B. The DUSRs were compiled after data validation was performed for each analytical parameter in accordance with the following documents (most current versions used for this reporting period listed):

- VOCs & SVOCs: USEPA National Functional Guidelines for Organic Superfund Methods Data Review, EPA 540-R-20-005 (November 2020)
- VOCs: USEPA Region 2, Validating VOCs by Gas Chromatography/Mass Spectrometry (GC/MS), SOP HW-24, Revision 4, September 2014
- SVOCs: USEPA Region 2, Validating SVOCs by GC/MS, SOP HW-22, Revision 5, December 2010
- Metals: USEPA National Functional Guidelines for Inorganic Superfund Data Review, EPA-542-R-20-006 (November 2020)
- Metals: USEPA Region 2, ICP-MS Data Validation, SOP HW-3b, Revision 1, September 2016
- Mercury and Cyanide: USEPA Region 2, Mercury and Cyanide Data Validation, SOP HW-3c, Revision 1, September 2016

Data validation resulted in the qualification of selected data points due to various QC nonconformances. The following table summarizes the qualifiers that were used for the data qualification process:

DATA QUALIFIER	QUALIFIER DEFINITION
J	The analyte was positively identified; the associated numerical value is the approximate (i.e., estimated) concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated numerical value is the approximate (i.e., estimated) concentration of the analyte in the sample. Result is biased high.
J-	The analyte was positively identified; the associated numerical value is the approximate (i.e., estimated) concentration of the analyte in the sample. Result is biased low.
UJ	The analyte was not detected above the sample reporting limit; the reporting limit is approximate.
U	The sample was analyzed for, but was not detected above the sample reporting limit.
R	The sample result is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified

Table 4 summarizes the QC nonconformances identified during the data validation process for the 2016, 2017, 2018 2019, 2021, 2022, 2023, and 2024 monitoring events. In general, data were

found to be valid as reported and were considered acceptable for decision-making purposes. Data qualifications applied to the data as a result of sampling or analytical errors are presented in the data usability summary reports presented in Appendix I and included with the groundwater sample data summarized in the attached Tables 5 through 8.

Groundwater data were evaluated by comparison with New York State's Ambient Water Quality Standards and Guidance Values for Class GA groundwater, as presented in the Division of Water Technical and Operational Guidance Series (TOGS 1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. Class GA groundwater represents a source of drinking water and the groundwater classification that the NYSDEC would likely assign to the Site. Under the Environmental Easement, the use of the groundwater underlying the property is prohibited without treatment rendering it safe for the intended use.

A summary of the groundwater sample laboratory data for all Site quarterly groundwater monitoring events, including those from the prior monitoring period, along with the comparison to Class GA criteria is provided in Tables 5 through 7. Summaries of the groundwater constituents that exceeded Class GA criteria for the monitoring performed in 2015-2016, 2016-2017, 2017-2018, 2018-2019, 2020-2021, 2022, 2023, and 2024 are also provided on the attached Figures 3A, 3B, 3C, 3D, 3E, 3F, 3G, and 3H. During the March 2016 monitoring event, a thin floating oil layer was present in well MW-104S and therefore an oil sample was instead collected from that well and those sample analysis result are presented separately in Table 8. In August 2018, October 2019, March 2021, August 2022, September 2023, and September 2024 an oil layer was again present in well MW-104S, so no groundwater samples were collected from that well. The oil sorbent sock present in the well was replaced during the monitoring events, with the used oily socks collected in a drum temporarily stored in the on-site locked storage shipping container located adjacent to the on-site comfort station. The following provides an overview of the groundwater sample analysis results including the NYS groundwater quality standards and guidance criteria comparison for all of the events.

Volatile Organic Compounds (VOCs)

A summary of the VOCs groundwater sample data from all six reporting periods including the highlighting of those VOCs concentrations exceeding Class GA criteria is presented in Table 5. VOCs were detected above the laboratory method detection limits in at least one of the monitoring rounds in all of the wells. A total of eleven (11) different VOCs were detected at concentrations exceeding Class GA standards or guidance values. VOCs were detected above Class GA criteria in 10 of the 18 monitoring wells including exceedances at 6 shallow wells (MW-101S, MW-102S, MW-103S, MW-104S, MW-105S, and MW-106S), 3 intermediate wells (MW-101I, MW-102I, and 103I), and 2 deep wells (off-site upgradient wells MW-101D and MW-102D). Below is a summary of the VOCs detected at concentrations exceeding the Class GA criteria (provided below) in the groundwater samples (with detected concentration that exceeded the criteria) collected from 2015 to 2024:

- 1,1,1-Trichloroethane (TCA) (5 µg/L standard) was detected in upgradient off-site well MW-101D (15 micrograms per liter (µg/L), 15 µg/L, 14.5 µg/L, 16.1 µg/L, 21.2 µg/L, 19.8 µg/L),
- 1,1-Dichloroethane (DCA) (5 µg/L standard) was detected in upgradient off-site wells MW101S (5.3 µg/L, 5.9 µg/L, 8.7 µg/L), MW-101I (13 µg/L, 20.9 µg/L, 18.8 µg/L), MW-101D (27 µg/L, 25 µg/L, 25.6 µg/L, 26.8 µg/L, 38.3 µg/L, 35.4 µg/L, 10.6 µg/L, 8.3 µg/L, 18.7 µg/L), MW-102I (10.5/9.4 µg/L), MW-102D (5.2 µg/L), and MW-103I (5.8 µg/L),
- 1,1-Dichloroethene (DCE) (5 µg/L standard) was detected in upgradient off-site wells MW-101S (6.8 µg/L, 10.9 µg/L), MW-101I (10 µg/L, 5.1 µg/L, 5.9 µg/L, 29.3 µg/L, 18.9 µg/L), and MW-101D (21 µg/L, 22 µg/L, 22.9 µg/L, 21.9 µg/L, 26.3 µg/L, 28.5 µg/L, 9.2 µg/L, 6.8 µg/L, 15.3 µg/L), MW-102I (10.5/9.4 µg/L), and MW-102D (6.7 µg/L)
- 1,3-Dichlorobenzene (3 µg/L standard) was detected in well MW-106S (4.9 µg/L),
- Acetone (50 µg/L standard) was detected in well MW-105D (66.3 µg/L),
- Benzene (1 µg/L standard) was detected in wells MW-103S (2.0 µg/L, 2.8 µg/L, 2.3 µg/L, 2.6 µg/L, 3.0 µg/L, 3.5 µg/L, 1.8 µg/L, 2.0 µg/L, 1.2 µg/L, 1.8 µg/L, 2.5 µg/L) and MW-105D (13.1 µg/L),
- Chlorobenzene (5 µg/L standard) was detected in wells MW-104S (12 µg/L, 10.1 µg/L, 9.1 µg/L, 13.3 µg/L) and MW-105S (22 µg/L, 29 µg/L, 5.7 µg/L, 11.2 µg/L, 12.9 µg/L, 8.7 µg/L, 5.5 µg/L, 7.3 µg/L, 5.8 µg/L, 6.4 µg/L),
- Tetrachloroethene (PCE) (5 µg/L standard) was detected in upgradient off-site wells MW-101S (6.1 µg/L, 13 µg/L, 6.1/5.9 µg/L, 9.8/9.7 µg/L, 13 µg/L, 10.8 µg/L, 11.8 µg/L, 10.7 µg/L, 10.7 µg/L, 5.3 µg/L), MW-101I (25 µg/L, 35 µg/L, 15.5 µg/L, 26.8

- µg/L, 26.2 µg/L, 28.9 µg/L, 37.3 µg/L, 26.9 µg/L, 7.0 µg/L, 25 µg/L), MW-101D (16 µg/L, 25 µg/L, 14.1 µg/L, 25.4 µg/L, 17.3 µg/L, 26 µg/L, 13.5 µg/L, 9.1 µg/L, 7.1 µg/L), and MW-102S (6 µg/L, 5.9 µg/L, 6.7 µg/L), 102I (5.7 µg/L, 6.3 µg/L, 6.0 µg/L, 11.5 µg/L, 54.4/54.2 µg/L, 35.5/33.7 µg/L, 18.4/16.3 µg/L, 24.0/25.0 µg/L), and MW-102D (18.4 µg/L),
- Trichloroethene (TCE) (5 µg/L standard) was detected in upgradient off-site wells MW-101S (29 µg/L, 27 µg/L, 22.3/23.6 µg/L, 28.7/28.7 µg/L, 40.2 µg/L, 26.9 µg/L, 17.3 µg/L, 21.8 µg/L, 30.0 µg/L, 16 µg/L, 8.4 µg/L), MW-101I (39 µg/L, 19 µg/L, 16.2 µg/L, 19.2 µg/L, 16.4 µg/L, 12.4 µg/L, 15.8 µg/L, 27.2 µg/L, 20.1 µg/L, 30 µg/L), MW-101D (130 µg/L, 180 µg/L, 140 µg/L, 160 µg/L, 130 µg/L, 180 µg/L, 84 µg/L, 41.4 µg/L, 18.0 µg/L, 10.0 µg/L), MW-102S (16.7 µg/L, 16.0 µg/L), and MW-102I (5.4 µg/L, 27.9/27.5 µg/L, 20.7 µg/L/18.2 µg/L, 48.6/43.1 µg/L), and MW-102D (5.7 µg/L)
 - cis-1,2-Dichloroethene (DCE) (5 µg/L standard) was detected in upgradient off-site wells MW-101S (6.3 µg/L), MW-101I (5.4 µg/L, 28.3 µg/L) and MW-101D (20 µg/L, 24 µg/L, 21.9 µg/L, 22 µg/L, 23.3 µg/L, 30.6 µg/L, 9.4 µg/L, 5.5 µg/L), MW-102I (7.7/7.9 µg/L), MW-102I (10.5/9.4 µg/L), and MW-102D (5.5 µg/L),
 - Vinyl Chloride (2 µg/L standard) was detected in on-site well MW-103I (2.9 µg/L, 3.4 µg/L).

The highest overall VOC levels were generally observed in wells MW-101S, MW-101I and MW-101D located off the Site along the upgradient edge of the Site. In 2023, elevated levels of VOCs were also detected in upgradient well MW-102S, MW-102I, and MW-102D. VOCs detected in the groundwater at the upgradient off-site MW-101 and MW-102 well locations include the chlorinated hydrocarbons TCA, 1,1-DCA, 1,1-DCE, PCE, TCE, and cis-1,2-DCE; with some of the highest VOC concentrations detected in the upgradient off-site deep well MW-101D, intermediate wells MW-101I and MW-102I, and/or shallow well MW-101S during this monitoring period. During at least one monitoring event in this period, PCE and TCE were detected above Class GA standards in upgradient off-site wells MW-101S, MW-101I, MW-101D, MW-102S, MW-102I, and MW-102D. VOCs that were detected in wells on the Site at concentrations exceeding Class GA criteria are acetone (well MW-5D in 2016), benzene (wells MW-103S in 2015, 2016, 2017, 2018, 2019, 2021, 2022, 2023, and 2024) and MW-105D in 2016), chlorobenzene (wells MW-104S in 2015, 2016 and 2017 and MW-105S in 2015, 2016, 2017, 2019, 2021, 2022, 2023, and 2024), 1,3-dichlorobenzene (well MW-106S in 2015), 1,1-dichloroethane (well MW-103I in 2019), and vinyl chloride (well MW-103I in 2019 and 2024).



Attached in Appendix J is a copy of the report titled *Hydrogeologic Investigation Proposed Bush Terminal Basement Dewatering 1st Avenue, Brooklyn, New York* prepared by Tectonic for Turner Construction and the NYCEDC dated October 24, 2007. This hydrogeologic study, which includes groundwater sampling and chemical analysis, was conducted directly upgradient of the Site and included one of the shallow wells sampled under the Site monitoring program (well MW-101S which is identified as MW-3 in the hydrogeologic study). As indicated by the groundwater data presented in Table 1 of the report, the study documents the presence of higher levels of the same chlorinated VOCs that were detected in the Site groundwater monitoring program. Since the net ground water flow direction is to the west towards the adjacent Bay and the highest concentrations of chlorinated VOCs were detected in wells upgradient and off of the landfill Site, the chlorinated VOCs detected in the groundwater are believed to be related to a source off of the Site.

Petroleum product was found in on-site well MW-104S during each sampling event. During the May 2015, October 2016, March 2017, and June 2017 events, there was no measurable oil layer, however, small oil droplets were initially observed in the purge water and a sheen and petroleum odor were present at sampling. In the March 2016, August 2018, October 2019, March 2021, August 2022, September/October 2023, and September 2024 events, there was an apparent thin layer of oil floating on the water in the well, however, its thickness could not be accurately measured since the oil would adhere to the oil/water interface probe sensor. As a result of the presence of an apparent floating oil layer in the March 2016, August 2018, October 2019, March 2021, and August 2022, September 2023, and September 2024 events, a groundwater sample was not collected from well MW-104S during these events. However, in March 2016 an oil sample was collected from the well for laboratory testing. The oil sample was analyzed for VOCs (Method 8260C), SVOCs (Method 8270D), and petroleum hydrocarbon identification scan (NYSDOH Method 310.13). A summary of those oil sample analysis results is presented in Table 8. No VOCs were detected in the oil. The petroleum hydrocarbon scan performed by the laboratory did not identify the petroleum type. However, upon collection from the well it appeared to be a heavy/viscous oil. An oil absorbent sock is suspended in well MW-104S to capture the oil product in the well and the sock is removed and replaced during the monitoring events. The used oil absorbent socks are collected in a 55-gallon drum for off-site disposal. The closed and labelled



drum is located in the locked steel ocean shipping container located near the comfort station building and used for park maintenance storage.

Slight petroleum-like odors were previously incidentally noted during the May 2015 sampling of off-site well MW-102I and on-site wells MW-103D and MW-104S (where petroleum product was present during all sampling events). During the August 2018 event, a petroleum-like odor was noticed in on-site wells MW-103S, MW-103I, MW-103D and MW-104S (where petroleum product was present). A rotten egg- or sulfur-like odors were incidentally noted during the May 2015 or March 2016 sampling of on-site wells MW-103S, MW-103I, MW-103D, MW-104S, MW-105S, and MW-106S. During the August 2018 event, a sulfur-like odor was noted at well MW-106S. During the October 2019 event, a sulfur-like odor was noted during the initial purging of wells MW-103I and MW-103D. Prior to the October 2019 sampling, elevated PID organic vapor readings were measured in the headspace of wells MW-106S, MW-106I, and MW-106D; however, only estimated low to nondetectable concentrations VOCs were detected in the groundwater samples from these wells. During the 2022 monitoring, slight petroleum odors were noted during the purging of wells MW-103S and MW-104I and an organic odor was noted in well MW-106S. During the 2024 monitoring, a slight rotten egg- or sulfur-like odor was noted at wells MW-106S (previously noted in 2015, 2016, 2018, and 2022) and MW-106I. Naturally occurring anaerobic biodegradation processes that produce hydrogen sulfide (evident by the rotten egg-like odor) may be the result of petroleum degradation (sulfate reduction) and/or the sulfur reducing bacteria associated with marine sediments below the landfill.

Semivolatile Organic Compounds (SVOCs)

A summary of the SVOCs groundwater sample data from all of the monitoring periods including the highlighting of those SVOCs concentrations exceeding Class GA criteria is presented in Table 6. SVOCs were detected above the laboratory method detection limits in at least one of the monitoring rounds in all eighteen (18) of the wells. SVOCs detected in all eighteen (18) wells were phthalate compounds at very low levels below GA criteria except at one well, MW-4S, where the concentration of bis(2-ethylhexyl)phthalate DEHP) exceeded the respective GA criteria. Other SVOCs detected below GA criteria includes several polycyclic aromatic hydrocarbons (PAHs)

most at very low estimated concentrations below method detection limits in wells MW-3S and MW-4S. One SVOC, phenol, was detected at concentrations exceeding the Class GA standard for total phenolic compounds (1 ppb) in ten wells. The two SVOCs, 2-methylphenol and/or 3-and 4-methylphenol, were detected above Class GA standard for total phenolic compounds in one well MW-105D. Below is a summary of the SVOCs detected at concentrations exceeding the Class GA criteria (provided) in the groundwater samples (with detected concentrations that exceeded) collected from 2015 to 2024:

- Phenol (1 µg/L total phenols standard) was detected above GA Criteria in wells MW-101S (2.8J/3.1J µg/L, 3.6J µg/L, 2.2J µg/L), MW-101I (4.6J µg/L), MW-101D (6.2J µg/L), MW-102S (7.5J µg/L), MW-102I (4.0J), MW-102D (6.8J µg/L), MW-103S (4.5J µg/L, 7.3J µg/L), MW-103I (3.4J µg/L, 6.9J µg/L, 2.4J µg/L), MW-103D (2.2J µg/L 7.6J µg/L), MW-104S (6.9J µg/L), MW-104I (3.4 J µg/L, 6.5J µg/L), MW-104D (4.5J µg/L), MW-105S (2.7J µg/L, 7.3J µg/L), MW-105I (6.1J µg/L, 3.3J µg/L), MW-105D (6.2J µg/L, 4.9JQ µg/L, 9.4J µg/L, 3.4J µg/L), MW-106I (4.4J µg/L, 3.4J µg/L),
- 2-Methylphenol (1 µg/L total phenols standard) was detected above GA Criteria in well MW-105D (1.7 µg/L, 12.1 µg/L, 4.3J µg/L),
- 3+4-Methylphenol (1 µg/L total phenols standard) was detected above GA Criteria in wells MW-103D (4.1J µg/L), MW-105S (3 µg/L), and MW-105D (2.1J µg/L, 16.1 µg/L),
- Bis(2-ethylhexyl)phthalate (DEHP) (5 µg/L standard) was detected above GA Criteria in well MW-104S (22.8 µg/L, 6.8 µg/L), and
- Benzo(a)anthracene (0.002 µg/L standard) was detected above GA Criteria in well MW-103S (0.71J µg/L).

The greatest number of SVOCS and highest overall total SVOC concentrations (all below Class GA values) have generally been detected in on-site shallow wells MW-3S and MW-4S; with the J qualified estimated detections at these two wells consisting primarily of PAHs. Well MW-4S, where petroleum product was encountered, had the highest total SVOC concentration when last sampled in 2017. The oil sample results indicate the presence of several PAHs and DEHP, a plasticizer and common laboratory contaminant. DEHP was also previously detected at low estimated concentrations in three other wells (MW-103D, MW-105S, and MW-106I).

Metals and Chloride

A summary of the metals groundwater sample data from all monitoring periods including the highlighting of those metals and chloride concentrations exceeding Class GA criteria is presented

in Table 7. Eight (8) different metals were detected in groundwater samples at concentrations exceeding Class GA standards or guidance values. Metals were detected above Class GA criteria in all 18 monitoring wells. Below is a summary of the metals detected at concentrations exceeding the Class GA criteria (provided) in the groundwater samples (with detected concentrations that exceeded) collected from 2015 to 2024:

- Antimony (3 µg/L) was detected above GA criteria in the two upgradient off-site shallow wells MW-101S (3.6 µg/L, 5.2 µg/L, 3.34/3.39 µg/L, 3.53 µg/L) and MW-102S (5.8 µg/L/5.9 µg/L, 4.6 µg/L, 8.16 µg/L, 4.33 µg/L, 4.57J+ µg/L, 9.33 µg/L, 4.86 µg/L, 4.42 µg/L, 4.1 µg/L) and on-site wells MW-103S (4.5J µg/L), MW-104D (5.24 µg/L, 3.34 µg/L), MW-105I (3.08 µg/L), MW-105D (3.63 µg/L, 6.16 µg/L, 4.5 µg/L), MW-106S (3.35J µg/L /3.03J µg/L), MW-106D (5.24 µg/L),
- Arsenic (25 µg/L) was detected above GA criteria in well off-site upgradient well MW-101S (3.34 µg/L /3.39 µg/L, 3.53J+ µg/L, 3.36J µg/L) and on-site wells MW-105S (34.7J+ µg/L) and MW-105I (25.6 µg/L, 25.1 µg/L),
- Iron (300 µg/L) was detected above GA criteria in all but well MW-104S that was only tested once for metals,
- Lead (25 µg/L) was detected above GA criteria in the two upgradient off-site wells MW-101S (34.8 µg/L/48 µg/L, 48.8 µg/L, 31.9 µg/L), MW-102D (27.6 µg/L, 36.1 µg/L, 32.0 µg/L), and one on-site well MW-103I (28 µg/L),
- Magnesium (35,000 µg/L) was detected above GA criteria in all but the three wells MW-102S, MW-103D, and MW-104S,
- Manganese (300 µg/L) was detected above GA criteria in twelve (12) of the eighteen wells,
- Selenium (10 µg/L) was detected in the six wells MW-102S (14.5 µg/L). MW-103S (12.5 µg/L /36.3 µg/L, 21.7 µg/L, 20.5 µg/L), MW-103I (12.4 µg/L, 12 µg/L), MW-103D (11 µg/L), MW-104D (36.9 µg/L /126 µg/L, 32.1 µg/L, 31.4 µg/L), MW-105D (54.8 µg/L /118 µg/L), and MW-106D (16.6 µg/L /39.1 µg/L, 16.7 µg/L/18.6 µg/L),
- Sodium (20,000 µg/L) was detected above GA criteria in all eighteen wells, and
- Chloride (250,000 mg/l) was detected above GA criteria in all eighteen wells.

Magnesium, manganese, and sodium, as well as calcium and potassium that do not have Class GA values, are common salt water intrusion indicators and the highest levels of these naturally occurring elements were detected in the deep wells MW-104D, MW-105D, and MW-106D. Iron, which is also naturally occurring mineral, was detected in all but one of the wells above Class GA criteria. Selenium, another naturally occurring compound, was primarily detected at the highest levels in the three deep wells MW-104D, MW-105D, and MW-106D indicating that its presence



is also likely related to naturally occurring conditions including salt water intrusion (as supported by below discussed elevated chloride levels at these same wells).

The highest chloride levels were generally detected in deep wells MW-104D, MW-105D, and MW-106D that also had the highest metals indicative of salt water, further supporting the occurrence of salt water intrusion. The detected chloride levels are greater than 250 mg/l across the site indicating that the groundwater meets the NYSDEC TOGS 1.1.1 definition of *saline groundwater*.

The results of the groundwater monitoring do not indicate any significant changes in the Site groundwater quality. Based on the 2022 through 2024 groundwater monitoring results, there continues to be signs of petroleum-related impacts at on-site wells MW-103S (benzene, PAHs), MW-103I (1,1-dichloroethane, cis-1,2-dichloroethylene, vinyl chloride), MW-103D (1,1-dichloroethane, chlorobenzene, cis-1,2-dichloroethylene, trichloroethylene), MW-104S (NAPL), and MW-105S (1,2-dichlorobenzene, carbon disulfide, chlorobenzene). Although SVOCs consisting of phenol were previously reported at estimated concentrations above Class GA criteria in several wells, including an upgradient off-site well, no phenol was detected during this period.

To assess potential seasonal trends in groundwater contaminant conditions, TRC prepared constituent concentration versus time trend graphs for several of the wells where Site contaminants of concern were detected above Class GA criteria. Therefore, this assessment did not include constituents believed to be associated with salt water intrusion or naturally occurring background constituents (e.g., antimony, manganese, magnesium, iron, sodium, chloride) or the upgradient contaminants detected in off-site wells MW-101 and MW-102 (e.g., TCE, PCE). The constituent and well pairs for which these trend graphs were prepared are: Acetone and MW-105D, Benzene and wells MW-103S and MW-104S, Chlorobenzene and wells MW-104S and MW-105S, and Arsenic and wells MW-105D, MW-105I, and MW-105S. These contaminant trend graphs are presented in Appendix K and indicate no discernable seasonal trends in the contaminant levels at the well locations. In general, the concentrations of these contaminants at these wells are decreasing over time. However, the concentrations of arsenic at well MW-105I and benzene at



MW-103S increased in 2024 from the prior decreasing trends but less than prior high concentrations of each at the location.

In accordance with the SMP, quarterly groundwater monitoring was to be performed for the first two years and annually thereafter unless the frequency is approved otherwise by NYSDEC. Based on the monitoring results for the first two years, annual groundwater monitoring was performed for the prior 2017-2018 monitoring period. For the 2019-2021 monitoring period, groundwater sampling events were performed in October 2019 and March 2021. Monitoring was not performed in 2020 due to COVID-19 pandemic travel and work restrictions. For the 2021-2024 period, monitoring was performed annually in August 2022, September/October 2023, and September 2024. In the future, the NYSDEC may be petitioned for its approval to further reduce or discontinue monitoring, if conditions are warranted based on prior monitoring results.

The Site institutional controls, that include an environmental easement restricting Site groundwater use without treatment, continue to prevent any use or ingestion of the Site groundwater.

5.3 Landfill Gas Monitoring

Landfill gas monitoring was conducted by TRC on October 17-19, 2016; March 13, 16 -17, 2017; June 13-15, 2017, August 9, 2018, October 1-2, 2019, June 17, 2021, August 16, 2022, September 27, 2023, and September 17, 2024. Generally, the landfill gas monitoring was conducted on a quarterly basis for the first two years in accordance with the SMP. However, a monitoring round planned in July 2016 was not performed due to lack of DPR funding for the monitoring program at that time. In accordance with the SMP, landfill gas monitoring is now being performed on an annual basis. However, the 2020 monitoring was not performed due to COVID-19 pandemic travel and work restrictions. The results of the August 2022, September 2023, and September 2024 landfill gas monitoring performed during this reporting period are presented below.

The landfill gas monitoring includes monitoring at five gas monitoring wells, three passive vent pipes, and inside the Comfort Station building. The five gas monitoring wells are located just off of the Site, with four wells (VP-1 through VP-4) located along the inland edge of the landfill area and one located inland and just north of the landfill area to assess background conditions away



from the landfill. The three passive vent pipes which are connected to the subsurface vent piping below the athletic fields on the Site are located adjacent to the athletic fields. The locations of the gas monitoring wells are shown on Figure 2. Copies of the Gas Monitoring Logs completed by TRC for all events are provided in Appendix D.

Gas monitoring at the passive vent pipes adjacent to the athletic fields was conducted at the screened goose neck vent pipe outlets located approximately 12 feet above grade and at the adjacent ambient breathing level approximately 4 to 6 feet above grade. The FID monitor in conjunction with the photoionization detector (PID) organic vapor monitor is used to aid in distinguishing between methane and non-methane organic vapors. In addition, a landfill gas meter equipped with an infrared methane analyzer is used for the gas monitoring. The gas monitoring from 2022 to 2024 showed low levels of organic vapors at the three 12-foot high vent pipe outlets ranging from 1.0 to 14.6 part per million (by FID) and methane ranging from approximately 0.0 to 0.5% by a landfill gas infrared analyzer. However, no significant organic vapor or methane readings were detected and no odors were noticed at the ambient breathing level at the three passive vent locations for the athletic field areas.

Low levels of organic vapors were detected at all five of the gas monitoring wells which are located along the inland eastern edge of the Site. A summary of the 2022 to 2024 gas well monitoring data is presented along with prior gas well monitoring data from 2006 to 2021 in Table 9. The majority of the highest organic vapor levels measured in the off-site gas wells ranging from 2 to 4,500 ppm (FID or PID) and methane levels ranging from 0.2 to 0.5% were observed during the Summer to Fall monitoring events including those from June 2006, August 2006, September 2007, and October 2019. Generally, these higher organic vapor and methane levels is what would be expected later in the Summer and the Fall seasons after ambient air temperatures increase, the ground temperature rises, and greater subsurface gases are produced from increased bacterial activity and volatilization. However, since the October 2019 event, those elevated organic vapor levels have not been observed. Methane levels ranging from 0.1 to 0.4% were also observed at other times throughout the year at multiple well locations. After 2006, the highest organic vapor readings (primarily PID levels) have generally been observed at off-site wells VP-3 and VP-4, which are located directly inland of the central portion of the Site landfill area, and at off-site well



VP-5 located inland and north of the landfill area. The elevated organic vapor levels at the off-site locations inland from the landfill are likely from the VOCs that were also detected in the groundwater upgradient of the Site.

The gas monitoring that was conducted inside the Comfort Station building did not reveal any indications of landfill gas intrusion inside the building. Low levels of organic vapors (0.1 to 1.4 ppm) were detected in several of the equipment/material park maintenance storage areas during this periods' monitoring events. However, based on the odors evident in these areas, the vapors were believed to be associated with the storage of containers of paint, cleaning products, and petroleum products in the areas and not landfill gas vapor intrusion.

Based on the results of the landfill gas monitoring, the passive landfill gas venting system engineering controls continue to be effective in protecting public health.

In accordance with the SMP, quarterly landfill gas monitoring was performed for the first two years (2006/2007 and 2016/2017) and the frequency thereafter to be determined. Since 2018, the gas monitoring has generally been performed annually except for in 2020 due to the COVID-19 pandemic. Based on the landfill gas monitoring results to date, it is recommended that the landfill gas monitoring continue to be performed on an annual basis in late Summer (July to August) or Fall (September to October) when the ground temperature is greatest and the highest documented organic vapor readings were measured in the gas monitoring wells.

5.4 Wetland Monitoring

Inspections of the wetland area were conducted by a representative of the DPR Division of Forestry, Horticulture and Natural Resources (FHNR) on July 8, 2022. Annual wetland area inspections were conducted by TRC on October 24, 2023 and October 15, 2024.

Based on the findings of the 2022-2024 wetland area inspections, the DPR Natural Resources Group (NRG) Stewardship Team performed the following debris removals/cleanups, invasive species removals, and wetlands and shoreline plantings to maintain the restored wetland and adjacent upland shoreline area.

- On February 5, 2022 - NYC Parks NRG Stewardship Team repaired wetland goose fencing and cut back black locust sapling in the upland area.
- On February 17, 2022 - NYC Park certified applicator herbicide treatment to the cut locust saplings.
- On July 6, 2022 - NRG Stewardship Team held a volunteer clean-up event to remove trash and debris from the wetland and marsh areas. Larger heavy debris was not removed.
- On July 8, 2022 - NRG Stewardship Team and volunteers planted *Spartina alterniflora* plugs and repaired goose fencing in the low marsh area.
- On November 18, 2022 - NRG Stewardship Team held a volunteer clean-up event to remove trash and debris from the wetland and marsh areas and cut back black locust saplings.
- on December 8th. NYC Park certified applicator herbicide treatment to the cut locust saplings.
- On December 16, 2022 - NRG Stewardship Team and volunteers clean-up event for the wetland and marsh areas.
- On February 18, 2023 and June 15, 2023 - NRG Stewardship Team and volunteers clean-up events for the wetland and marsh areas.
- In October and November 2023 - NYC Parks Super Stewards cut black locusts in wetland adjacent area.
- December 8, 2023 - Volunteers removed debris and cut back remaining black locusts in the high marsh.
- December 12, 2023 - NYC Parks certified applicator treated locust stumps with herbicide and repaired herbivory fence.
- January 8, 2024 - NRG conducted a site visit. Observed large wood timbers washed up into the wetland area and requires removal. Wood stakes associated with the previously installed, now deteriorated core logs present a trip hazard and require removal/cutting. Stone riprap/gravel cover appears to be partly scoured from the spillway area of the dike between the two ponds and requires replenishing.
- February 3, 2024 - World Wetlands Day cleanup event. NRG Stewardship Team and volunteers repaired herbivory fence and collected more than 240 pounds of trash in 24 bags.
- July 3, 2024 - Summer cleanup event. NRG Stewardship Team and volunteers collected more than 230 pounds of trash in 23 bags.
- July 24, 2024 - NRG conducted a site visit to inspect the wetlands area conditions. During this inspection, the lower end of the gravel path leading down from the park pathway to the pond area was observed to be eroded which exposed underlying, black-colored geotextile and orange-colored demarcation fabric. A new exposed sand pathway leading from the park to the pond/wetland area has been created at a new fence opening off the

park path. The fence openings need to be secured to restrict this open public access and use, and the eroded areas stabilized to eliminate continued erosion of this cover in this area.

- September 30, 2024 - Fall planting and cleanup event. NYC Parks staff and volunteers planted 800 plugs of *Spartina alterniflora* in the low marsh area, repaired herbivory fence and collected more than 160 pounds of trash in 19 bags.
- November 15, 2024 - NRG Stewardship Team and volunteers held a clean-up event for the wetland and marsh areas.

According to the SMP, wetlands area inspections were to be conducted on a semiannual basis (i.e., twice in a one-year period) for the first two years and then annually for the next three years with the frequency thereafter to be determined. For the first two 2015-2016 and 2016-2017 monitoring periods, wetland inspections were conducted semiannually. The 2017-2018 period included an annual wetland inspection and a post storm wetlands inspection. For the 2018-2019 reporting period, an annual inspection was conducted on October 9, 2018. For the 2019-2021 reporting period, wetland inspections were conducted on August 1, 2019, September 11, 2020, and February 24, 2021. During this 2022-2023 reporting period, wetland inspections were conducted on July 6-8, 2022 (DPR NRG), October 24, 2023 (TRC), and October 15, 2024 (TRC). On January 8, 2024 and July 24, 2024, DPR NRG also conducted site visits to inspect the wetland area conditions. Copies of the Wetland Inspection Reports completed by the DPR and TRC for the wetland inspections and the NRG stewardship activities are provided in Appendix D.

As indicated by the wetland inspection reports, the following deficiencies were identified and subsequently addressed in this reporting period as summarized below:

- Some floatable debris and wood timber debris was present in the wetlands area both in the low marsh and high marsh wetland areas. Cleanup of trash and other debris in the area was conducted by DPR during several events in 2022, 2023, and 2024. Large pieces of floatable debris that accumulates in this area requires continued removal.
- Invasive locust samplings continue to be observed in the upland slope adjacent to the wetland area. The samplings were cut flush to the ground by a DPR licensed applicator and treated with herbicide by DPR in December 2023. Invasive locust requires annual removal from the area.

- Areas of stressed, damaged, or missing wetland plantings (*Spartina alterniflora*) were observed at the lower marsh wetland area. Supplemental *Spartina alterniflora* plantings were completed in this area by DPR NRG in July 2022 and September 2024. The area will continue to be monitored, and additional plantings completed by DPR NRG as needed.

The 4-foot high welded wire range fencing along the park pathway inland of the pond/wetland area is damaged/open at several locations requires repair/replacement to restrict public access to the wetland/pond area. Public access through the fence openings have resulted in destruction of vegetation and the erosion of the gravel and sand covers in the upland marsh area. In addition, the opening at the west end of this fence that was meant for controlled/restricted DPR and BOP access to the pond and wetland area is no longer secure. The increased public access to this area has resulted in the damage of a portion of the gravel cover at the bottom end of the gravel trail (where underlying, orange-colored demarcation fabric and black-colored geotextile fabric are exposed) leading down to the ponds and wetland area. The gravel cover and underlying geotextile at this location requires repair/replacement. More secure rigid fencing such as DPR steel picket ornamental or chain-link fencing and a locking gate are required along the top of the wetland/marsh area slope and adjacent to the park pathway to restrict public access and damage to the ecologically sensitive wetland/marsh area. Furthermore, as previously recommended, a section of fencing with signage indicating no public access should be installed where Pier 4 intersects the dike between the two tidal ponds to restrict public access to the inner dike, ponds and adjacent wetland area from Pier 4 at low tide.

The gravel/stone cover of the stone spillway between the two tidal ponds has eroded and requires restoration with additional gravel/larger stone to maintain the grade of the spillway that maintains the desired water elevation/depth in the inner pond at low tide.

Semiannual wetland monitoring was conducted the first two years (2015-2017) and annual wetlands inspections were required for the next three years in accordance with the SMP. As documented above, three wetland area inspection were conducted in the 2019-2021 monitoring period. From 2022 to 2024, three wetland area inspections were performed. In accordance with the SMP, after completion of the three years of annual wetland monitoring (total five years post construction monitoring) the monitoring results can be evaluated to determine if NYSDEC should



be petitioned for its approval to discontinue or reduce the wetland monitoring. The findings of the 2022-2024 inspections indicate the need to continue the conduct of annual inspections and maintenance of the wetland area.

Tidal Ponds Bathymetric Surveys

In October 2019 and May 2020, TRC retained a subcontractor to perform a bathymetric survey of the two on-site tidal ponds to aid in assessing the current pond bottom cover thickness. As indicated in the project Site Management Plan (SMP), the pond bottom sand cover thickness for each pond is required to be a minimum 1- to 2-foot thick sand cover for the outer pond and a minimum 1-foot thick sand cover for the inner pond with both sand covers underlain by an orange-colored filter fabric demarcation layer. After the completion of the pond filling and bottom capping and the subsequent post cap pond bottom surveys, the sand cover thickness was calculated to range from approximately 1- to 8-feet thick in the outer pond and approximately 1- to 5-feet thick in the inner pond based on a comparison of the pre cap to post cap pond bottom surveys.

Under contract to DPR, TRC retained Normandeau Associates to complete a current bathymetric survey of each pond bottom on October 22, 2019. In addition, ten (10) pond bottom cover gauge monitoring stations were established in the ponds for continued future assessment of pond bottom cover thicknesses. The monitoring stations consist of 3-foot long steel T-posts driven 1 to 1.5 feet into the sand bottom with fiberglass staff gauges set approximately 0.5 feet into the sand and attached to the posts with zip ties. The actual sand thickness was measured at each gauge location by pushing a thin metal yardstick by hand into the sand until firm refusal was encountered, with refusal considered the demarcation fabric installed at the bottom of the clean cover layer. If refusal was not encountered within the 3-foot length of the yardstick, the sand thickness was recorded as greater than 36 inches (36+). The installed elevation of the top of the sand cover at each gauge was surveyed for future use in determining sand thickness from observed gauge readings. Based on the survey and data collected at the monitoring stations completed on October 22-23, 2019, a bathymetric survey drawing prepared by Normandeau for the two ponds. The survey drawing includes the locations of the bottom cover monitoring stations and provides tabulated location-specific information including actual measured thicknesses of the sand cover at each location. A copy of the 2019 bathymetric survey drawing is provided in Appendix L.

To aid in assessing the sand pond bottom cover thicknesses, TRC used AutoCAD computer software to compare the current bathymetric survey data to the previously completed 2011/2012 precap survey data for each pond. This AutoCAD survey comparison generated contour maps for each pond bottom that depict the difference between the surveys and thereby should represent the change from the precap condition to the current condition or the existing cover thickness. Copies of the resulting pond bottom cover thickness contour maps are provided in Appendix L as one plan showing both pond areas and as separate larger scale maps for both the inner pond and outer pond areas. In addition, TRC compared the information received from actual sand cover thickness measurements made at each of the ten monitoring stations to the thickness determined by the CAD survey comparison in the summary table provided on the TRC drawings provided in Appendix L. This comparison indicates the following findings:

- There are several areas within each pond where the cap was calculated to be less than 12 inches in thickness as well as smaller areas where it is calculated to be less than 0 inches (i.e., none present).
- As indicated by monitoring station summary table, the precap to current survey comparison calculations are not fully supported by the actual sand cover thickness measurements made at the ten stations.
- The actual sand thickness measurements at 8 of the 10 station locations exceeded the minimum 1- to 2-foot sand cover thickness requirement.
- In comparing the cover thicknesses from the actual physical measurements at the monitoring stations to those calculated by the precap to current survey comparison, the measured cover thickness was greater than or equal to the calculated thickness at 5 of the 10 locations (1, 2, 7, 8, and 10). At two other station locations (3 and 9) where actual thicknesses were measured to be greater than 36 inches (36+), the survey calculated thicknesses were also found to be greater than 36 inches. The other three station locations (4, 5, and 6) had measured thicknesses less than those calculated and are all located in the outer pond with the thickness at one location (4) differing by nearly 3 feet between the calculated (60") and actual (27").
- During the 2019 survey and placement of the monitoring stations, there were no locations observed along the pond bottoms where the orange demarcation fabric was observed (i.e., would indicate that no cover is present).
- Given the significant differences between the actual sand cover thickness measurements and those calculated by the precap to current survey comparisons and no observations of exposed orange demarcation fabric on the pond bottoms, TRC questions the accuracy of the precap survey map that was generated from non-spatially uniform data collected during five survey events over a 6-month period from 12-21-2011 (inner pond) and 3-31-2012 to 5-10-2012 (outer pond).



On May 21, 2020, under contract to TRC, Normandeau Associates conducted a supplemental pond bottom survey to collect additional information to further assess the bottom clean sand cover thickness for the tidal ponds. The findings of the supplemental survey are presented in Appendix L on the Normandeau precap to 2019 cap bathymetry drawing and discussed below. Based on the findings of the 2019 bathymetric survey, the supplemental pond bottom survey included the performance of the following activities by the Normandeau dive crew:

- inspection of the pond bottoms for the presence of any exposed orange demarcation fabric,
- where exposed fabric was found, the divers measured the approximate dimensions of the areas and obtained GPS coordinates for the locations (unfortunately clear underwater photographs could not be taken due to the turbid water along the pond bottoms),
- installation of two additional sand cover thickness monitoring staff gauge stations in the main area of concern in each pond where minimum sand cover thicknesses were previously indicated by the 2011/2012 precap survey (prior to sand cover placement) and 2019 bathymetric survey comparison, and
- measurement of the pond bottom cover thicknesses at four locations within the main areas of concern in each pond where less than 1 foot and/or less than 0 feet of cover were indicated by the 2011/2012 precap survey and 2019 bathymetric survey comparison.

The second attached file is an updated TRC drawing that presents the 2019 results of the CAD survey comparison along with the new supplemental 2020 sand thickness survey information tabulated. Note that the thickness contours from the bathymetric survey comparison have not been updated based on these spot readings. The following presents a summary of the findings of the key supplemental survey tasks listed above.

Pond Bottom Demarcation Fabric Visual Survey

During the supplemental survey in May 2020, the lower few feet of the water column in the deeper central portions of the ponds was very turbid and as a result it was difficult to clearly see the pond bottoms including any exposed orange demarcation fabric in these areas. As a result, the divers had to feel along the bottom in these areas for the presence of exposed fabric along approximately 5-foot spaced traverses in the main areas of concern. In addition, in the shallow pond areas, the divers were able to visually survey for exposed fabric. During the pond bottom survey for exposed fabric, the diver crew found exposed fabric near two slope edges of the outer pond at the locations. The observed fabric at each location was found to be black in color. The approximate dimensions of the exposed fabric at each location was as follows: Fabric 1 is 5-foot by 5-foot and Fabric 2 is 2 feet by 6 feet. Based on the black fabric color (not orange) and proximity to the



adjacent stone-covered slope bottom edges, the black fabric is believed to be the lower edge of the black-colored woven fabric installed below the stone riprap that was placed along that upland area of the adjacent stone-covered slope.

TRC previously observed several locations along the stone-covered slope edges that surround the ponds where the orange demarcation fabric edge is visible in the shallow water at low tide. The orange fabric edges, some tethered with white-colored sandbags, were visible at several locations along the pond edge following the completion of the pond bottom cover installation.

Supplemental Monitoring Gauge Installation and Sand Thickness Measurements

Based on the findings of the initial pond bottom sand cover thickness assessment, two (2) additional monitoring gauges were installed in each pond in May 2020 for the continued long-term monitoring of the sand cover thickness. Also, sand cover thicknesses were physically measured at four additional locations in the main areas of concern in each pond. The four new gauge station locations were installed in the main areas of concern not having a gauge station and where the prior precap to current cap CAD comparison indicated less than 0 foot of sand cover. The actual measured sand cover thicknesses at the 4 new gauge stations are provided in a table on the attached drawings along with the previously measured sand thicknesses at the previously monitored ten existing gauge station locations. The actual sand cover thickness measurements at the 4 new gauge station locations showed sand thickness ranging from 6 to 16 inches; with inner pond locations (Gauge 11 and Gauge 12) having 16 and 7 inches of sand cover and the outer pond locations (Gauge 13 and Gauge 14) having 12 and 6 inches of sand cover.

In addition to physically measuring the sand cover thickness at these four new gauge monitoring stations, the sand cover was measured at four additional locations in each pond to further assess the sand cover thickness in the previously identified main areas of concern. As indicated by the additional Sand Thickness measurements (“ST” location labels on drawings), the actual measured sand thicknesses ranged from 7 to 17 inches in the outer pond and 6 to 31 inches in the inner pond. In the main pond bottom areas where the prior CAD survey comparison indicated less than 0 foot of sand cover, actual sand cover thickness ranging from 6 to 31 inches were measured during

this supplemental survey. This actual physical observation of sand cover in these areas was supported by the absence of any visibly exposed orange demarcation fabric in these areas.

Summary of 2019/2020 Pond Bottom Bathymetric Survey Findings

During the 2019 bathymetric survey and the 2020 supplemental pond bottom survey, no evidence of exposed orange demarcation fabric was found along the pond bottoms, including areas where a minimum 1-foot thick sand cover had been installed. Furthermore, in those areas where sand cover thicknesses of less than 1 foot, including some less than 0 foot, were calculated based on a comparison of the precap survey to the 2019 survey, at least 6 inches of actual sand cover was measured with up to three of the locations having 16-17 inches of cover and one with 31 inches of cover. Although no areas were not found to have no sand cover (i.e., demarcation layer exposed), the survey findings do indicate that there are areas in both ponds where the sand cover thickness is less than 1-foot thick; with a minimum sand thickness of 6 to 7 inches measured at several locations. Those areas having less than 1 foot of sand cover are primarily located in the center-most portion of the inner pond and the central part of the east end of the outer pond. However, most of the locations where sand thicknesses were physically measured in these areas showed actual sand cover thicknesses greater than 1-foot, with four locations in each pond having actual sand thicknesses of at least 2 feet and several locations having greater than 3 feet of sand cover.

2023-2024 Pond Bottom Sand Thickness Gauge Measurements

In October 2023 and October 2024, the Billion Oyster Project (BOP) personnel conducted visual inspections of the fourteen staff gauge monitoring stations installed on the pond bottoms and recorded the sand surface level observed at each gauge. Copies of the BOP Dive Reports prepared documenting these inspections are provided in Appendix L. A summary of the staff gauge readings observed during each inspection is presented in Table 10. The 2023 measurements indicate increased sediment thickness equal to or greater than 1 inch at eight (8) gauge locations. This included six locations in the outer pond (1, 2, 4, 5, 6, and 13) and two locations (8 and 9) in the inner pond, with the largest sand cover thickness increases of approximately 3 inches or more observed in the outer pond (locations 1, 2, 4, 6, and 13). The 2024 measurements indicate further increases in the sand cover thicknesses at five locations, including four in the outer pond (locations 1, 2, 4, and 13) and one in the inner pond (location 12). Based on the measurements, there were



no observed decreases in the sand cover thickness of the pond bottoms between 2020 and 2024 with three locations still having less than 1 foot of cover (locations #5 at 10.9 inches and #14 at 6 inches in the outer pond and location #12 at 7.5 inches in the inner pond).

Based on observations made during the BOP 2023 and 2024 staff gauge measurements, the markings on the pond bottom staff gauges are fouled with algae, barnacles and capidula and as a result they are becoming increasingly difficult to clean and read. Therefore, plans must be made to replace the gauges sometime over the next few years including measures to protect the new gauges (e.g., provide covers/sleeves) from a similar fate.

6.0 CONCLUSIONS

As a result of the inspections, some maintenance, improvements and repairs were made to existing site engineering controls. The most significant improvement/repair completed during this reporting period was the repair of Pier 2 pavement pathway shoreline edge. Additional maintenance activities (e.g., invasive species removal, brush clearing, debris cleanup) were conducted and are required on a routine basis for existing site engineering control components to ensure their long-term performance and the continued protection of public health and environment.

Although the site-wide inspections identified the need for some maintenance of the Site cover system engineering control, there is still sufficient cover system in place with no significant exposure of underlying demarcation fabric (except for one location along a path in the upland marsh area where public access is generally restricted), as well as an environmental easement institutional control restricting land use, to ensure that the cover system for the Site soils and sediments continue to be effective in protecting public health and the environment.

Several Site cover locations require repair to prevent further deterioration and to protect public health including the following locations:

- Due to uncontrolled public access to the pond/wetland area, a portion of the gravel/sand cover at the end of the gravel trail (where underlying, orange-colored demarcation fabric and black-colored geotextile fabric are exposed) leading down to the pond/wetland area requires repair/replacement.
- A small hole (approx. 2 feet wide by 2 feet long) in the paved area located just south of the Pier 2 gate entrance along the southeast edge of the Site requires repair/filling. This hole in the pavement must be filled before it gets larger and undermines the adjacent curbing, site soil cover, and perimeter fencing. The hole is near a prior hole that was fill/repaved.
- Small tears are present at two locations in the artificial/synthetic turf sports fields. The tears require repair to maintain the integrity of the turf cover.
- Small cracks in the comfort station concrete floor and asphalt park pathways require continued sealing/filling to prevent further deterioration of these covers.



The steel range and/or wood snow fencing that exists between the park pathway and wooded area and the pond/wetland area requires replacement with more secure, steel fencing (e.g., DPR steel picket ornamental, chain-link fencing) with locking gates to restrict public access and damage to the ecologically sensitive wetland area. Furthermore, as previously recommended, a section of steel fencing should be installed where Pier 4 intersects the stone dike between the two tidal ponds to restrict public access from Pier 4 to the inner dike, ponds and adjacent wetland area at low tide. Signage should also be installed at both locations indicating that there is no public access to this protected ecologically sensitive wetland area.

The groundwater monitoring results continue to show elevated VOCs above Class GA criteria, including several chlorinated hydrocarbons (e.g., TCE, PCE, DCE), upgradient of the Site and associated with an off-site source. In addition, low levels of VOCs were detected above Class GA criteria in the following three on-site wells MW-103S (benzene), MW-103I (vinyl chloride), and MW-105S (chlorobenzene). In addition, petroleum product (an apparent thin floating layer) was encountered in shallow well MW-4S. As a result, an oil absorbent sock has been installed in well MW-4S to recover the small amount of oil observed at this well. The absorbent sock is removed and replaced during the annual groundwater monitoring events and the used oily socks are collected in a 5-gallon pail for off-site disposal.

Site groundwater data shows elevated levels of several metals including magnesium, manganese, calcium, potassium and sodium, which are all common salt water intrusion indicators and the highest levels of these naturally occurring elements were detected in the deep wells MW-104D, and MW-106D that border the landfill water edge. The highest chloride levels have also generally been detected in the deep shoreline wells and elevated chloride levels indicative of saline groundwater were detected across the Site, further supporting the finding of salt water intrusion onto the Site.

Based on the five quarters of groundwater monitoring from 2015 to 2017 and annual monitoring performed in 2018, 2019, 2021, 2022, 2023, and 2024, the monitoring results do not indicate any significant changes in the Site groundwater quality. Furthermore, there are no discernable significant seasonal trends associated with the Site groundwater contaminant conditions. In



addition, the Site institutional controls, that include an environmental easement restricting Site groundwater use without treatment, continue to prevent any use or ingestion of the Site groundwater.

In 2007, a separate groundwater study was conducted by others directly upgradient of the Site (see report in Appendix J) that showed higher chlorinated VOC groundwater contaminant concentrations compared to those detected on the Site. In fact, chlorinated VOCs were detected at concentrations exceeding Class GA standards at only upgradient off-site wells. Therefore, since the net groundwater flow direction is to the west towards the adjacent Bay, chlorinated VOCs are not a documented Bush Terminal Landfill Site contaminant of concern, and the highest concentrations of chlorinated VOCs were detected in the wells upgradient and off of the Site, the chlorinated VOCs detected in the groundwater are believed to be related to an upgradient off-Site source and not the landfill Site.

In accordance with the SMP, quarterly groundwater monitoring was to be performed for the first two years and annually thereafter unless the frequency is approved otherwise by NYSDEC. Based on the monitoring results for the first two years, annual groundwater monitoring is now being performed. In the future, the NYSDEC may be petitioned for its approval to further reduce or discontinue groundwater monitoring, if conditions are warranted based on the monitoring results.

The landfill gas monitoring showed the continued generation of organic vapors and methane at the Site. Generally, most of the highest organic vapor and methane levels were observed during the Summer to Fall monitoring events, which is what would be expected after ambient air temperatures increase, the ground temperature rises and greater subsurface gases are produced from increased bacterial activity and volatilization. In addition, methane was also detected at other times throughout the year at multiple well locations. During the October 2019 monitoring event, some of the highest levels of organic vapors were detected in gas monitoring wells VP-3, VP-4, and VP-5. The highest October 2019 organic vapor readings were observed at off-site wells VP-3 and VP-4, which are located directly inland of the central portion of the landfill area and where VOCs were also detected in upgradient groundwater. However, since the October 2019 event, those elevated organic vapor levels have not been observed. Methane levels ranging from 0.1 to 0.4% were also

observed at other times throughout the year at multiple well locations. After 2006, the highest organic vapor readings (primarily PID levels) have generally been observed at off-site wells VP-3 and VP-4, which are located directly inland of the central portion of the Site landfill area, and at off-site well VP-5 located inland and north of the landfill area. The elevated organic vapor levels at the off-site locations inland from the landfill are likely from the VOCs that were also detected in the groundwater upgradient of the Site. The gas monitoring that was conducted inside the Comfort Station building previously and during this reporting period did not reveal any evidence of landfill gas intrusion in the building.

Based on the results of the landfill gas monitoring, the passive landfill gas venting system engineering controls continue to be effective in protecting public health. In accordance with the SMP, after conduct of the first two years of landfill gas monitoring, the frequency of monitoring thereafter will be determined. Based on the first two years of landfill gas monitoring, landfill gas monitoring is now being performed on an annual basis in late Summer or Fall when the ground temperature is greatest and the highest documented organic vapor readings were previously measured in the gas monitoring wells.

The wetlands inspections found that parts of the wetlands area plantings (*Spartina alterniflora*) had been damaged by goose herbivory. As a result, additional wetland plantings (*Spartina alterniflora*) were completed in the areas and additional goose fencing was installed by DPR around these areas to promote and sustain vegetation growth. DPR also worked with volunteers to complete additional plantings in the upland sandy slope area to prevent erosion. In addition, trash/debris that had washed up and accumulated in the wetlands and adjacent shoreline area was removed during several volunteer cleanups. Also, large/heavy wooden timbers that had accumulated in the area over the past several years and were too big for removal by volunteers were removed by the contractor that performed nearby shoreline erosion repairs in October 2019. The wetlands area and adjacent upland shoreline area will continue to be monitored on an annual basis and maintained with the removal of invasive plants and washed-up trash/debris and additional wetlands plantings as needed to restore the wetlands and stabilize the soil to protect the soil cover from erosion.



The cause of the apparent reduced sand cover thickness in each tidal pond is unknown, however, it is likely related to both wave and tidal effects, especially during storm/hurricane events, and the resulting hydrodynamic forces impacting sediment transport/movement in the tidal ponds. Although the sand cover thickness has been primarily reduced in central portions of each pond, the sand cover thickness elsewhere in the ponds is significantly greater with multiple locations having more than 3 feet of verified sand cover.

According to the BOP staff responsible for the oyster cages in the ponds, over the past few years there has been significant accumulation of sediments in the existing oyster cage pond bottom area such that they plan to add a bottom empty cage layer to elevate the existing oyster beds above the accumulated sediments. Therefore, concurrent with BOP's proposal to install additional oyster cages in the ponds, TRC recommends assessing the use of the additional BOP oyster cages or other artificial reef-like features in the central pond bottom areas having less than 1 foot of cover to provide for the natural accumulation of sand and long-term stabilization of the existing sand cover in those areas. In addition, the long-term disposition of the oyster cages or any other artificial reef-like structures and minimizing the disturbance of any accumulated sediments at the locations would need to be addressed (i.e., cages/reefs could not be moved or removed in the future). Furthermore, appropriate procedures and protective measures should be established to minimize the disturbance of the sand cover in those areas and throughout the ponds by the BOP staff and volunteers that access the oyster cages.

The 2023 pond sand bottom cover measurements indicate increased sediment thickness equal to or greater than 1 inch at eight (8) of the 14 staff gauge locations. This included six gauge locations in the outer pond (1, 2, 4, 5, 6, and 13) and two locations (8 and 9) in the inner pond, with the largest sand cover thickness increases of approximately 3 inches or more observed in the outer pond (locations 1, 2, 4, 6, and 13). The 2024 measurements indicate further increases in the sand cover thicknesses at five locations, including four in the outer pond (locations 1, 2, 4, and 13) and one in the inner pond (location 12). Based on the measurements, there were no observed decreases in the sand cover thickness of the pond bottoms between 2020 and 2024 with three locations still having less than 1 foot of cover (locations #5 at 10.9 inches and #14 at 6 inches in the outer pond and location #12 at 7.5 inches in the inner pond).



The 14 staff gauge monitoring stations established across the pond bottoms will continue to be used for the annual inspections and long-term monitoring of the pond bottom sand cover thickness along with visual inspections of the pond bottoms for any visible orange demarcation layer. In addition, these inspections should continue to be conducted during the time of the year when the pond water is clearest (i.e., late fall and winter), the tide is low, and there is minimal wave action (i.e., no wind or storm event). Due to fouling of the staff gauges and the gauge readings wearing off and becoming increasingly difficult to read, they will required replacement over the next few years.

The institutional and site use controls for the Site remain in place and are in the form of a deed restriction known as an Environmental Easement recorded with the Office of the City Register on October 16, 2014.

This Periodic Review Report along with the attached Institutional and Engineering Controls Certification Form (Appendix A) have been completed and are hereby submitted to NYSDEC for the 2021-2024 monitoring period. Based on the findings of the site inspections and monitoring program, the required site maintenance activities are identified in this report.

TABLES

Table 1
Monitoring/Inspection Schedule
Bush Landfill Piers 1-4, Brooklyn, New York

Monitoring Program	Frequency*	Matrix	Analysis
Cover Inspection Monitoring	Annually	Landfill and Shoreline Covers	Inspection & Maintenance
Wetlands Inspection Monitoring	Semiannually (April and July) for first 2 Years and Annually (July) for 3 Years, Frequency Thereafter To Be Determined ⁽¹⁾	Wetlands Plantings	Inspection & Maintenance
Groundwater Monitoring	Annually (October) for first 2 Years after SMP Approval and Frequency Thereafter To Be Determined ⁽¹⁾	Groundwater	Target Compound List (TCL) VOCs, TCL SVOCs, Target Analyte List (TAL) Metals (Part 375-6.8 list)
Landfill Gas Monitoring	Quarterly (January, April, July, October) for first 2 Years and Frequency Thereafter To Be Determined ⁽¹⁾	Landfill/Soil Gas	Field Screening for Methane and Organic Vapors

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH.

(1) After above-specified monitoring, the NYSDEC may be petitioned for its approval to discontinue or reduce monitoring, if conditions are warranted based on prior monitoring results.

Table 1a
Completed 2022-2024 Monitoring/Inspection Schedule
Bush Landfill Piers 1-4, Brooklyn, New York

Monitoring Program	SMP Specified Frequency*	Actual Frequency Completed	Difference
Cover Inspection Monitoring	Annually	Annually November 2022 November 2023 September 2024	
Wetlands Inspection Monitoring	Semiannually (April and July) for first 2 Years and Annually (July) for 3 Years , Frequency Thereafter To Be Determined ⁽¹⁾	Annually July 2022 October 2023 October 2024	Also conducted additional wetland planting/cleaning events
Groundwater Monitoring	Quarterly (January, April, July, and October) for first Year and Annually Thereafter after SMP Approval and Frequency Thereafter To Be Determined ⁽¹⁾	Annually August 2022 September. 2023 September 2024	
Landfill Gas Monitoring	Quarterly (January, April, July, October) for first 2 Years and Frequency Thereafter To Be Determined ⁽¹⁾	Annually August 2022 Sept/Oct. 2023 September 2024	

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH.

(1) After above-specified monitoring, the NYSDEC may be petitioned for its approval to discontinue or reduce monitoring, if conditions are warranted based on prior monitoring results.

Table 2
Groundwater Monitoring Well Construction Details
Bush Landfill Piers 1-4, Brooklyn, New York

Well Identification	Construction Date	Location Coordinates ^(a)		Flush Cover (Ground) Elevation ^(b)	Top of Casing Elevation ^(b)	Total Depth (ftbg)	Total Depth (elevation) ^(b)	Screened Interval -Top (ftbg)	Screened Interval -Bottom (ftbg)	Screened Interval -Top (elevation) ^(b)	Screened Interval -Bottom (elevation) ^(b)
		North	East								
MW-101S (MW-3) ^(c)	7/11/2007	176736.54	978702.11	6.91	6.54	15.00	-8.09	4.75	14.75	2.16	-7.84
MW-101I	10/11/2011	176750.92	978688.49	5.99	5.46	51.24	-45.25	40.99	50.99	-35	-45
MW-101D	10/12/2011	176746.22	978683.21	6.13	5.65	81.38	-75.25	71.13	81.13	-65	-75
MW-102S	10/10/2011	177026.69	978909.79	5.35	4.78	13.6	-8.25	3.35	13.35	2	-8
MW-102I	10/10/2011	177018.43	978903.12	5.32	4.71	50.57	-45.25	40.32	50.32	-35	-45
MW-102D	10/7/2011	177009.21	978897.02	5.31	4.61	80.56	-75.25	70.31	80.31	-65	-75
MW-103S	10/5/2011	176982.05	978331.36	14.44	13.88	19.35	-4.91	9.10	19.10	5.34	-4.66
MW-103I	10/5/2011	176977.87	978328.06	14.40	13.85	57.35	-42.95	47.10	57.10	-32.7	-42.7
MW-103D	10/4/2011	176973.71	978324.86	14.39	13.83	87.35	-72.96	77.10	87.10	-62.71	-72.71
MW-104S	9/28/2011	177345.22	978253.80	17.43	16.82	20.75	-3.32	10.50	20.50	6.93	-3.07
MW-104I	9/30/2011	177341.68	978249.20	17.35	16.79	60.25	-42.9	50.50	60.50	-33.15	-43.15
MW-104D	9/7/2011	177338.44	978244.73	17.29	16.68	90.45	-73.16	80.20	90.20	-62.91	-72.91
MW-105S	9/16/2011	177554.27	978419.02	18.65	18.30	21.25	-2.6	11.00	5.00	7.65	13.65
MW-105I	9/21/2011	177559.00	978420.72	18.57	18.16	61.85	-43.28	51.60	61.60	-33.03	-43.03
MW-105D	9/23/2011	177549.67	978416.05	18.75	18.35	91.85	-73.1	81.60	91.60	-62.85	-72.85
MW-106S	9/13/2011	177572.95	978631.97	12.68	12.30	16.25	-3.57	6.00	16.00	6.68	-3.32
MW-106I	9/21/2011	177569.19	978628.82	12.74	10.60	56.25	-43.51	46.00	56.00	-33.26	-43.26
MW-106D	9/15/2011	177565.46	978625.62	12.89	10.61	86.25	-73.36	76.00	86.00	-63.11	-73.11

NOTES:

ftbg = feet below grade

(a) Location coordinates based on the NAD 1983 New York Long Island coordinate system.

(b) Vertical datum for elevation values is the Brooklyn Borough Highway Datum (equal to 2.56 feet above NGVD).

(c) Upgradient well MW-101S was constructed by others and originally identified as MW-3 in 2007 and is being used as an upgradient shallow well for the MW-101 well nest location.

Table 3
Groundwater Sample Analyses Parameters and Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

VOCs		SVOCs				METALS	
ANALYTE	Class GA Value (µg/L)	ANALYTE	Class GA Value (µg/L)	ANALYTE	Class GA Value (µg/L)	ANALYTE	Class GA Value (µg/L)
1,1,1-Trichloroethane (TCA)	5	1,2,4,5-Tetrachlorobenzene	5	Fluorene	50	Silver, Total	50
1,1,2,2-Tetrachloroethane	5	2,2'-Oxybis(1-chloropropane)	5	Hexachlorobenzene	0.04	Aluminum, Total	NC
1,1,2-Trichloro-1,2,2-trifluoroethane	5	2,3,4,6-Tetrachlorophenol	1(1)	Hexachlorobutadiene	0.5	Arsenic, Total	25
1,1,2-Trichloroethane	1	2,4,5-Trichlorophenol	1(1)	Hexachlorocyclopentadiene	5	Barium, Total	1,000
1,1-Dichloroethane (1,1-DCA)	5	2,4,6-Trichlorophenol	1(1)	Hexachloroethane	5	Beryllium, Total	3
1,1-Dichloroethene (1,1-DCE)	5	2,4-Dichlorophenol	1(1)	Indeno(1,2,3-cd)pyrene	0.002	Calcium, Total	NC
1,2,3-Trichlorobenzene	5	2,4-Dimethylphenol	1(1)	Isophorone	50	Cadmium, Total	5
1,2,4-Trichlorobenzene	5	2,4-Dinitrophenol	1(1)	N-Nitrosodi-n-propylamine	NC	Chromium, Total	50
1,2-Dibromo-3-chloropropane (DBCP)	0.04	2,4-Dinitrotoluene	5	N-Nitrosodiphenylamine	50	Copper, Total	200
1,2-Dibromoethane	0.0006	2,6-Dinitrotoluene	5	Naphthalene	10	Iron, Total	300
1,2-Dichlorobenzene	3	2-Chloronaphthalene	10	Nitrobenzene	0.4	Potassium, Total	NC
1,2-Dichloroethane	0.6	2-Chlorophenol	1(1)	Pentachlorophenol (PCP)	1(1)	Magnesium, Total	35,000
1,2-Dichloropropane	1	2-Methylnaphthalene	NC	Phenanthrene	50	Manganese, Total	300
1,3-Dichlorobenzene	3	2-Methylphenol	1(1)	Phenol	1	Sodium, Total	20,000
1,4-Dichlorobenzene	3	2-Nitroaniline	5	Pyrene	50	Lead, Total	25
1,4-Dioxane	NC	2-Nitrophenol	1(1)			Zinc, Total	2,000
2-Butanone (MEK)	50	3,3'-Dichlorobenzidine	5			Cobalt, Total	NC
2-Hexanone	50	3- and 4-Methylphenol Coelution	1(1)			Nickel, Total	100
4-Methyl-2-pentanone	NC	3-Nitroaniline	5			Antimony, Total	3
Acetone	50	4,6-Dinitro-2-methylphenol	1(1)			Selenium, Total	10
Benzene	1	4-Bromophenyl Phenyl Ether	NC			Thallium, Total	0.5
Bromochloromethane	5	4-Chloro-3-methylphenol	1(1)			Vanadium, Total	NC
Bromodichloromethane	50	4-Chloroaniline	5			Mercury, Total	0.7
Bromoform	50	4-Chlorophenyl Phenyl Ether	NC			Other	
Bromomethane	5	4-Nitroaniline	5			ANALYTE	Class GA Value (µg/L)
Carbon Disulfide	60	4-Nitrophenol	1(1)			Chloride	250,000
Carbon Tetrachloride	5	Acenaphthene	20				
Chlorobenzene	5	Acenaphthylene	NC				
Chloroethane	5	Acetophenone	NC				
Chloroform	7	Anthracene	50				
Chloromethane	5	Atrazine	7.5				
Cyclohexane	NC	Benz(a)anthracene	0.002				
Dibromochloromethane	50	Benzaldehyde	NC				
Dichlorodifluoromethane (CFC 12)	5	Benzo(a)pyrene	ND				
Dichloromethane	5	Benzo(b)fluoranthene	0.002				
Ethylbenzene	5	Benzo(g,h,i)perylene	NC				
Isopropylbenzene (Cumene)	5	Benzo(k)fluoranthene	0.002				
Methyl Acetate	NC	Biphenyl	5				
Methyl tert-Butyl Ether	10	Bis(2-chloroethoxy)methane	5				
Methylcyclohexane	NC	Bis(2-chloroethyl) Ether	1				
Styrene	5	Bis(2-ethylhexyl) Phthalate	5				
Tetrachloroethene (PCE)	5	Butyl Benzyl Phthalate	50				
Toluene	5	Caprolactam	NC				
Trichloroethene (TCE)	5	Carbazole	NC				
Trichlorofluoromethane (CFC 11)	5	Chrysene	0.002				
Vinyl Chloride	2	Di-n-butyl Phthalate	50				
cis-1,2-Dichloroethene	5	Di-n-octyl Phthalate	50				
cis-1,3-Dichloropropene	0.4	Dibenz(a,h)anthracene	NC				
m,p-Xylenes	5(2)	Dibenzofuran	NC				
o-Xylene	5(2)	Diethyl Phthalate	50				
trans-1,2-Dichloroethene	5	Dimethyl Phthalate	50				
trans-1,3-Dichloropropene	0.4	Fluoranthene	50				

- (1) The GA guidance value for Phenolic Compounds (Total Phenols) applies.
(2) There is no Standard or Guidance Value for total xylenes. The Standard for o-xylene, m-xylene, and p-xylene is 5µg/l.

Table 4
Groundwater Data QC Nonconformances Identified During Data Validation

ANALYTICAL PARAMETER	QC NONCONFORMANCE	RESULTING QUALIFIERS
October 2016 Results		
VOCs	Continuing calibration percent difference (%D)	UJ
	Field blank and trip blank contamination	U
SVOCs	Laboratory control sample (LCS): Low recovery	J/J-/UJ
	Continuing calibration %D	UJ
Metals	Field blank, preparation blank, and/or calibration blank contamination	J+/U
	Calibration blank and/or preparation blank negative contamination	J-/UJ
	Positive interference check sample results	J+/U
	Negative interference check sample results	J-/UJ
Chloride	No QC nonconformances identified	
March 2017 Results		
VOCs	Continuing calibration %D	UJ
	Field blank contamination	U
SVOCs	LCS and/or LCS Duplicate: Significantly low recoveries (<10%)	R
	Continuing calibration %D	UJ
	Matrix spike/matrix spike duplicate (MS/MSD): Low recoveries	UJ
Metals	Calibration blank and field blank contamination	J+/U
	Positive interference check sample results	J/J+/U
	Negative interference check sample results	J-/UJ
	MS/MSD and post digestion spike (PDS): Low recoveries	UJ
	Field duplicate variability	J
Chloride	No QC nonconformances identified	

Table 4
Groundwater Data QC Nonconformances Identified During Data Validation

ANALYTICAL PARAMETER	QC NONCONFORMANCE	RESULTING QUALIFIERS
June 2017 Results		
VOCs	Continuing calibration %D	UJ
	MS: Low recovery	UJ
SVOCs	MS and/or MSD: Low recoveries	UJ
	Continuing calibration %D	UJ
Metals	Calibration blank and field blank contamination	J+/U
	Positive interference check sample results	J+/U
	Negative interference check sample results	J-/UJ
Chloride	No QC nonconformances identified	
August 2018 Results		
VOCs	Field blank contamination	U
SVOCs	MS and MS Duplicate: Significantly low recoveries (<10%)	R
	Continuing calibration %D	UJ
1,4-Dioxane	MS and MSD: Low recoveries	J-
Metals	Calibration blank, preparation blank, and field blank contamination	J/J+/U
	Positive interference check sample results	J+/U
	Negative interference check sample results	J/UJ
	MS and MSD: Low recoveries	J-
Chloride	No QC nonconformances identified	
October 2019 Results		
VOCs	Field blank contamination	U
	Continuing calibration %D	UJ
SVOCs	Method blank contamination	U
	LCS: High recovery	J
	Continuing calibration %D	UJ

Table 4
Groundwater Data QC Nonconformances Identified During Data Validation

ANALYTICAL PARAMETER	QC NONCONFORMANCE	RESULTING QUALIFIERS
October 2019 Results (continued)		
Metals	Calibration blank, preparation blank, and/or field blank contamination	J/J+/U
	Positive interference check sample results	J+/U
	Negative interference check sample results	J/UJ
	Serial dilution %D	J
Chloride	No QC nonconformances identified	
March 2021 Results		
VOCs	Field blank contamination	U
	Continuing calibration %D	UJ
SVOCs	Field blank contamination	U
	MS and/or MSD: Low recoveries	UJ
	Continuing calibration %D	UJ
Metals	MS, MSD, and PDS: Significantly low recoveries (<30%)	R
	Calibration blank and/or field blank contamination	J+/U
	Positive interference check sample results	U
	Negative interference check sample results	J/UJ
Chloride	Field blank contamination	J+
August 2022 Results		
VOCs	Field blank contamination	U
	Continuing calibration %D	J/UJ
	LCS: High recoveries	J/J+
SVOCs	Continuing calibration %D	UJ
Metals	Calibration blank and/or field blank contamination	U/J+
	Field duplicate variability	J
	Serial dilution %D	J
	MS, MSD, and/or PDS: Low recoveries	J/J-/UJ
	Positive interference check sample results	J

Table 4
Groundwater Data QC Nonconformances Identified During Data Validation

ANALYTICAL PARAMETER	QC NONCONFORMANCE	RESULTING QUALIFIERS
August 2022 Results (continued)		
Chloride	No QC nonconformances identified	
September 2023 Results		
VOCs	Continuing calibration %D	UJ
	Field blank contamination	U
SVOCs	Continuing calibration %D	UJ
	Surrogates: Low recoveries	UJ
Metals	Calibration blank and/or preparation blank contamination	J/J+/U
	Low-level check standard: High recovery	J
	MSD and PDS: Significantly low recoveries (<30% and <75%, respectively)	R
	MS, MSD, and PDS: Low recoveries	J-
	Field duplicate variability	J
Chloride	No QC nonconformances identified	
September 2024 Results		
VOCs	Continuing calibration %D	J/UJ
SVOCs	No QC nonconformances identified	
Metals	Calibration blank and/or preparation blank contamination	U
	Field blank contamination	U/J+
	Serial dilution %D	J
	Positive interference check sample results	J/J+
	Field duplicate variability	J
Chloride	Low MSD and high MS recoveries, and MS/MSD variability	J

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date: Class GA Value (ug/L)		MW-101D 5/19/2015	MW-101D 3/25/2016	MW-101D 10/17/2016	MW-101D 3/13/2017	MW-101D 7/31/2017	MW-101D 08/09/2018	MW-101D 10/03/2019	MW-101D 3/23/2021	MW-101D 8/18/2022	MW-101D 10/2/2023	MW-101D 9/19/2024	MW-1011 5/19/2015	MW-1011 3/25/2016	MW-1011 10/17/2016	MW-1011 3/13/2017	MW-1011 7/31/2017	MW-1011 08/09/2018	MW-1011 10/03/2019	MW-1011 3/23/2021	MW-1011 8/18/2022	MW-1011 10/2/2023	MW-1011 9/19/2024
VOLATILE ORGANIC COMPOUNDS (VOCs)																							
1,1,1-Trichloroethane	5	15 J	15	14.5	16.1	21.2	19.8	3.7	2.9	2.8	1 U	1.0 U	4.5 J	1.6	1.1	1.1	0.6 J	1 U	0.97 J	3.8	1.8	1 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1,2-Trichloroethane	1	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1-Dichloroethane	5	27 J	25	25.6	26.8	38.3	35.4	10.6	8.3	18.7	1 U	0.67 J	13 J	5.0	3.3	3.7	1.7	2.1	4.5	20.9	18.8	1 U	4.5
1,1-Dichloroethylene	5	21 J	22	22.9	21.9	26.3	28.5	9.2	6.8	15.3	1 U	1.0	10 J	5.1	4.1	4.7	2.8	4	5.9	29.3	18.9	1 U	5.2
1,2,3-Trichlorobenzene	5	1 UJ	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2,4-Trichlorobenzene	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	0.04	2 UJ	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 UJ	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dibromoethane (EDB)	0.0006	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dichlorobenzene	3	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dichloroethane	0.6	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.51 U
1,2-Dichloropropane	1	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,3-Dichlorobenzene	3	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,4-Dichlorobenzene	3	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
2-Butanone (MEK)	50	5 UJ	5.0 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	5 UJ	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U
2-Hexanone (MBK)	50	5 UJ	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	5 UJ	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U
4-Methyl-2-pentanone (MIBK)	NC	5 UJ	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	5 UJ	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U
Acetone	50	5 UJ	5.0 UJ	5 U	5 U	5 U	2.3 J	5 U	6.3 U	5 U	5 U	5.0 U	5 UJ	5.0 U	5 U	5 U	1.3 J	5 U	4.3 J	5.5	5 U	2 J	5.0 U
Benzene	1	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	1 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U
Bromochloromethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Bromodichloromethane	50	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Bromoform	50	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Bromomethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U
Carbon Disulfide	60	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Carbon Tetrachloride	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chlorobenzene	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chlorodibromomethane	50	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chloroethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chloroform	7	0.65 J	0.45 J	0.38 J	0.37 J	0.35 J	0.39 J	0.92 J	1 U	2.6	1 U	1.0 U	0.63 J	0.91 J	0.67 J	0.66 J	0.68 J	0.56 J	1.4	5.5	0.59 J	1 U	1.0 U
Chloromethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 UJ	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.8
cis-1,2-Dichloroethylene	5	20 J	24	21.9	22	23.3	30.6	9.4	5.5	10.3	1 U	0.78 J	5.4 J	2.5	2.3	2.6	2.2	2.8	4.5	28.3	21.1	1 U	3.9
cis-1,3-Dichloropropene	0.4(b)	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Cyclohexane	NC	1 UJ	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U
Dichlorodifluoromethane (Freon 12)	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 UJ	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Ethylbenzene	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Isopropylbenzene (Cumene)	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Methyl acetate	NC	2 UJ	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 UJ	2 UJ	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Methyl tert-Butyl Ether (MTBE)	10	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.53 U
Methylcyclohexane	NC	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Methylene Chloride	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1	0.3 J	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Styrene	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Tetrachloroethylene	5	16 J	25	14.1	25.4	17.3	26	13.5	9.1	7.1	1 U	3.7	25 J	35	15.5	26.8	26.2	28.9	37.3	26.9	7	0.84 J	25
Toluene	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	0.21 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
trans-1,2-Dichloroethylene	5	0.68 J	0.39 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
trans-1,3-Dichloropropene	0.4(b)	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Trichloroethylene	5	130 J	180	140	160	130	180	84	41.4	18	1 U	10	39 J	19	16.2	19.2	16.4	12.4	15.8	27.2	20.1	0.35 J	30
Trichlorofluoromethane (Freon 11)	5	1 UJ	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Vinyl Chloride	2	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
m/p-Xylene	5(a)	2 UJ	2.0 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1.0 U	2 UJ	2.0 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1.0 U
o-Xylene	5(a)	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
m/p-Xylene	5(a)	2 UJ	2.0 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1.0 U	2 UJ	2.0 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1.0 U
1,4-Dioxane	NC	40 UJ	38 J	17 J-	16.2	20.2 Q	NA	NA	NA	NA	NA	NA	29 J	40 U	3.1 JQ	4.4 J	10.2 UQ	NA	NA	NA	NA	NA	NA

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J- - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits requirements.
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date: Class GA Value (ug/L)		MW-101S 5/19/2015	MW-101S 3/25/2016	MW-101S 10/17/2016	MW-101S 10/17/2016	MW-101S 3/13/2017	MW-101S 3/13/2017	MW-101S 6/15/2017	MW-101S 08/09/2018	MW-101S 10/03/2019	MW-101S 3/23/2021	MW-101S 8/18/2022	MW-101S 10/2/2023	MW-101S 9/19/2024	MW-102D 5/19/2015	MW-102D 3/25/2016	MW-102D 10/17/2016	MW-102D 3/13/2017	MW-102D 6/15/2017	MW-102D 08/09/2018	MW-102D 10/03/2019	MW-102D 3/24/2021	MW-102D 8/18/2022	MW-102D 9/28/2023	MW-102D 9/19/2024
VOLATILE ORGANIC COMPOUNDS (VOCs)		Field Dup				Field Dup																			
1,1,1-Trichloroethane	5	2.2 J	1.8	1.1	1.2	1.2	1.1	1 U	1 U	0.87 J	1.1	1.2	1 U	0.76 J	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2,2-Tetrachloroethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2-Trichloroethane	1	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1-Dichloroethane	5	5.3 J	3.8	2.4	2.7	2.8	2.8	3.1	3.1	3.3	5.9	8.7	1 U	0.93 J	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	5.2	1.0 U	
1,1-Dichloroethylene	5	4.8 J	4.0	2.7	3	3.7	3.7	4.2	4.2	3.8	6.8	10.9	1 U	0.72 J	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	6.7	1.0 U	
1,2,3-Trichlorobenzene	5	1 UJ	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2,4-Trichlorobenzene	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dibromo-3-chloropropane (DBCP)	0.04	2 UJ	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 UJ	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dibromoethane (EDB)	0.0006	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dichlorobenzene	3	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dichloroethane	0.6	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.51 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.51 U	
1,2-Dichloropropane	1	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,3-Dichlorobenzene	3	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,4-Dichlorobenzene	3	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
2-Butanone (MEK)	50	5 UJ	5.0 UJ	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 UJ	0.93 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U
2-Hexanone (MBK)	50	5 UJ	5.0 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 UJ	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U
4-Methyl-2-pentanone (MIBK)	NC	5 UJ	5.0 U	5 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 UJ	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U
Acetone	50	5 UJ	5.0 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	3.3 J	5 U	2.2 J	5.0 U	5 UJ	3.2 J	2.6 J	5 U	5 U	5 U	4.3 J	5.6	5 U	5 U	5.0 U
Benzene	1	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	1 UJ	0.23 J	0.3 J	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	
Bromochloromethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Bromodichloromethane	50	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Bromoform	50	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Bromomethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 UJ	0.33 BJ	1 U	1 U	1 U	1 U	5 U	5 U	5 U	1.0 U	
Carbon Disulfide	60	1 UJ	1.0 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Carbon Tetrachloride	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chlorobenzene	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chlorodibromomethane	50	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloroethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	0.37 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloroform	7	1.8 J	1.1	0.9 J	0.98 J	0.8 J	0.8 J	1.1	1.5	1.4	1.7	1.1	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	0.45 J	1.0 U	
Chloromethane	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
cis-1,2-Dichloroethylene	5	4 J	2.8	2.1	2.4	2.5	2.3	2.9	3.2	4.2	6.3	16.5	1 U	1.4	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	5.5	1.0 U	
cis-1,3-Dichloropropene	0.4(b)	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Cyclohexane	NC	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	1.0 U	
Dichlorodifluoromethane (Freon 12)	5	1 UJ	1.0 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Ethylbenzene	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Isopropylbenzene (Cumene)	5	1 UJ	1.0 U	1 U	1 U	0.4 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methyl acetate	NC	2 UJ	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 UJ	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methyl tert-Butyl Ether (MTBE)	10	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.53 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.53 U	
Methylcyclohexane	NC	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methylene Chloride	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	0.8 J	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Styrene	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Tetrachloroethylene	5	6.1 J	13	6.1	5.9	9.8	9.7	13	10.8	11.8	10.7	6.2	1.7	5.3	0.33 J	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	5.7	1.0 U	
Toluene	5	1 UJ	1.0 U	0.28 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
trans-1,2-Dichloroethylene	5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
trans-1,3-Dichloropropene	0.4(b)	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Trichloroethylene	5	29 J	27	22.3	23.6	28.7	28.7	40.2	26.9	17.3	21.8	30	1 U	8.4	0.36 J	1.0 U	0.2 J	1 U	1 U	1 U	1 U	1 U	18.4	1.0 U	
Trichlorofluoromethane (Freon 11)	5	1 UJ	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U											

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J- - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits re
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-1021 5/20/2015	MW-1021 3/25/2016	MW-1021 10/17/2016	MW-1021 3/13/2017	MW-1021 6/15/2017	MW-1021 08/09/2018	MW-1021 10/03/2019	MW-1021 3/24/2021	MW-1021 3/24/2021	MW-1021 8/18/2022	MW-1021 8/18/2022	MW-1021 10/2/2023	MW-1021 10/2/2023	MW-1021 9/19/2024	MW-1021 9/19/2024	MW-102S 5/20/2015	MW-102S 5/20/2015	MW-102S 3/25/2016	MW-102S 10/17/2016	MW-102S 3/13/2017	MW-102S 6/15/2017	MW-102S 08/09/2018	MW-102S 10/03/2019	MW-102S 3/24/2021
VOLATILE ORGANIC COMPOUNDS (VOCs)	Class GA Value (ug/L)									Field Dup	Field Dup		Field Dup		Field Dup		Field Dup								
1,1,1-Trichloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,1,2,2-Tetrachloroethane		1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,1,2-Trichloroethane	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,1-Dichloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	4.9	4.3	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	
1,1-Dichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	10.4	9.2	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	
1,2,3-Trichlorobenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,2,4-Trichlorobenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,2-Dibromo-3-chloropropane (DBCP)	0.04	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	2 U	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	
1,2-Dibromoethane (EDB)	0.0006	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,2-Dichlorobenzene	3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,2-Dichloroethane	0.6	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,2-Dichloropropane	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,3-Dichlorobenzene	3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
1,4-Dichlorobenzene	3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
2-Butanone (MEK)	50	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	
2-Hexanone (MBK)	50	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	
4-Methyl-2-pentanone (MIBK)	NC	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	
Acetone	50	5 U	5.0 U	5 U	5 U	5 U	6.3	2.7 J	5 U	6 U	5 U	5 U	5 U	5 U	5.0 U	5.0 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	
Benzene	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	0.50 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Bromochloromethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Bromodichloromethane	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Bromoform	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Bromomethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	5 U	
Carbon Disulfide	60	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Carbon Tetrachloride	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Chlorobenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Chlorodibromomethane	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Chloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Chloroform	7	0.69 J	0.63 J	0.57 J	0.56 J	0.68 J	0.27 J	1 U	0.79 J	0.77 J	0.7 J	0.73 J	1.8	1.6	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.4	
Chloromethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
cis-1,2-Dichloroethylene	5	2.1	2.4	2.4	2.1	1.8	0.78 J	1	7.7	7.9	3.3	2.7	10.5	9.4	0.96 J	0.89 J	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
cis-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Cyclohexane	NC	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	5 U	5 U	
Dichlorodifluoromethane (Freon 12)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Ethylbenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Isopropylbenzene (Cumene)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Methyl acetate	NC	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	2 U	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	
Methyl tert-Butyl Ether (MTBE)	10	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1.6	1.6	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Methylcyclohexane	NC	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Methylene Chloride	5	1 U	1.0 U	0.9 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Styrene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Tetrachloroethylene	5	5.7	6.3	3.6	6	4.4	4.5	11.5	54.4	54.2	35.5	33.7	18.4	16.3	24	25	2.5	2.4	1.6	0.71 J	1.9	1.3	0.54 J	2.1	1.8
Toluene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
trans-1,2-Dichloroethylene	5	0.35 J	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.81 J	0.56 J	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
trans-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Trichloroethylene	5	4.1	2.7	3.2	3.4	2.7	2.4	5.4	27.9	27.5	20.7	18.2	48.6	43.1	1.7	1.9	1 U	1 U	1.0 U	1 U	0.23 J	1 U	1 U	1 U	1 U
Trichlorofluoromethane (Freon 11)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	
Vinyl Chloride	2	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U											

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J- - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits re
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date: Class GA Value (ug/L)		MW-102S 8/18/2022	MW-102S 10/2/2023	MW-102S 9/19/2024	MW-103D 5/22/2015	MW-103D 3/25/2016	MW-103D 10/19/2016	MW-103D 3/17/2017	MW-103D 6/14/2017	MW-103D 08/09/2018	MW-103D 10/02/2019	MW-103D 3/23/2021	MW-103D 8/17/2022	MW-103D 9/28/2023	MW-103D 9/18/2024	MW-103I 5/22/2015	MW-103I 3/24/2016	MW-103I 10/19/2016	MW-103I 3/17/2017	MW-103I 6/14/2017	MW-103I 08/08/2018	MW-103I 10/02/2019	MW-103I 3/23/2021	MW-103I 8/17/2022	MW-103I 9/28/2023	MW-103I 9/18/2024
VOLATILE ORGANIC COMPOUNDS (VOCs)																										
1,1,1-Trichloroethane	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2,2-Tetrachloroethane	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2-Trichloroethane	1	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1-Dichloroethane	5	1 U	1.7	1.0 U	0.92 J	0.60 J	1 U	1 U	1 U	1.2	1 U	1 U	2 J+	1 U	0.82 J	1 U	1.0 U	1 U	1 U	1 U	1.2	5.8	1 U	1.8 T	1 U	1.7
1,1-Dichloroethylene	5	0.24 J	2.4	1.0 U	0.77 J	1.0 U	0.53 J	1 U	1 U	0.73 J	1 U	1 U	0.73 J	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2,3-Trichlorobenzene	5	1 U	1 U	1.0 U	1 U	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2,4-Trichlorobenzene	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dibromo-3-chloropropane (DBCP)	0.04	1 U	1 U	1.0 U	2 U	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dibromoethane (EDB)	0.0006	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dichlorobenzene	3	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dichloroethane	0.6	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.51 U	
1,2-Dichloropropane	1	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UT	1 U	1.0 U	
1,3-Dichlorobenzene	3	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,4-Dichlorobenzene	3	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
2-Butanone (MEK)	50	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	
2-Hexanone (MBK)	50	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	
4-Methyl-2-pentanone (MIBK)	NC	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	
Acetone	50	5 U	5 U	5.0 U	5 U	5.0 UJ	5 U	5 U	5 U	5 U	5 U	7 U	5 U	5 U	5.0 U	5 U	5.0 U	5 U	5 U	5 U	5 U	3 J	11.6	5 U	2.4 J	5.0 U
Benzene	1	1 U	1 U	0.50 U	1 U	1.0 U	1 U	0.26 J	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	
Bromochloromethane	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UT	1 U	1.0 U	
Bromodichloromethane	50	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Bromoform	50	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Bromomethane	5	5 U	5 U	1.0 U	1 U	1.0 U	1 U	1 UJ	1 UJ	1 U	5 U	5 U	5 U	5 U	1.0 U	1 UJ	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	1.0 U	
Carbon Disulfide	60	1 U	1 U	1.0 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	0.72 J	1 U	1 U	1.2 T	1 U	1.0 U	
Carbon Tetrachloride	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chlorobenzene	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	0.2 J	1 U	1 U	1 U	0.31 J	1 U	1.0 U	
Chlorodibromomethane	50	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloroethane	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloroform	7	1 U	0.74 J	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloromethane	5	1 U	1 U	1.0 UJ	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UT	1 U	1.0 U	
cis-1,2-Dichloroethylene	5	0.25 J	3.8	1.0 U	1 U	0.57 J	0.62 J	1 U	1 U	1.2	1 U	1 U	1.2	1 U	1.1	1.2	0.80 J	0.62 J	0.85 J	0.96 J	1.6	3.1	1 U	1.3	1.4	
cis-1,3-Dichloropropene	0.4(b)	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Cyclohexane	NC	5 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 UT	5 U	1.0 U	
Dichlorodifluoromethane (Freon 12)	5	1 U	1 U	1.0 UJ	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Ethylbenzene	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Isopropylbenzene (Cumene)	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methyl acetate	NC	1 U	1 U	1.0 UJ	2 U	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1.0 U	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methyl tert-Butyl Ether (MTBE)	10	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.53 U	
Methylcyclohexane	NC	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methylene Chloride	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	0.81 J	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Styrene	5	1 U	1 U	1.0 U	1 U	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Tetrachloroethylene	5	1 U	5.9	6.7	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Toluene	5	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U									

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J- - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits res
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date: Class GA Value (ug/L)		MW-103S 5/22/2015	MW-103S 3/24/2016	MW-103S 10/19/2016	MW-103S 3/17/2017	MW-103S 6/14/2017	MW-103S 08/08/2018	MW-103S 10/02/2019	MW-103S 3/24/2021	MW-103S 8/17/2022	MW-103S 9/28/2023	MW-103S 9/19/2024	MW-104D 5/22/2015	MW-104D 3/25/2016	MW-104D 10/19/2016	MW-104D 3/17/2017	MW-104D 6/14/2017	MW-104D 08/08/2018	MW-104D 10/02/2019	MW-104D 3/23/2021	MW-104D 8/17/2022	MW-104D 9/28/2023	MW-104D 9/18/2024
VOLATILE ORGANIC COMPOUNDS (VOCs)																							
1,1,1-Trichloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1,2-Trichloroethane	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1-Dichloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1-Dichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2,3-Trichlorobenzene	5	1 U	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2,4-Trichlorobenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	0.04	2 U	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 U	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dibromoethane (EDB)	0.0006	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dichlorobenzene	3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dichloroethane	0.6	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.51 U
1,2-Dichloropropane	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,3-Dichlorobenzene	3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,4-Dichlorobenzene	3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
2-Butanone (MEK)	50	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U
2-Hexanone (MBK)	50	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U
4-Methyl-2-pentanone (MIBK)	NC	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U
Acetone	50	2.2 J	5.0 UJ	5.7	5 U	7.9	5.6 U	9.6 U	11.3 U	5 U	5 U	5.0 U	5 U	5.0 UJ	5 U	5 U	5 U	0.9 J	2.5 J	5.3	5 U	5 U	5.0 U
Benzene	1	2	2.8	2.3	2.6	3	3.5	1.8	2	1.2	1.8	2.5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U
Bromochloromethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Bromodichloromethane	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Bromoform	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Bromomethane	5	1 U	1.0 U	1 U	1 UJ	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 UJ	1.0 U	1 U	1 UJ	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U
Carbon Disulfide	60	0.24 J	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	0.51 J	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	0.55 JT	1 U	1.0 U
Carbon Tetrachloride	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chlorobenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chlorodibromomethane	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chloroform	7	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chloromethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	0.26 J	1 U	0.89 J	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	0.34 JT	1 U	1.0 U
cis-1,2-Dichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
cis-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Cyclohexane	NC	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U
Dichlorodifluoromethane (Freon 12)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1.0 UJ	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Ethylbenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Isopropylbenzene (Cumene)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	0.31 J	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Methyl acetate	NC	2 U	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1.0 UJ	2 U	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Methyl tert-Butyl Ether (MTBE)	10	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.53 U
Methylcyclohexane	NC	1 U	1.0 U	1 U	1 U	1 U	0.28 J	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Methylene Chloride	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Styrene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Tetrachloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Toluene	5	0.31 J	0.40 J	0.22 J	1 U	0.33 J	0.26 J	0.41 J	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
trans-1,2-Dichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
trans-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Trichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Trichlorofluoromethane (Freon 11)	5	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Vinyl Chloride	2	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
m/p-Xylene	5(a)	2 U	2.0 U	2 U	2 U	2 U	0.41 J	2 U	2 U	0.43 J	2 U	1.0 U	2 U	2.0 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1.0 U
o-Xylene	5(a)	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
m/p-Xylene	5(a)	2 U	2.0 U	2 U	2 U	2 U	0.41 J	2 U	2 U	0.43 J	2 U	1.0 U	2 U	2.0 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1.0 U
1,4-Dioxane	NC	40 UJ	R	10.2 UJ	10.3 U	10 U	0.64	NA	NA	NA	NA	NA	40 UJ	R	10.3 UJ	10.2 U	10.1 U	NA	NA	NA	NA	NA	NA

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J- - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits req
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date: Class GA Value (ug/L)		MW-1041 5/21/2015	MW-1041 3/25/2016	MW-1041 3/25/2016 Field Dup	MW-1041 10/19/2016	MW-1041 3/17/2017	MW-1041 6/14/2017	MW-1041 08/08/2018	MW-1041 10/02/2019	MW-1041 3/23/2021	MW-1041 8/17/2022	MW-1041 9/28/2023	MW-1041 9/18/2024	MW-104S 5/22/2015	MW-104S 10/19/2016	MW-104S 3/17/2017	MW-104S 6/15/2017	MW-105D 5/21/2015	MW-105D 3/24/2016	MW-105D 10/18/2016	MW-105D 3/16/2017	MW-105D 6/14/2017	MW-105D 08/08/2018	MW-105D 10/02/2019	MW-105D 3/22/2021	MW-105D 8/17/2022
VOLATILE ORGANIC COMPOUNDS (VOCs)																										
1,1,1-Trichloroethane	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	0.57 J	10 U	0.38 J	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UT
1,1-Dichloroethylene	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-Trichlorobenzene	5	1 U	1.0 UJ	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane (DBCP)	0.04	2 U	2.0 UJ	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 U	10 U	1 U	1 U	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (EDB)	0.0006	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	3	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.2	10 U	1 U	1.4	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	0.6	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	1	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UT
1,3-Dichlorobenzene	3	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	0.26 J	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	3	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	0.68 J	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone (MEK)	50	5 U	5.0 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	50 U	5 U	5 U	5 U	3.0 J	8.6	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone (MBK)	50	5 U	5.0 U	5.0 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	1.0 U	5 U	50 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	NC	5 U	5.0 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	50 U	5 U	5 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	50	5 U	5.0 UJ	5.0 UJ	5 U	5 U	5 U	5 U	5 U	8 U	5 U	5 U	5.0 U	5 U	50 U	27.1	15.7	5 U	16	66.3	31.6	17.7	5 U	2.8 J	5	5 U
Benzene	1	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	0.25 J	10 U	0.23 J	0.44 J	1 U	1.0 U	13.1	0.44 J	1 U	1 U	1 U	1 U	1 U
Bromochloromethane	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UT
Bromodichloromethane	50	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	50	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	1 UJ	1.0 U	1.0 U	1 U	1 UJ	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 U	10 U	1 UJ	1 UJ	1 U	1.0 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U
Carbon Disulfide	60	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	0.28 J	9.8 J	1.5	1.5	1 U	1.0 U	5.4	1 U	1 U	1 U	1 U	1 U	1 UT
Carbon Tetrachloride	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	12	10.1	9.1	13.3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	50	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2.2	10 U	1 U	1 U	1 U	1.0 U	2.1	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	7	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UT
cis-1,2-Dichloroethylene	5	0.89 J	0.69 J	0.87 J	0.56 J	0.78 J	0.98 J	0.92 J	1.1	1 U	0.41 J	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	NC	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	1.0 U	1.3	10 U	2.1	2.6	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 UT	
Dichlorodifluoromethane (Freon 12)	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1.0 U	1 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	2.4 J	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene (Cumene)	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	0.31 J	10 U	1.1	1.2	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl acetate	NC	2 U	2.0 UJ	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1.0 U	2 U	10 U	1 U	1 U	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methyl tert-Butyl Ether (MTBE)	10	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylcyclohexane	NC	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	0.31 J	10 U	0.61 J	0.83 J	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	0.52 J	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	10 U	1 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethylene	5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.													

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J- - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits res
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type
exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values
for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date: Class GA Value (ug/L)		MW-105D 9/27/2023	MW-105D 9/18/2024	MW-105I 5/21/2015	MW-105I 3/23/2016	MW-105I 10/18/2016	MW-105I 3/16/2017	MW-105I 6/14/2017	MW-105I 08/08/2018	MW-105I 10/02/2019	MW-105I 3/22/2021	MW-105I 8/17/2022	MW-105I 9/27/2023	MW-105I 9/18/2024	MW-105S 5/21/2015	MW-105S 3/23/2016	MW-105S 10/18/2016	MW-105S 3/16/2017	MW-105S 6/14/2017	MW-105S 08/08/2018	MW-105S 10/02/2019	MW-105S 3/22/2021	MW-105S 8/17/2022	MW-105S 9/28/2023	MW-105S 9/18/2024
VOLATILE ORGANIC COMPOUNDS (VOCs)																									
1,1,1-Trichloroethane	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2,2-Tetrachloroethane	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2-Trichloroethane	1	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1-Dichloroethane	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UT	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1-Dichloroethylene	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2,3-Trichlorobenzene	5	1 U	1.0 U	1 U	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2,4-Trichlorobenzene	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1.0 U	
1,2-Dibromo-3-chloropropane (DBCP)	0.04	1 U	1.0 U	2 U	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 U	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dibromoethane (EDB)	0.0006	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dichlorobenzene	3	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	0.62 J	0.58 J	0.28 J	0.51 J	1 U	1 U	1 U	1 U	0.3 J	1 U	1.0 U
1,2-Dichloroethane	0.6	1 U	0.51 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.51 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dichloropropane	1	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UT	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,3-Dichlorobenzene	3	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,4-Dichlorobenzene	3	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	0.22 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
2-Butanone (MEK)	50	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	1.0 U	
2-Hexanone (MBK)	50	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	1.0 U	
4-Methyl-2-pentanone (MIBK)	NC	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	1.0 U	
Acetone	50	5 U	5.0 U	5 U	5.0 UJ	5 U	5 U	5 U	5 U	3.7 J	4.6 J	5 U	5 U	5.0 U	5 U	5.0 UJ	5 U	5 U	5 U	5 U	5.5 U	5 U	5 U	5.0 U	
Benzene	1	1 U	0.50 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	
Bromochloromethane	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UT	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Bromodichloromethane	50	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Bromoform	50	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1.0 U	
Bromomethane	5	5 U	1.0 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	1.0 U	
Carbon Disulfide	60	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UT	1 U	1.0 U	0.32 J	1.0 U	1 UJ	1 U	1 U	1 U	1 U	4.1 J+	1 U	1.0 U	
Carbon Tetrachloride	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chlorobenzene	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	22	29	5.7	11.2	12.9	3.1	8.7	5.5	7.3	5.8	6.4
Chlorodibromomethane	50	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloroethane	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloroform	7	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloromethane	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UT	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1.0 U	
cis-1,2-Dichloroethylene	5	1 U	1.0 U	1.5	1.4	1 U	0.71 J	0.64 J	0.71 J	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
cis-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Cyclohexane	NC	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 UT	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	1.0 U	
Dichlorodifluoromethane (Freon 12)	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 UJ	1.0 U	
Ethylbenzene	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Isopropylbenzene (Cumene)	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methyl acetate	NC	1 U	1.0 U	2 U	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 U	2.0 UJ	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1.0 U	
Methyl tert-Butyl Ether (MTBE)	10	1 U	0.53 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.53 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methylcyclohexane	NC	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methylene Chloride	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Styrene	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Tetrachloroethylene	5	1 U	1.0 U	0.3 J	0.66 J	0.4 J	0.45 J	0.35 J	0.36 J	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Toluene	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
trans-1,2-Dichloroethylene	5	1 U	1.0 U	1 U	1.0 U	0.23 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
trans-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Trichloroethylene	5	1 U	1.0 U	0.58 J	0.81 J	1 U	0.57 J	0.42 J	0.54 J	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Trichlorofluoromethane (Freon 11)	5	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U								

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J- - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits re:
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date: Class GA Value (ug/L)		MW-106D 5/20/2015	MW-106D 3/24/2016	MW-106D 10/18/2016	MW-106D 3/16/2017	MW-106D 6/13/2017	MW-106D 08/08/2018	MW-106D 10/01/2019	MW-106D 10/01/2019	MW-106D 3/23/2021	MW-106D 8/16/2022	MW-106D 9/27/2023	MW-106D 9/17/2024	MW-106I 5/21/2015	MW-106I 3/24/2016	MW-106I 10/18/2016	MW-106I 3/16/2017	MW-106I 6/13/2017	MW-106I 6/13/2017	MW-106I 08/07/2018	MW-106I 10/01/2019	MW-106I 3/22/2021	MW-106I 8/16/2022	MW-106I 9/27/2023	MW-106I 9/17/2024
VOLATILE ORGANIC COMPOUNDS (VOCs)		Field Dup												Field Dup											
1,1,1-Trichloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2,2-Tetrachloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1,2-Trichloroethane	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1-Dichloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,1-Dichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2,3-Trichlorobenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2,4-Trichlorobenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dibromo-3-chloropropane (DBCP)	0.04	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dibromoethane (EDB)	0.0006	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dichlorobenzene	3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,2-Dichloroethane	0.6	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.51 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.51 U	
1,2-Dichloropropane	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,3-Dichlorobenzene	3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
1,4-Dichlorobenzene	3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
2-Butanone (MEK)	50	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	
2-Hexanone (MBK)	50	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	
4-Methyl-2-pentanone (MIBK)	NC	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	3.1 J	5 U	5 U	1.0 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	
Acetone	50	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	7.8	5 U	5 U	5.0 U	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	3.6 J	2.8 J	5 U	5.0 U	
Benzene	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	
Bromochloromethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Bromodichloromethane	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Bromoform	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Bromomethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	
Carbon Disulfide	60	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Carbon Tetrachloride	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chlorobenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chlorodibromomethane	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloroform	7	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Chloromethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
cis-1,2-Dichloroethylene	5	1 U	1.0 U	0.25 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2.3	1.6	1.7	2	3.3	3.5	2	1	1.2	1.2	1.7	1.1
cis-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Cyclohexane	NC	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	
Dichlorodifluoromethane (Freon 12)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Ethylbenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Isopropylbenzene (Cumene)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methyl acetate	NC	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methyl tert-Butyl Ether (MTBE)	10	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.53 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.53 U	
Methylcyclohexane	NC	1 U	1.0 U	1 U	1 U	1 U	0.26 J	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Methylene Chloride	5	1 U	1.0 U	1.3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1.1	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Styrene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Tetrachloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.4 J	1.0 U	
Toluene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
trans-1,2-Dichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
trans-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Trichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	0.4 J	0.41 J	1.0 U	
Trichlorofluoromethane (Freon 11)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
Vinyl Chloride	2	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	
m/p-Xylene	5(a)	2 U	2.0 U	2 U	2 U	2 U	0.59 J	2 U	2 U	0.7 J	2 U	2 U	1.0 U	2 U	2.0 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U			

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J- - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits re
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date: Class GA Value (ug/L)		MW-106S 5/20/2015	MW-106S 3/24/2016	MW-106S 10/18/2016	MW-106S 3/16/2017	MW-106S 6/13/2017	MW-106S 08/07/2018		MW-106S 10/01/2019	MW-106S 3/22/2021	MW-106S 8/16/2022	MW-106S 9/27/2023	MW-106S 9/17/2024	FB 5/19/2015	FB 3/23/2016	FB 10/17/2016	FB 3/13/2017	FB 6/13/2017	FB 8/7/2018	FB 8/8/2018	FB 10/01/2019	FB 3/23/2021	FB 8/16/2022	FB 10/2/2023	FB 9/19/2024
VOLATILE ORGANIC COMPOUNDS (VOCs)		Field Dup																							
1,1,1-Trichloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1,2-Trichloroethane	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 UJ
1,1-Dichloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,1-Dichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2,3-Trichlorobenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2,4-Trichlorobenzene	5	0.63 J	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	0.04	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 UJ	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dibromoethane (EDB)	0.0006	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dichlorobenzene	3	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dichloroethane	0.6	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,2-Dichloropropane	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,3-Dichlorobenzene	3	4.9	0.34 J	1 U	0.44 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
1,4-Dichlorobenzene	3	1.5	0.26 J	1 U	0.31 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
2-Butanone (MEK)	50	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 UJ	5 UJ	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U
2-Hexanone (MBK)	50	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	5 UJ	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U
4-Methyl-2-pentanone (MIBK)	NC	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	5 UJ	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U
Acetone	50	5 U	5.0 U	5 U	5 U	5 U	5 U	5 U	5 U	4.1 J	5 U	5 U	5.0 U	5 UJ	2.7 J	5 U	6.9	5 U	6.5	5 U	5.4	7.1	3.7 J	5 U	5.0 U
Benzene	1	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U
Bromochloromethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Bromodichloromethane	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Bromoform	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Bromomethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U
Carbon Disulfide	60	0.23 J	1.0 U	1 U	0.37 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 UJ	1 UJ	1 U	3.8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Carbon Tetrachloride	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chlorobenzene	5	2.2	1.6	0.3 J	1.7	1 U	1.1	1.2	1 U	1.4	0.71 J	0.33 J	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chlorodibromomethane	50	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chloroethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 UJ
Chloroform	7	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Chloromethane	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1.0 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 UJ
cis-1,2-Dichloroethylene	5	1 U	1.0 U	0.33 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
cis-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Cyclohexane	NC	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	1.0 U
Dichlorodifluoromethane (Freon 12)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1.0 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 UJ
Ethylbenzene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	0.28 J	1 U	1 U	1 U	1 U	1.0 U
Isopropylbenzene (Cumene)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Methyl acetate	NC	2 U	2.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	2 UJ	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Methyl tert-Butyl Ether (MTBE)	10	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Methylcyclohexane	NC	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	0.35 J	1 U	1 U	1 U	1 U	1.0 U
Methylene Chloride	5	1 U	1.0 U	1.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	3	2.5	1 U	1 U	0.86 J	1 U	1 U	1 U	1 U	2.8
Styrene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Tetrachloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Toluene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
trans-1,2-Dichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
trans-1,3-Dichloropropene	0.4(b)	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Trichloroethylene	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Trichlorofluoromethane (Freon 11)	5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 UJ
Vinyl Chloride	2	1 U	1.0 U	1 U	1 U	1 U																			

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J- - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits re
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type
exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values
for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date: Class GA Value (ug/L)		TB 5/19/2015	TB 5/20/2015	TB 5/21/2015	TB 5/22/2015	TB 5/22/2015	TB 3/23/2016	TB 3/25/2016	TB 10/17/2016	TB 10/18/2016	TB 10/19/2016	TB 3/13/2017	TB 3/16/2017	TB 3/17/2017	TB 6/13/2017	TB 6/14/2017	TB 6/15/2017	TB 7/31/2017	TB 8/7/2018	TB 8/8/2018	TB 8/9/2018	TB 10/01/2019	TB 10/02/2019	TB 10/03/2019	TB 3/22/2021	TB 3/23/2021
VOLATILE ORGANIC COMPOUNDS (VOCs)																										
1,1,1-Trichloroethane	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,1,2,2-Tetrachloroethane	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,1,2-Trichloroethane	1	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,1-Dichloroethane	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,1-Dichloroethylene	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,2,3-Trichlorobenzene	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,2,4-Trichlorobenzene	5	1 UJ	1 U	1 U	1 U	1 U	0.26 BJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	
1,2-Dibromo-3-chloropropane (DBCP)	0.04	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,2-Dibromoethane (EDB)	0.0006	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,2-Dichlorobenzene	3	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,2-Dichloroethane	0.6	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,2-Dichloropropane	1	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,3-Dichlorobenzene	3	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
1,4-Dichlorobenzene	3	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
2-Butanone (MEK)	50	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
2-Hexanone (MBK)	50	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
4-Methyl-2-pentanone (MIBK)	NC	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Acetone	50	5 UJ	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	
Benzene	1	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Bromochloromethane	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Bromodichloromethane	50	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Bromoform	50	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	
Bromomethane	5	1 UJ	1 U	1 U	1 U	1 U	0.31 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	
Carbon Disulfide	60	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Carbon Tetrachloride	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Chlorobenzene	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Chlorodibromomethane	50	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Chloroethane	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Chloroform	7	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Chloromethane	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	
eis-1,2-Dichloroethylene	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.5 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
cis-1,3-Dichloropropene	0.4(b)	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Cyclohexane	NC	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	
Dichlorodifluoromethane (Freon 12)	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Ethylbenzene	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Isopropylbenzene (Cumene)	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Methyl acetate	NC	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Methyl tert-Butyl Ether (MTBE)	10	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Methylcyclohexane	NC	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Methylene Chloride	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Styrene	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Tetrachloroethylene	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Toluene	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
trans-1,2-Dichloroethylene	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
trans-1,3-Dichloropropene	0.4(b)	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Trichloroethylene	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.27 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Trichlorofluoromethane (Freon 11)	5	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
Vinyl Chloride	2	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
m/p-Xylene	5(a)	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	
o-Xylene	5(a)	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U</															

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits re
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type
exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values
for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 5
Summary of Groundwater Sample Volatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date: Class GA Value (ug/L)		TB 3/24/2021	TB 8/16/2022	TB 8/18/2022	TB 9/27/2023	TB 9/28/2023	TB 10/2/2023	TB 9/17/2024	TB 9/18/2024	TB 9/19/2024
VOLATILE ORGANIC COMPOUNDS (VOCs)										
1,1,1-Trichloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro- 1,2,2-trifluoroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethylene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,2,3-Trichlorobenzene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane (DBCP)	0.04	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (EDB)	0.0006	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	3	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	0.6	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	0.51 U	1.0 U
1,2-Dichloropropane	1	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	3	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	3	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
2-Butanone (MEK)	50	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	1.0 U
2-Hexanone (MBK)	50	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone (MIBK)	NC	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	1.0 U
Acetone	50	5 U	1.6 J	5 U	5 U	5 U	5 U	6.6 J	6.3	5.8
Benzene	1	1 U	1 U	1 U	1 U	1 U	1 U	0.50 U	0.50 U	0.50 U
Bromochloromethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	50	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Bromoform	50	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Bromomethane	5	5 U	5 U	5 U	5 U	5 U	5 U	1.0 UJ	1.0 U	1.0 U
Carbon Disulfide	60	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 UJ
Carbon Tetrachloride	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Chlorodibromomethane	50	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Chloroethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Chloroform	7	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Chloromethane	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethylene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	0.4(b)	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Cyclohexane	NC	5 U	5 U	5 U	5 U	5 U	5 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (Freon 12)	5	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1.0 U	1.0 U	1.0 UJ
Ethylbenzene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Isopropylbenzene (Cumene)	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Methyl acetate	NC	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Methyl tert-Butyl Ether (MTBE)	10	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	0.53 U	1.0 U
Methylcyclohexane	NC	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Methylene Chloride	5	1 U	1 U	1 U	1 U	1 U	1 U	0.61 J	0.62 J	1.0 U
Styrene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Tetrachloroethylene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Toluene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethylene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	0.4(b)	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Trichloroethylene	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (Freon 11)	5	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	2	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
m/p-Xylene	5(a)	2 U	2 U	2 U	2 U	2 U	2 U	1.0 U	1.0 U	1.0 U
o-Xylene	5(a)	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	1.0 U
m/p-Xylene	5(a)	2 U	2 U	2 U	2 U	2 U	2 U	1.0 U	1.0 U	1.0 U
1,4-Dioxane	NC	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
ug/L - micrograms per liter.
B - Compound found in the blank and sample.
J - Estimated value.
J- - Estimated value; biased low.
T - Indicates that a quality control parameter doesn't meet the control limits re:
NA - Sample not analyzed for the listed analyte.
NC - No Criterion.
Q - LCS recovery outside control limits.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
(a) - criteria applicable to xylene (total), the sum of the xylene isomers.
(b) - criteria applicable to the sum of the cis and trans isomers.

Table 6
Summary of Groundwater Sample Semivolatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-101D 5/19/2015	MW-101D 3/25/2016	MW-101D 10/17/2016	MW-101D 3/13/2017	MW-101D 7/31/2017	MW-101D 08/09/2018	MW-101D 10/03/2019	MW-101D 3/23/2021	MW-101D 8/18/2022	MW-101D 10/2/2023	MW-101D 9/19/2024	MW-1011 5/19/2015	MW-1011 3/25/2016	MW-1011 10/17/2016	MW-1011 3/13/2017	MW-1011 7/31/2017	MW-1011 08/09/2018	MW-1011 10/03/2019	MW-1011 3/23/2021	MW-1011 8/18/2022	MW-1011 10/2/2023	MW-1011 9/19/2024	
ORGANIC COMPOUNDS (SVOCs)	Class GA Value (ug/L)																							
1,1'-Biphenyl	5	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
1,2,4,5-Tetrachlorobenzene	5	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2,2'-Oxybis(1-chloropropane)	5	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2,3,4,6-Tetrachlorophenol	1(c)	9.4 UJ	9.4 U	10.3 U	10.4 UJ	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 UQ	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2,4,5-Trichlorophenol	1(c)	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2,4,6-Trichlorophenol	1(c)	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2,4-Dichlorophenol	5	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	0.52 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	0.56 U	
2,4-Dimethylphenol	50	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	1.4 U	
2,4-Dinitrophenol	10	47 UJ	47 UJ	10.3 U	10.4 U	10.1 U	10 U	10 U	10 U	10 U	10 U	10 U	47 UJ	47 U	10.3 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	10 U	11 U	
2,4-Dinitrotoluene	5	9.4 UJ	9.4 U	10.3 U	10.4 UJ	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2,6-Dinitrotoluene	5	9.4 UJ	9.4 U	10.3 U	10.4 UJ	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 UQ	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2-Chloronaphthalene	10	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2-Chlorophenol	1(c)	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2-Methylnaphthalene	NC	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	0.65 U	
2-Methylphenol	1(c)	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 UQ	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2-Nitroaniline	5	47 UJ	47 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	47 UJ	47 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
2-Nitrophenol	1(c)	9.4 UJ	9.4 U	10.3 U	10.4 UJ	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 UQ	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
3,3'-Dichlorobenzidine	5	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	10 U	10 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	10 U	10 U	2.2 U	
3,4-Methylphenol	1(c)	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	10 U	10 U	10 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	10 U	0.61 U	
3-Nitroaniline	5	47 UJ	47 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	47 UJ	47 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
4,6-Dinitro-2-methylphenol	1(c)	47 UJ	47 U	10.3 U	10.4 U	10.1 U	10 U	10 U	10 U	10 U	10 U	10 U	47 UJ	47 U	10.3 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	10 U	11 U	
4-Bromophenyl-phenylether	NC	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
4-Chloro-3-methylphenol	1(c)	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
4-Chloroaniline	5	9.4 UJ	9.4 U	10.3 U	R	10.1 U	10 U	10 U	5 U	5 U	5 U	0.52 U	9.4 UJ	9.4 U	10.3 U	10.2 UQ	10.2 U	10 U	10 U	5 U	5 U	5 U	0.56 U	
4-Chlorophenyl-phenyl ether	NC	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
4-Nitroaniline	5	47 UJ	47 U	10.3 U	10.4 UJ	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	47 UJ	47 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
4-Nitrophenol	1(c)	47 UJ	47 U	10.3 U	10.4 UJ	10.1 U	10 U	10 U	10 U	10 U	10 U	2.1 U	47 UJ	47 U	10.3 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	10 U	2.2 U	
Acenaphthene	20	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Acenaphthylene	NC	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Acetophenone	NC	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Anthracene	50	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Atrazine	7.5	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Benzaldehyde	NC	47 UJ	47 UJ	10.3 U	10.4 U	10.1 U	10 U	10 U	10 U	10 U	10 U	2.1 U	47 UJ	47 U	10.3 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	10 U	2.2 U	
Benzo(a)anthracene	0.002	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Benzo(a)pyrene	ND	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Benzo(b)fluoranthene	0.002	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Benzo(g,h,i)perylene	NC	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 UJ	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Benzo(k)fluoranthene	0.002	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Bis(2-chloroethoxy)methane	5	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Bis(2-chloroethyl) ether	1	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	0.52 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	0.56 U	
Bis(2-ethylhexyl)phthalate	5	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Butylbenzylphthalate	50	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Caprolactam	NC	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 UJ	8 J	10 U	10 U	33	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	6 J	10.1	10 U	16	
Carbazole	NC	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Chrysene	0.002	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Dibenz(a,h)anthracene	NC	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 UJ	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Dibenzofuran	NC	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	0.65 U	
Diethyl phthalate	50	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Dimethylphthalate	50	9.4 UJ	9.4 U	5.1 J	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	2.4 J	10.2 U	10.2 U	10 U	10 U	5.1 J	5 U	5 U	5 U	2.2 U
Di-n-butylphthalate	50	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Di-n-octylphthalate	50	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	10 U	10 U	10 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	10 U	2.2 U	
Fluoranthene	50	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Fluorene	50	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Hexachlorobenzene	0.04	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U	5 U	5 U	2.1 U	9.4 UJ	9.4 U	10.3 U	10.2 U	10.2 U	10 U	10 U	5 U	5 U	5 U	2.2 U	
Hexachlorobutadiene	0.5	9.4 UJ	9.4 U	10.3 U	10.4 U	10.1 U	10 U	10 U	5 U															

Table 6
Summary of Groundwater Sample Semivolatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: MW-101S MW-101S MW-101S MW-101S MW-101S MW-101S MW-101S MW-101S MW-101S MW-101S MW-101S MW-101S MW-101S MW-101S MW-102D MW-102D MW-102D MW-102D MW-102D MW-102D MW-102D MW-102D MW-102D MW-102D MW-102D		Sample Date: 5/19/2015 3/25/2016 10/17/2016 10/17/2016 3/13/2017 3/13/2017 6/15/2017 08/09/2018 10/03/2019 3/23/2021 8/18/2022 10/2/2023 9/19/2024 5/19/2015 3/25/2016 10/17/2016 3/13/2017 6/15/2017 08/09/2018 10/03/2019 3/24/2021 8/18/2022 9/28/2023 9/19/2024																													
ORGANIC COMPOUNDS (SVOCs)	Class GA Value (ug/L)	Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup									
1,1'-Biphenyl	5	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U		
1,2,4,5-Tetrachlorobenzene	5	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U		
2,2'-Oxybis(1-chloropropane)	5	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	UJ	10	U	10.4	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
2,3,4,6-Tetrachlorophenol	1(c)	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	UJ	10.2	UJ	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
2,4,5-Trichlorophenol	1(c)	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
2,4,6-Trichlorophenol	1(c)	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
2,4-Dichlorophenol	5	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	0.50	U
2,4-Dimethylphenol	50	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	1.2	U
2,4-Dinitrophenol	10	47	UJ	47	UJ	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	10	U	10.9	U	10.1	U	10	U
2,4-Dinitrotoluene	5	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	UJ	10.2	UJ	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
2,6-Dinitrotoluene	5	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	UJ	10.2	UJ	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
2-Chloronaphthalene	10	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
2-Chlorophenol	1(c)	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
2-Methylnaphthalene	NC	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	0.59	U
2-Methylphenol	1(c)	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
2-Nitroaniline	5	47	UJ	47	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
2-Nitrophenol	1(c)	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	UJ	10.2	UJ	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
3,3'-Dichlorobenzidine	5	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	10.9	U	10.1	U	2.0	U
3,4-Methylphenol	1(c)	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10.1	U	0.54	U
3-Nitroaniline	5	47	UJ	47	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
4,6-Dinitro-2-methylphenol	1(c)	47	UJ	47	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	10	U	10.9	U	10.1	U	10	U
4-Bromophenyl-phenylether	NC	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
4-Chloro-3-methylphenol	1(c)	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
4-Chloroaniline	5	9.4	UJ	9.4	U	10.4	U	10.2	U	R		R		10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	0.50	U
4-Chlorophenyl-phenyl ether	NC	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
4-Nitroaniline	5	47	UJ	47	U	10.4	U	10.2	U	10.3	UJ	10.2	UJ	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
4-Nitrophenol	1(c)	47	UJ	47	U	10.4	U	10.2	U	10.3	UJ	10.2	UJ	10	U	10	U	10	U	10	U	10	U	10	U	10.9	U	10.1	U	2.0	U
Acenaphthene	20	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
Acenaphthylene	NC	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
Acetophenone	NC	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
Anthracene	50	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
Atrazine	7.5	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
Benzaldehyde	NC	47	UJ	47	UJ	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	10	U	10.9	U	10.1	U	2.0	U
Benzo(a)anthracene	0.002	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
Benzo(a)pyrene	ND	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
Benzo(b)fluoranthene	0.002	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
Benzo(g,h,i)perylene	NC	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
Benzo(k)fluoranthene	0.002	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U	10.2	U	10	U	10	U	10	U	10	U	10	U	5	U	5.4	U	5.1	U	2.0	U
Bis(2-chloroethoxy)methane	5	9.4	UJ	9.4	U	10.4	U	10.2	U	10.3	U																				

Table 6
Summary of Groundwater Sample Semivolatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-1021 5/20/2015	MW-1021 3/25/2016	MW-1021 10/17/2016	MW-1021 3/13/2017	MW-1021 6/15/2017	MW-1021 08/09/2018	MW-1021 10/03/2019	MW-1021 3/24/2021	MW-1021 3/24/2021	MW-1021 8/18/2022	MW-1021 8/18/2022	MW-1021 10/2/2023	MW-1021 10/2/2023	MW-1021 9/19/2024	MW-1021 9/19/2024	MW-102S 5/20/2015	MW-102S 5/20/2015	MW-102S 3/25/2016	MW-102S 10/17/2016	MW-102S 3/13/2017	MW-102S 6/15/2017	MW-102S 08/09/2018	MW-102S 10/03/2019	MW-102S 3/24/2021	
ORGANIC COMPOUNDS (SVOCs)	Class GA Value (ug/L)																									
1,1'-Biphenyl	5	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	Field Dup	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
1,2,4,5-Tetrachlorobenzene	5	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2,2'-Oxybis(1-chloropropane)	5	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2,3,4,6-Tetrachlorophenol	1(c)	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2,4,5-Trichlorophenol	1(c)	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2,4,6-Trichlorophenol	1(c)	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2,4-Dichlorophenol	5	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	0.53 U	0.52 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2,4-Dimethylphenol	50	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2,4-Dinitrophenol	10	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10.3 U	11.2 U	10 U	10.1 U	11 U	10 U	47 U	47 U	47 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	5 U
2,4-Dinitrotoluene	5	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2,6-Dinitrotoluene	5	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2-Chloronaphthalene	10	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2-Chlorophenol	1(c)	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2-Methylnaphthalene	NC	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2-Methylphenol	1(c)	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2-Nitroaniline	5	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	47 U	47 U	47 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
2-Nitrophenol	1(c)	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
3,3'-Dichlorobenzidine	5	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	10.3 U	11.2 U	10 U	10.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
3,4-Methylphenol	1(c)	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10.3 U	11.2 U	10 U	10.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	5 U
3-Nitroaniline	5	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	47 U	47 U	47 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
4,6-Dinitro-2-methylphenol	1(c)	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10.3 U	11.2 U	10 U	10.1 U	11 U	10 U	47 U	47 U	47 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	5 U
4-Bromophenyl-phenylether	NC	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
4-Chloro-3-methylphenol	1(c)	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
4-Chloroaniline	5	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	0.53 U	0.52 U	9.4 U	9.4 U	9.4 U	10.2 U	R	10 U	10 U	10 U	5 U
4-Chlorophenyl-phenyl ether	NC	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
4-Nitroaniline	5	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	47 U	47 U	47 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
4-Nitrophenol	1(c)	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10.3 U	11.2 U	10 U	10.1 U	2.1 U	2.1 U	47 U	47 U	47 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	5 U
Acenaphthene	20	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
Acenaphthylene	NC	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
Acetophenone	NC	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
Anthracene	50	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
Atrazine	7.5	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
Benzaldehyde	NC	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10.3 U	11.2 U	10 U	10.1 U	2.1 U	2.1 U	47 U	47 U	47 U	10.2 U	10.2 U	10 U	10 U	10 U	10 U	5 U
Benzo(a)anthracene	0.002	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
Benzo(a)pyrene	ND	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
Benzo(b)fluoranthene	0.002	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U	5.2 U	5.6 U	5 U	5.1 U	2.1 U	2.1 U	9.4 U	9.4 U	9.4 U	10.2 U	10.2 U	10 U	10 U	10 U	5 U
Benzo(g,h,i)perylene	NC	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	5 U	5 U															

Table 6
Summary of Groundwater Sample Semivolatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-102S 8/18/2022	MW-102S 10/2/2023	MW-102S 9/19/2024	MW-103D 5/22/2015	MW-103D 3/25/2016	MW-103D 10/19/2016	MW-103D 3/17/2017	MW-103D 6/14/2017	MW-103D 08/09/2018	MW-103D 10/02/2019	MW-103D 3/23/2021	MW-103D 8/17/2022	MW-103D 9/28/2023	MW-103D 9/18/2024	MW-103I 5/22/2015	MW-103I 3/24/2016	MW-103I 10/19/2016	MW-103I 3/17/2017	MW-103I 6/14/2017	MW-103I 08/08/2018	MW-103I 10/02/2019	MW-103I 3/23/2021	MW-103I 8/17/2022	MW-103I 9/28/2023	MW-103I 9/18/2024	
ORGANIC COMPOUNDS (SVOCs)	Class GA Value (ug/L)																										
1,1'-Biphenyl	5	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
1,2,4,5-Tetrachlorobenzene	5	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2,2'-Oxybis(1-chloropropane)	5	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2,3,4,6-Tetrachlorophenol	1(c)	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2,4,5-Trichlorophenol	1(c)	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2,4,6-Trichlorophenol	1(c)	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2,4-Dichlorophenol	5	5.4 U	5 U	0.49 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	0.50 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	0.50 U	
2,4-Dimethylphenol	50	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	1.2 U	
2,4-Dinitrophenol	10	10.8 U	10 U	9.7 U	48 U	47 U	10.4 U	10.4 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	48 U	47 U	10.1 U	10.4 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2,4-Dinitrotoluene	5	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2,6-Dinitrotoluene	5	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2-Chloronaphthalene	10	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2-Chlorophenol	1(c)	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2-Methylnaphthalene	NC	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	0.59 U	
2-Methylphenol	1(c)	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 UQ	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2-Nitroaniline	5	5.4 U	5 U	1.9 U	48 U	47 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	48 U	47 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
2-Nitrophenol	1(c)	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
3,3'-Dichlorobenzidine	5	10.8 U	10 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	10 U	10 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	10 U	10 U	2.0 U	
3,4-Methylphenol	1(c)	10.8 U	10 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	10 U	10 U	10 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 UQ	10 U	10 U	10 UQ	10 U	10 U	10 U	0.54 U	
3-Nitroaniline	5	5.4 U	5 U	1.9 U	48 U	47 U	10.4 U		R	10 U	10 U	5 U	5 U	5 U	2.0 U	48 U	47 U	10.1 U	10.4 UQ	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
4,6-Dinitro-2-methylphenol	1(c)	10.8 U	10 U	9.7 U	48 U	47 U	10.4 U	10.4 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	48 U	47 U	10.1 U	10.4 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
4-Bromophenyl-phenylether	NC	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
4-Chloro-3-methylphenol	1(c)	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
4-Chloroaniline	5	5.4 U	5 U	0.49 U	9.5 U	9.4 U	10.4 U		R	10 U	10 U	5 U	5 U	5 U	0.50 U	9.5 U	9.4 U	10.1 U	10.4 UQ	10 U	10 U	10 U	5 U	5 U	5 U	0.50 U	
4-Chlorophenyl-phenyl ether	NC	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
4-Nitroaniline	5	5.4 U	5 U	1.9 U	48 U	47 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	48 U	47 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
4-Nitrophenol	1(c)	10.8 U	10 U	1.9 U	48 U	47 U	10.4 U	10.4 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.0 U	48 U	47 U	10.1 U	10.4 U	10 U	10 U	10 U	10 U	10 U	2.0 U	
Acenaphthene	20	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Acenaphthylene	NC	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Acetophenone	NC	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Anthracene	50	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Atrazine	7.5	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Benzaldehyde	NC	10.8 U	10 U	1.9 U	48 U	47 U	10.4 U	10.4 U	10 U	10 U	10 U	10 U	10 U	10 U	2.0 U	48 U	47 U	10.1 U	10.4 U	10 U	10 U	10 U	10 U	10 U	10 U	2.0 U	
Benzo(a)anthracene	0.002	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Benzo(a)pyrene	ND	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Benzo(b)fluoranthene	0.002	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Benzo(g,h,i)perylene	NC	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Benzo(k)fluoranthene	0.002	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Bis(2-chloroethoxy)methane	5	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Bis(2-chloroethyl) ether	1	5.4 U	5 U	0.49 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	0.50 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	0.50 U	
Bis(2-ethylhexyl)phthalate	5	5.4 U	5 U	1.9 U	3.7 J	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Butylbenzylphthalate	50	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Caprolactam	NC	10.8 U	11.5	4.0	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	4.8 J	11.2	10 U	29	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	10.7	10 U	10 U	16	
Carbazole	NC	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Chrysene	0.002	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Dibenz(a,h)anthracene	NC	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Dibenzofuran	NC	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	0.59 U	
Diethyl phthalate	50	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.1 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	
Dimethylphthalate	50	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	3.8 J	2.1 J	10.2 U	5 U	2.0 U	9.5 U	9.4 U	3 J	10.4 U	11	2.6 J	18.3 B	5 U	5 U	5 U	2.0 U
Di-n-butylphthalate	50	5.4 U	5 U	1.9 U	9.5 U	9.4 U	10.4 U	10.4 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U										

Table 6
Summary of Groundwater Sample Semivolatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-103S 5/22/2015	MW-103S 3/24/2016	MW-103S 10/19/2016	MW-103S 3/17/2017	MW-103S 6/14/2017	MW-103S 08/08/2018	MW-103S 10/02/2019	MW-103S 3/24/2021	MW-103S 8/17/2022	MW-103S 9/28/2023	MW-103S 9/19/2024	MW-104D 5/22/2015	MW-104D 3/25/2016	MW-104D 10/19/2016	MW-104D 3/17/2017	MW-104D 6/14/2017	MW-104D 08/08/2018	MW-104D 10/02/2019	MW-104D 3/23/2021	MW-104D 8/17/2022	MW-104D 9/28/2023	MW-104D 9/18/2024
ORGANIC COMPOUNDS (SVOCs)	Class GA Value (ug/L)																						
1,1'-Biphenyl	5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
1,2,4,5-Tetrachlorobenzene	5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2,2'-Oxybis(1-chloropropane)	5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2,3,4,6-Tetrachlorophenol	1(c)	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2,4,5-Trichlorophenol	1(c)	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2,4,6-Trichlorophenol	1(c)	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2,4-Dichlorophenol	5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	0.50 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	0.50 U
2,4-Dimethylphenol	50	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	1.2 U
2,4-Dinitrophenol	10	48 U	47 U	10.2 U	10.3 U	10 U	10.2 U	10 U	10 U	10 U	10 U	10 U	48 U	47 U	10.3 U	10.2 U	10.1 U	10 U	10 U	10.5 U	10 U	10 U	10 U
2,4-Dinitrotoluene	5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2,6-Dinitrotoluene	5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2-Chloronaphthalene	10	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2-Chlorophenol	1(c)	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2-Methylnaphthalene	NC	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	0.59 U
2-Methylphenol	1(c)	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2-Nitroaniline	5	48 U	47 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	48 U	47 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
2-Nitrophenol	1(c)	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
3,3'-Dichlorobenzidine	5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	R	10 U	5 U	10 U	10 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	10 U	10 U	2.0 U
3,4-Methylphenol	1(c)	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	10 U	10 U	10 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	10.5 U	10 U	10 U	0.54 U
3-Nitroaniline	5	48 U	47 U	10.2 U	R	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	48 U	47 U	10.3 U	R	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
4,6-Dinitro-2-methylphenol	1(c)	48 U	47 U	10.2 U	10.3 U	10 U	10.2 U	10 U	10 U	10 U	10 U	10 U	48 U	47 U	10.3 U	10.2 U	10.1 U	10 U	10 U	10.5 U	10 U	10 U	10 U
4-Bromophenyl-phenylether	NC	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
4-Chloro-3-methylphenol	1(c)	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
4-Chloroaniline	5	9.5 U	9.4 U	10.2 U	R	10 U	10.2 U	10 U	5 U	5 U	5 U	0.50 U	9.5 U	9.4 U	10.3 U	R	10.1 U	10 U	10 U	5.3 U	5 U	5 U	0.50 U
4-Chlorophenyl-phenyl ether	NC	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
4-Nitroaniline	5	48 U	47 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	48 U	47 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
4-Nitrophenol	1(c)	48 U	47 U	10.2 U	10.3 U	10 U	10.2 U	10 U	10 U	10 U	10 U	2.0 U	48 U	47 U	10.3 U	10.2 U	10.1 U	10 U	10 U	10.5 U	10 U	10 U	2.0 U
Acenaphthene	20	11	7.7 J	5.9 J	8.6 J	4.7 J	5.5 J	5.5 J	4.6 J	5	4.8 J	4.0	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Acenaphthylene	NC	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Acetophenone	NC	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Anthracene	50	1.9 J	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	0.69 J	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Atrazine	7.5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Benzaldehyde	NC	48 U	47 U	10.2 U	10.3 U	10 U	10.2 U	10 U	10 U	10 U	10 U	2.0 U	48 U	47 U	10.3 U	10.2 U	10.1 U	10 U	10 U	10.5 U	10 U	10 U	2.0 U
Benzo(a)anthracene	0.002	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	0.71 J	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Benzo(a)pyrene	ND	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Benzo(b)fluoranthene	0.002	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Benzo(g,h,i)perylene	NC	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Benzo(k)fluoranthene	0.002	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Bis(2-chloroethoxy)methane	5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Bis(2-chloroethyl) ether	1	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	0.50 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	0.50 U
Bis(2-ethylhexyl)phthalate	5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Butylbenzylphthalate	50	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Caprolactam	NC	9.5 U	9.4 U	2.3 J	10.3 U	10 U	10.2 U	7 J	9 J	10 U	10 U	12	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	11.9	10.5 U	10 U	10 U	50
Carbazole	NC	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Chrysene	0.002	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Dibenz(a,h)anthracene	NC	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Dibenzofuran	NC	3.9 J	3.2 J	10.2 U	3.6 J	2.1 J	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	0.59 U
Diethyl phthalate	50	9.5 U	9.4 U	10.2 U	16.1	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Dimethylphthalate	50	9.5 U	9.4 U	7 J	10.3 U	18.8	2.1 J	16.5	2.7 J	5 U	5 U	2.0 U	9.5 U	9.4 U	3.9 J	10.2 U	10.1 U	10 U	7.9 JB	5.3 U	5 U	5 U	2.0 U
Di-n-butylphthalate	50	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Di-n-octylphthalate	50	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	10 U	10 U	10 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	10.5 U	10 U	10 U	2.0 U
Fluoranthene	50	8.1 J	5.7 J	2.6 J	4.7 J	10 U	2.9 J	10 U	5 U	2.4 J	2.4 J	3.3	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Fluorene	50	2.4 J	1.9 J	10.2 U	2.4 J	10 U	10.2 U	10 U	5 U	5 U	5 U	1.9 J	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Hexachlorobenzene	0.04	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.2 U	10.1 U	10 U	10 U	5.3 U	5 U	5 U	2.0 U
Hexachlorobutadiene	0.5	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10.2 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U								

Table 6
Summary of Groundwater Sample Semivolatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-1041 5/21/2015	MW-1041 3/25/2016	MW-1041 3/25/2016	MW-1041 10/19/2016	MW-1041 3/17/2017	MW-1041 6/14/2017	MW-1041 08/08/2018	MW-1041 10/02/2019	MW-1041 3/23/2021	MW-1041 8/17/2022	MW-1041 9/28/2023	MW-1041 9/18/2024	MW-104S 5/22/2015	MW-104S 3/17/2017	MW-104S 6/15/2017	MW-105D 5/21/2015	MW-105D 3/24/2016	MW-105D 10/18/2016	MW-105D 3/16/2017	MW-105D 6/14/2017	MW-105D 08/08/2018	MW-105D 10/02/2019	MW-105D 3/22/2021	MW-105D 8/17/2022	
ORGANIC COMPOUNDS (SVOCs)	Class GA Value (ug/L)			Field Dup																						
1,1'-Biphenyl	5	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
1,2,4,5-Tetrachlorobenzene	5	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2,2'-Oxybis(1-chloropropane)	5	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2,3,4,6-Tetrachlorophenol	1(e)	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 UJ	5.1 U	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2,4,5-Trichlorophenol	1(e)	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 U	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2,4,6-Trichlorophenol	1(e)	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 UJ	5.1 U	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2,4-Dichlorophenol	5	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 U	0.50 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2,4-Dimethylphenol	50	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 U	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2,4-Dinitrophenol	10	48 U	47 UJ	47 UJ	10.2 U	10.3 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10.1 UJ	10 U	48 U	22.2 U	10.4 U	48 U	47 U	10.2 U	10.4 U	10.4 U	10 U	10 U	10 U	10 U	
2,4-Dinitrotoluene	5	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2,6-Dinitrotoluene	5	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 UJ	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2-Chloronaphthalene	10	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2-Chlorophenol	1(e)	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 U	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2-Methylnaphthalene	NC	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2-Methylphenol	1(e)	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 U	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	1.7 J	12.1	4.3 JQ	10.4 U	10 U	10 U	5 U	5 U	
2-Nitroaniline	5	48 U	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	5 UJ	5 UJ	5.1 UJ	2.0 U	48 U	22.2 U	10.4 U	48 U	47 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
2-Nitrophenol	1(e)	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 UJ	5 UJ	5.1 U	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
3,3'-Dichlorobenzidine	5	9.5 UJ	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	10 U	10.1 UJ	2.0 U	9.5 UJ	22.2 U	10.4 U	9.5 UJ	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	10 U	
3,4-Methylphenol	1(e)	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10.1 U	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	2.1 J	16.1	10.4 UQ	10.4 U	10 U	10 UQ	10 U	10 U	
3-Nitroaniline	5	48 UJ	47 U	47 U	10.2 U		R	10 U	10 U	5 U	5 UJ	5.1 UJ	2.0 U	48 UJ		R	10.4 U	48 UJ	47 U	10.2 U	10.4 UQ	10.4 U	10 U	10 U	5 U	5 U
4,6-Dinitro-2-methylphenol	1(e)	48 U	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 UJ	10.1 U	10 U	48 U	22.2 U	10.4 U	48 U	47 U	10.2 U	10.4 U	10.4 U	10 U	10 U	10 U	10 U	
4-Bromophenyl-phenylether	NC	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
4-Chloro-3-methylphenol	1(e)	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 U	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
4-Chloroaniline	5	9.5 UJ	9.4 U	9.4 U	10.2 U		R	10 U	10 U	5 U	5 U	5.1 UJ	0.50 U	9.5 UJ		R	10.4 U	9.5 UJ	9.4 U	10.2 U	10.4 UQ	10.4 U	10 U	10 U	5 U	5 U
4-Chlorophenyl-phenyl ether	NC	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
4-Nitroaniline	5	48 U	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	48 U	22.2 U	10.4 U	48 U	47 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
4-Nitrophenol	1(e)	48 U	47 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 UJ	10.1 U	2.0 U	48 U	22.2 U	10.4 U	48 U	47 U	10.2 U	10.4 U	10.4 U	10 U	10 U	10 U	10 U	
Acenaphthene	20	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	5.1 J	10 J	5.5 J	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Acenaphthylene	NC	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Acetophenone	NC	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Anthracene	50	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	1.1 J	5.9 J	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Atrazine	7.5	9.5 UJ	9.4 U	9.4 U	10.2 UJ	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 UJ	22.2 U	10.4 U	9.5 UJ	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Benzaldehyde	NC	48 UJ	47 UJ	47 UJ	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10.1 UJ	2.0 U	48 UJ	22.2 U	10.4 U	48 UJ	47 U	10.2 U	10.4 U	10.4 U	10 U	10 U	10 U	10 U	
Benzo(a)anthracene	0.002	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Benzo(a)pyrene	ND	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Benzo(b)fluoranthene	0.002	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Benzo(g,h,i)perylene	NC	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Benzo(k)fluoranthene	0.002	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Bis(2-chloroethoxy)methane	5	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Bis(2-chloroethyl) ether	1	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	0.50 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Bis(2-ethylhexyl)phthalate	5	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	4.6 J	5.1 UJ	2.0 U	4.6 J	22.8	6.8 J	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Butylbenzylphthalate	50	9.5 U	9.4 U	9.4 U	10.2 UJ	10.3 U	10 U	10 U	10 U	5 U	5 UJ	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Caprolactam	NC	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 J	10 U	10 UJ	10.1 UJ	27	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	6.1 J	11	
Carbazole	NC	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Chrysene	0.002	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Dibenz(a,h)anthracene	NC	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Dibenzofuran	NC	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Diethyl phthalate	50	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	10 U	5 U	5 U	
Dimethylphthalate	50	9.5 U	9.4 U	9.4 U	10.2 U	10.3 U	10 U	3.6 J	10 U	5 U	5 U	5.1 UJ	2.0 U	9.5 U	22.2 U	10.4 U	9.5 U	9.4 U	10.2 U	10.4 U	10.4 U	10 U	13.9 B	5 U	5 U	

Table 6
Summary of Groundwater Sample Semivolatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-105D 9/27/2023	MW-105D 9/18/2024	MW-105I 5/21/2015	MW-105I 3/23/2016	MW-105I 10/18/2016	MW-105I 3/16/2017	MW-105I 6/14/2017	MW-105I 08/08/2018	MW-105I 10/02/2019	MW-105I 3/22/2021	MW-105I 8/17/2022	MW-105I 9/27/2023	MW-105I 9/18/2024	MW-105S 5/21/2015	MW-105S 3/23/2016	MW-105S 10/18/2016	MW-105S 3/16/2017	MW-105S 6/14/2017	MW-105S 08/08/2018	MW-105S 10/02/2019	MW-105S 3/22/2021	MW-105S 8/17/2022	MW-105S 9/28/2023	MW-105S 9/18/2024	
ORGANIC COMPOUNDS (SVOCs)	Class GA Value (ug/L)																									
1,1'-Biphenyl	5	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
1,2,4,5-Tetrachlorobenzene	5	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2,2'-Oxybis(1-chloropropane)	5	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2,3,4,6-Tetrachlorophenol	1(e)	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2,4,5-Trichlorophenol	1(e)	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2,4,6-Trichlorophenol	1(e)	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2,4-Dichlorophenol	5	5 U	0.50 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	0.50 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	1.5 U	
2,4-Dimethylphenol	50	5 U	1.2 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	1.2 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2,4-Dinitrophenol	10	10 U	10 U	48 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	48 U	47 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	10 U	10 U	10 U	30 U	
2,4-Dinitrotoluene	5	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2,6-Dinitrotoluene	5	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2-Chloronaphthalene	10	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2-Chlorophenol	1(e)	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2-Methylnaphthalene	NC	5 U	0.59 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	0.59 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2-Methylphenol	1(e)	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2-Nitroaniline	5	5 U	2.0 U	48 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	48 U	47 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
2-Nitrophenol	1(e)	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
3,3'-Dichlorobenzidine	5	10 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	10 U	10 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	10 U	10 U	6.0 U	
3,4-Methylphenol	1(e)	10 U	0.54 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10 U	0.54 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	10 U	10 U	10 U	6.0 U	
3-Nitroaniline	5	5 U	2.0 U	48 U	47 U	10.2 U		R	10 U	10 U	5 U	5 U	5 U	2.0 U	48 U	47 U	10.3 U	10.4 U	R	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U
4,6-Dinitro-2-methylphenol	1(e)	10 U	10 U	48 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	48 U	47 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	10 U	10 U	10 U	30 U	
4-Bromophenyl-phenylether	NC	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
4-Chloro-3-methylphenol	1(e)	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
4-Chloroaniline	5	5 U	0.50 U	9.5 U	9.4 U	10.2 U		R	10 U	10 U	5 U	5 U	5 U	0.50 U	9.5 U	9.4 U	10.3 U	10.4 U	R	10.1 U	10.1 U	10 U	5 U	5 U	5 U	1.5 U
4-Chlorophenyl-phenyl ether	NC	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
4-Nitroaniline	5	5 U	2.0 U	48 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	48 U	47 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
4-Nitrophenol	1(e)	10 U	2.0 U	48 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10 U	2.0 U	48 U	47 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	10 U	10 U	10 U	6.0 U	
Acenaphthene	20	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Acenaphthylene	NC	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Acetophenone	NC	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Anthracene	50	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Atrazine	7.5	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Benzaldehyde	NC	10 U	2.0 U	48 U	47 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10 U	2.0 U	48 U	47 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	10 U	10 U	10 U	6.0 U	
Benzo(a)anthracene	0.002	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Benzo(a)pyrene	ND	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Benzo(b)fluoranthene	0.002	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Benzo(g,h,i)perylene	NC	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Benzo(k)fluoranthene	0.002	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Bis(2-chloroethoxy)methane	5	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Bis(2-chloroethyl) ether	1	5 U	0.50 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	0.50 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	1.5 U	
Bis(2-ethylhexyl)phthalate	5	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	2.6 J	5 U	2.0 U	1.6 J	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	3.1 J	5 U	6.0 U	
Butylbenzylphthalate	50	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Caprolactam	NC	10 U	91	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10 U	130	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	10 U	10 U	10 U	250	
Carbazole	NC	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Chrysene	0.002	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Dibenz(a,h)anthracene	NC	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Dibenzofuran	NC	5 U	0.59 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	0.59 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Diethyl phthalate	50	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Dimethylphthalate	50	5 U	2.0 U	9.5 U	9.4 U	3.7 J	10.3 U	23.8	10 U	10.8 B	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	8 J	10.4 U	2.9 J	3.1 J	14.4	5 U	5 U	5 U	6.0 U	
Di-n-butylphthalate	50	5 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	5 U	5 U	5 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	5 U	5 U	5 U	6.0 U	
Di-n-octylphthalate	50	10 U	2.0 U	9.5 U	9.4 U	10.2 U	10.3 U	10 U	10 U	10 U	10 U	10 U	10 U	2.0 U	9.5 U	9.4 U	10.3 U	10.4 U	10.1 U	10.1 U	10 U	10 U	10 U			

Table 6
Summary of Groundwater Sample Semivolatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-106D 5/20/2015	MW-106D 3/24/2016	MW-106D 10/18/2016	MW-106D 3/16/2017	MW-106D 6/13/2017	MW-106D 08/08/2018	MW-106D		MW-106D 3/23/2021	MW-106D 8/16/2022	MW-106D 9/27/2023	MW-106D 9/17/2024	MW-106I 5/21/2015	MW-106I 3/24/2016	MW-106I 10/18/2016	MW-106I 3/16/2017	MW-106I 6/13/2017	MW-106I 6/13/2017	MW-106I 08/07/2018	MW-106I 10/01/2019	MW-106I 3/22/2021	MW-106I 8/16/2022	MW-106I 9/27/2023	MW-106I 9/17/2024
ORGANIC COMPOUNDS (SVOCS)	Class GA Value (ug/L)	Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup		Field Dup	
1,1'-Biphenyl	5	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
1,2,4,5-Tetrachlorobenzene	5	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2,2'-Oxybis(1-chloropropane)	5	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2,3,4,6-Tetrachlorophenol	1(c)	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2,4,5-Trichlorophenol	1(c)	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2,4,6-Trichlorophenol	1(c)	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2,4-Dichlorophenol	5	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	0.52 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	0.50 U
2,4-Dimethylphenol	50	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	1.3 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	1.2 U
2,4-Dinitrophenol	10	47 U	U	47 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	11 U	10 U	10 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	10 U
2,4-Dinitrotoluene	5	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2,6-Dinitrotoluene	5	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2-Chloronaphthalene	10	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2-Chlorophenol	1(c)	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2-Methylnaphthalene	NC	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	0.61 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	0.59 U
2-Methylphenol	1(c)	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2-Nitroaniline	5	47 U	U	47 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	48 U	47 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
2-Nitrophenol	1(c)	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
3,3'-Dichlorobenzidine	5	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
3,4-Methylphenol	1(c)	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	0.57 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	0.54 U
3-Nitroaniline	5	47 U	U	47 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	48 U	47 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
4,6-Dinitro-2-methylphenol	1(c)	47 U	U	47 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	10 U	48 U	47 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	10 U
4-Bromophenyl-phenylether	NC	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
4-Chloro-3-methylphenol	1(c)	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
4-Chloroaniline	5	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	0.52 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	0.50 U
4-Chlorophenyl-phenyl ether	NC	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
4-Nitroaniline	5	47 U	U	47 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	48 U	47 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
4-Nitrophenol	1(c)	47 U	U	47 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	48 U	47 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Acenaphthene	20	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Acenaphthylene	NC	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Acetophenone	NC	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Anthracene	50	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Atrazine	7.5	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Benzaldehyde	NC	47 U	U	47 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	48 U	47 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Benzo(a)anthracene	0.002	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Benzo(a)pyrene	ND	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Benzo(b)fluoranthene	0.002	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Benzo(g,h,i)perylene	NC	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Benzo(k)fluoranthene	0.002	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Bis(2-chloroethoxy)methane	5	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	2.1 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	2.0 U
Bis(2-chloroethyl) ether	1	9.4 U	U	9.4 U	U	10 U	U	10.2 U	U	10 U	U	10 U	U	0.52 U	9.5 U	9.4 U	10.4 U	10.4 U	10.2 U	U	10 U	U	10 U	U	0.50 U
Bis(2-ethylhexyl)phthalate	5	9.4 U																							

Table 6
Summary of Groundwater Sample Semivolatile Organic Compound Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-106S 5/20/2015	MW-106S 3/24/2016	MW-106S 10/18/2016	MW-106S 3/16/2017	MW-106S 6/13/2017	MW-106S 6/13/2017	MW-106S 08/07/2018 Field Dup		MW-106S 10/01/2019	MW-106S 8/16/2022	MW-106S 9/27/2023	MW-106S 9/17/2024	FB 5/19/2015	FB 3/23/2016	FB 10/17/2016	FB 3/13/2017	FB 6/13/2017	FB 8/7/2018	FB 8/8/2018	FB 10/01/2019	FB 3/23/2021	FB 8/16/2022	FB 10/2/2023	FB 9/19/2024
ORGANIC COMPOUNDS (SVOCs)	Class GA Value (ug/L)																								
1,1'-Biphenyl	5	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
1,2,4,5-Tetrachlorobenzene	5	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2,2'-Oxybis(1-chloropropane)	5	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2,3,4,6-Tetrachlorophenol	1(e)	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2,4,5-Trichlorophenol	1(e)	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2,4,6-Trichlorophenol	1(e)	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2,4-Dichlorophenol	5	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	0.50 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	0.52 U	
2,4-Dimethylphenol	50	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2,4-Dinitrophenol	10	47 U	47 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	10.2 U	10.1 U	10 U	47 U	47 U	10.3 U	10.1 U	10 U	10 U	10 U	10 U	10.3 U	10.1 U	10 U	
2,4-Dinitrotoluene	5	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2,6-Dinitrotoluene	5	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2-Chloronaphthalene	10	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2-Chlorophenol	1(e)	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2-Methylnaphthalene	NC	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2-Methylphenol	1(e)	9.4 U	9.4 U	10.2 U	10.5 UQ	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2-Nitroaniline	5	47 U	47 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	47 U	47 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
2-Nitrophenol	1(e)	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
3,3'-Dichlorobenzidine	5	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	10.2 U	10.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	10.3 U	10.1 U	2.1 U	
3,4-Methylphenol	1(e)	9.4 U	9.4 U	10.2 U	10.5 UQ	10.1 U	10.1 U	10 U	10 U	10 UQ	10.2 U	10.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	10 U	10.3 U	10.1 U	2.1 U	
3-Nitroaniline	5	47 U	47 U	10.2 U	10.5 UQ	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	47 U	47 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
4,6-Dinitro-2-methylphenol	1(e)	47 U	47 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	10.2 U	10.1 U	10 U	47 U	47 U	10.3 U	10.1 U	10 U	10 U	10 U	10 U	10.3 U	10.1 U	10 U	
4-Bromophenyl-phenylether	NC	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
4-Chloro-3-methylphenol	1(e)	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
4-Chloroaniline	5	9.4 U	9.4 U	10.2 U	10.5 UQ	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	0.50 U	9.4 U	9.4 U	10.3 U	R	10 U	10 U	10 U	10 U	5 U	5.2 U	0.52 U	
4-Chlorophenyl-phenyl ether	NC	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
4-Nitroaniline	5	47 U	47 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	47 U	47 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
4-Nitrophenol	1(e)	47 U	47 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	10.2 U	10.1 U	2.0 U	47 U	47 U	10.3 U	10.1 U	10 U	10 U	10 U	10 U	10.3 U	10.1 U	2.1 U	
Acenaphthene	20	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Acenaphthylene	NC	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Acetophenone	NC	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Anthracene	50	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Atrazine	7.5	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Benzaldehyde	NC	47 U	47 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	10.2 U	10.1 U	2.0 U	47 U	47 U	10.3 U	10.1 U	10 U	10 U	10 U	10 U	10.3 U	10.1 U	2.1 U	
Benzo(a)anthracene	0.002	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Benzo(a)pyrene	ND	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Benzo(b)fluoranthene	0.002	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Benzo(g,h,i)perylene	NC	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Benzo(k)fluoranthene	0.002	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Bis(2-chloroethoxy)methane	5	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Bis(2-chloroethyl) ether	1	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	0.50 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	0.52 U	
Bis(2-ethylhexyl)phthalate	5	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	2.8 J	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	3.7 J	5.2 U	5.1 U	2.1 U	
Butylbenzylphthalate	50	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U
Caprolactam	NC	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.8 J	10.1 U	18	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	10 U	10.3 U	10.1 U	2.1 U	
Carbazole	NC	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Chrysene	0.002	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Dibenzo(a,h)anthracene	NC	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Dibenzofuran	NC	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Diethyl phthalate	50	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Dimethylphthalate	50	9.4 U	9.4 U	3.3 J	10.5 U	19.1	19.1	10 U	4.9 J	5.9 J	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 J	5 U	5.2 U	5.1 U	2.1 U
Di-n-butylphthalate	50	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	5.1 U	5.1 U	2.0 U	9.4 U	9.4 U	10.3 U	10.1 U	10 U	10 U	10 U	5 U	5.2 U	5.1 U	2.1 U	
Di-n-octylphthalate	50	9.4 U	9.4 U	10.2 U	10.5 U	10.1 U	10.1 U	10 U	10 U	10 U	10														

Table 7
Summary of Groundwater Sample Metals and Chloride Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-101D 5/19/2015	MW-101D 3/25/2016	MW-101D 10/17/2016	MW-101D 3/13/2017	MW-101D 7/31/2017	MW-101D 08/09/2018	MW-101D 10/03/2019	MW-101D 3/23/2021	MW-101D 8/18/2022	MW-101D 10/2/2023	MW-101D 9/19/2024	MW-1011 5/19/2015	MW-1011 3/25/2016	MW-1011 10/17/2016	MW-1011 3/13/2017	MW-1011 7/31/2017	MW-1011 08/09/2018	MW-1011 10/03/2019	MW-1011 3/23/2021	MW-1011 8/18/2022	MW-1011 10/2/2023	MW-1011 9/19/2024
METALS	Class GA Value (ug/L)																						
Aluminum	NC	418 J	1,580	61.3	516 J	1,110	236	219	438	180	6,870 J	1,200 J	242 J	980	320	1,250	1,090	252	130	369	120	181	62 J
Antimony	3	1 UJ	1.0 U	2 U	2 U	2.38 ^	2.2 J	2 UJ	0.16 J	2 U	1.26 J	3.0 U	1 UJ	0.470 J	1.55 J	5.86	2.36 ^	2.37	1.86 J	0.35 J	0.23 J	0.16 J	3.0 U
Arsenic	25	10 UJ	10.0 U	1 U	3.1 J+	5.08	1.71 J+	1.01 J+	1 U	0.82 J	16.3	2.0 J	10 UJ	10.0 U	1.62	3.42	3.48	1.65	1.3	1.24	0.71 J	0.41 J	0.63 J
Barium	1,000	219 J	143	122	120	134	112	70.9 J+	77.2	69.5	58.4	32 J	130 J	118	142	142	159	98.8	146	160	236	6.52 J	160 B
Beryllium	3	3 UJ	3.0 U	1 U	1 U	0.13 JN	1 U	1 U	1 U	1 U	0.43 J	0.072 J	3 UJ	3.0 U	1 U	0.15 J	0.17 JN	0.08 J	1 U	1 U	1 U	1 U	1.0 U
Cadmium	5	5 UJ	5.0 U	1 UJ	1 UJ	0.13 J	1 UJ	1 U	1 UJ	1 U	0.27 J	2.0 U	5 UJ	5.0 U	1 U	1 U	0.1 J	1 U	1 U	1 U	1 U	1 U	2.0 U
Calcium	NC	113,000 J	72,000 J	67,100	56,300	66,300	60,000	57,100 J+	51,900	57,400	7,640 J-	17,000 J	88,300 J	64,500 N	105,000	79,500	90,300	50,800	72,700	118,000	82,800 T	3,780 T	60,000
Chromium	50	10 UJ	10.0 U	3.36	5.51	5.53	3.83	3.9	4.14	5.56	26 J	7.6	10 UJ	4.0 J	4.55	7.56	23.8	4.24	4.31	4.24	1.53 J	0.86 J	2.0 U
Cobalt	NC	10.8 J	1.6	0.67 J	1.59	2.48	0.69 J	1 U	0.93 J	0.92 J	5.72	1.8 J	1 UJ	0.732 J	0.57 J	2.3	1.54	0.25 J	0.14 J	0.41 J	0.47 J	0.11 J	0.41 J
Copper	200	20 UJ	4.1 J	3.71	13.2 J+	18.6	7.52	6.66 J+	4.32	3.92	42.6 J	8.2 J	20 UJ	5.5 J	9.73	25.8	20.3	8.33	7.28	6.23	28.4	4.63	14
Iron	300	897 J	1,570	102	1,050 J	2,280	588	580 J+	724	401	9,520 J	1,900 J	400 J	994	633	2,510	2,360	698	452	737	443	186	180 J
Lead	25	17.5 J	5.0 U	1.85	12.4 J	18.7	5.62	1.82	3.19 J+	3.39	31.9 J	6.0 J+	9.8 J	5.0 U	11.4	16.9	15.7	7.5	3.8	7.67	5.54	3.41	2.3 J
Magnesium	35,000	99,100 J	67,100	72,600	56,600	64,800	55,500	33,800 J+	36,300	42,000 J	3,980 J-	13,000 J	46,700 J	39,600	48,800	46,900	55,200	53,100	71,900	57,400	39,900	358 JT	13,000
Manganese	300	734 J	198	38.4	78.7 J	386	25.1	135	157	128	340 J	160 J	44.8 J	70.6	45.7	143	123	17.5	5.8	19.3	47.5	8.64	32
Mercury	0.7	0.16 J	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.059 J	0.2 U	0.2 U	0.22 J+	0.50 U	0.117 J	0.200 U	0.2 U	0.125 J	0.428	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U
Nickel	100	7.8 J	5.5	1.07 J-	3.19	5.05	1.38	1.78	2.28	2.47 J+	16.2 J	4.1 J	2.7 J	4.3	1.55	5.55	10.5	1.13	0.62 J	1.26	1.91	0.97 J	1.7 J
Potassium	NC	27,000 J	20,600	21,200	17,100	21,700	22,800 J-	16,000 J+	19,000	13,600 J+	3,510 J-	22,000 J	7,910 J	9,300	12,200	12,900	12,600	11,800 N	18,400	14,900	4,150	1,470 T	4,100
Selenium	10	4.5 J	7.5	1.76 J	5 U	2.58 J	5 U	5 U	5 U	3.17 J	5 U	1.9 J	1.4 J	2.3	1.86 J	2.61 J	2.1 J	1.63 J	5 U	5 U	5 U	5 U	2.0 J
Silver	50	10 UJ	10.0 U	1 U	1 UJ	0.4 J^	1 U	1 U	R	1 UJ	R	2.0 U	10 UJ	10.0 U	0.25 J	0.62 JN	0.6 J^	0.04 J	1 U	1 UJ	1 UT	1 U	2.0 U
Sodium	20,000	248,000 J	330,000	440,000	403,000	392,000	347,000	294,000	236,000	142,000	29,600	170,000 J	70,500 J	65,500	84,300	68,700	65,500	55,500	112,000	91,200	178,000	1,640	190,000
Thallium	0.5	1 UJ	1.0 U	1 U	1 U	0.05 J	1 U	1 U	1 U	1 U	1 U	2.0 U	1 UJ	1.0 U	1 U	0.2 J	0.11 J	1 U	0.07 J	1 U	1 U	1 U	2.0 U
Vanadium	NC	1 J	2.0 UJ	1.66 J	5 U	4.77 J	1.93 J	5 UJ	5 UJ	1.61 J	16.7	5.2	0.603 J	2.0 U	3.02 J	6.56	5.07	3.67 J	3.04 J	3 J	1.12 J	1.23 J	1.4 J
Zinc	2,000	785 J	63.8	69.1	170	183	103	47.9 J	84.7	64.8 J	237 J	86 J+	19.9 J	17.1 J	66.2	65.8	103	109	47.2	50.7	35.6	22.7	21 J
Chloride	250,000	697,000 J	652,000	711,000	700,000	808,000	587,000	438,000	338,000	256,000	42,100	130,000 J	231,000 J	224,000	237,000	206,000	249,000	204,000	290,000	311,000	330,000	1,400	240,000

Notes:
ug/L - micrograms per liter.
B - Analyte detected in associated method blank.
J - Estimated value.
J+ - Estimated value; biased high.
J- - Estimated value; biased low.
N - Matrix spike recovery outside control limits.
NC - No Criterion.
R - Rejected data point.
T - Indicates that a quality control parameter doesn't meet the control limits requirements.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
^ - Duplicate analysis outside control limits.

Table 7
Summary of Groundwater Sample Metals and Chloride Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-101S 5/19/2015	MW-101S 3/25/2016	MW-101S 10/17/2016	MW-101S 10/17/2016	MW-101S 3/13/2017	MW-101S 3/13/2017	MW-101S 6/15/2017	MW-101S 08/09/2018	MW-101S 10/03/2019	MW-101S 3/23/2021	MW-101S 8/18/2022	MW-101S 10/2/2023	MW-101S 9/19/2024	MW-102D 5/19/2015	MW-102D 3/25/2016	MW-102D 10/17/2016	MW-102D 3/13/2017	MW-102D 6/15/2017	MW-102D 08/09/2018	MW-102D 10/03/2019	MW-102D 3/24/2021	MW-102D 8/18/2022	MW-102D 9/28/2023	MW-102D 9/19/2024
METALS	Class GA Value (ug/L)				Field Dup		Field Dup																		
Aluminum	NC	403 J	3,470	66.7	51.4	538 J	395 J	1,350	453	156	888	170	657	200 U	998 J	771	150	665	383	663	1,140	9,170	320	8,040	3,200
Antimony	3	3.6 J	5.2	3.34 J+	3.39 J+	2.77 J+	2.92 J+	3.53 J+	3.36 J	3 J	1.38 J	1.27 J	2.43	11	1.2 J	0.924 J	1.42 J	1.03 J	1.5 J	2.27	2.48	2.54	0.25 J	0.88 J	1.0 J
Arsenic	25	10 UJ	10.0 U	1.93 J+	1.92 J+	2.61 J+	2.3 J+	3.76	2.24 J+	2.07 J+	1.71	1.83	1.29	3.0	10 UJ	10.0 U	3.38	5.67	4.32	5.4	5.28	7.68	7.57	5.21	5.8
Barium	1,000	67.1 J	75.2	89.6	90.4	65.1	61.3	90	129	81.6 J+	132	82.5	55.4	110 B	58.7 J	29.6	19.4	13.1	15.3	16.6	21.3	115	21.4	118	55 B
Beryllium	3	3 UJ	3.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	3 UJ	3.0 U	1 U	0.12 J	0.15 J	0.09 J	0.1 J	0.63 J	1 U	0.53 J	0.20 J
Cadmium	5	5 UJ	0.200 J	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	0.11 J	5 UJ	5.0 U	1 U	1 U	1 U	1 U	1 U	0.21 J	1 U	0.34 J	0.24 J
Calcium	NC	92,800 J	69,700 J	82,400	85,400	66,900	65,600	66,500	86,600	74,500 J+	74,400	38,100 T	20,900 T	67,000	31,600 J	9,270 N	9,720	5,490	7,390	7,050	7,780	22,500	8,290 T	33,700 T	15,000
Chromium	50	10 UJ	10.0 U	2 U	2 U	3.08	2.62	5.62	3.01	2.5	3.09	1.3 J	2.98	2.0 U	10 UJ	3.8 J	1.8 J	4.56	3.3	3.94	8.07	43.9	7.66	22.8	16
Cobalt	NC	1.3 J	6.5	0.4 J	0.34 J	1.49	1.15	4.47	4.49	1.77 J+	26	4.44	0.58 J	4.6	2 J	0.655 J	0.3 J	0.9 J	0.54 J	0.76 J	1.39	10.27	0.68 J	12.9	4.0
Copper	200	20 UJ	35.5	8.47	6.89	15.9 J+	12.1 J+	39.2	17.7	11.6	18.5	9.51	7.22	20	27.8 J	5.4 J	8.1	12.2	9.12	11.6	19.6	97	8.55	47.9	50
Iron	300	549 J	3,920	126	108	1,010 J	713 J	2,770	931	454 J+	1,360	344	780	300 U	1,820 J	728	261	1,230	815	1,260	2,340	15,700	613	12,300	5,900
Lead	25	34.8 J	47.9	3.88	3.29	13.6 J	9.41 J	48.8	17.6	5.06	25.1	12.9	2.68	2.4 J	27.6 J	2.3 J	3.56	6.75	3.67	5.21	9.15	82.2	5.15	36.1	32
Magnesium	35,000	29,100 J	25,700	25,200	25,500	25,000	23,900	18,000	23,900	25,300 J+	35,600	19,000	1,740 T	18,000	16,200 J	4,070	7,410	3,430	4,270	4,030	3,570	12,400	3,590	23,300 T	7,500
Manganese	300	80.5 J	594	37.1	27.5	94.7 J	57.7 J	392	182	96.1	613	115	31.4	100	165 J	45.7	108	92	96.2	113	112	818	64.5	932	360
Mercury	0.7	0.172 J	0.135 J	0.2 U	0.2 U	0.2 U	0.2 U	0.186 J	0.2 U	0.055 J	0.112 J	0.2 U	0.2 U	0.50 U	0.112 J	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.077 J	0.48	0.2 U	0.096 J	0.50 U
Nickel	100	4.3 J	12.8	1.85	1.63	3.47	2.87	8.27	4.24	1.92	6.18	2.08	1.44	3.6 J	5.2 J	2.2	0.92 J	2.59	1.39	1.98	3.72	26.6	3.99	29.2	10
Potassium	NC	12,200 J	7,010	4,660	4,740	5,930	5,660	3,700	4,760 J-	4,820 J+	3,590	3,990	2,610 T	5,600	24,500 J	42,600	10,000	4,840	4,750	5,770 N	6,370	12,400	5,610	36,700 T	11,000
Selenium	10	2.2 J	5.4	3.31 J	3.08 J	5 U	5 U	2.81 J	5 U	3.34 J	5 U	4.53 J	5 U	4.9 J	5.2 J	4.1	1.86 J	5 U	5 U	1.58 J	5 U	2.81 J	3.6 J	1.84 J	1.9 J
Silver	50	10 UJ	10.0 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 UJ	1 UT	1 U	2.0 U	10 UJ	10.0 U	0.16 J	0.24 JN	0.12 J	0.09 J	0.6 J	1 U	1 UT	1 U	2.0 U
Sodium	20,000	153,000 J	252,000	199,000	199,000	201,000	194,000	171,000	153,000	127,000 J+	158,000	135,000	2,540	150,000	579,000 J	322,000	468,000	289,000	355,000	387,000	362,000	289,000	329,000	129,000	290,000
Thallium	0.5	1 UJ	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U	1 UJ	1.0 U	1 U	0.04 J	1 U	1 U	0.48 J	0.13 J	1 U	0.11 J	0.13 J
Vanadium	NC	0.854 J	4.6 J-	2.01 J	2.16 J	5 U	5 U	5.66 J-	2.5 J	5 UJ	3 J	2.01 J	2.14 J	1.8 J	3.7 J	3.4	3.14 J	5.08	3.26 J	4.69 J	4.72 J	23.5	3.02 J	19.2	9.3
Zinc	2,000	65.2 J	152	65.2	56.2 J+	73.9	63.6	133	88.7 J+	38.1 J	90.7	31.6	12.3	63	300 J	29.1	48.4	60.7	37.8	61.1	81.2	606	51.2	496	270
Chloride	250,000	264,000 J	447,000	286,000	285,000	291,000	288,000	256,000	267,000	197,000	268,000	152,000	1,100	240,000	743,000 J	371,000	439,000	279,000	420,000	391,000	365,000	258,000	318,000	171,000	330,000

Notes:
ug/L - micrograms per liter.
B - Analyte detected in associated method blank.
J - Estimated value.
J+ - Estimated value; biased high.
J- - Estimated value; biased low.
N - Matrix spike recovery outside control limits.
NC - No Criterion.
R - Rejected data point.
T - Indicates that a quality control parameter doesn't meet the control lir
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
^ - Duplicate analysis outside control limits.

Table 7
Summary of Groundwater Sample Metals and Chloride Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-1021 5/20/2015	MW-1021 3/25/2016	MW-1021 10/17/2016	MW-1021 3/13/2017	MW-1021 6/15/2017	MW-1021 08/09/2018	MW-1021 10/03/2019	MW-1021 3/24/2021	MW-1021 3/24/2021	MW-1021 8/18/2022	MW-1021 8/18/2022	MW-1021 10/2/2023	MW-1021 10/2/2023	MW-1021 9/19/2024	MW-1021 9/19/2024	MW-102S 5/20/2015	MW-102S 5/20/2015	MW-102S 3/25/2016	MW-102S 10/17/2016	MW-102S 3/13/2017	MW-102S 6/15/2017	MW-102S 08/09/2018	MW-102S 10/03/2019	MW-102S 3/24/2021
METALS	Class GA Value (ug/L)									Field Dup		Field Dup		Field Dup		Field Dup		Field Dup							
Aluminum	NC	310	550	568	68	245	368	457	525	566	37.8	128	427 J	56.3 J	510 J	150 J	471	475	6,130	900	541 J	1,010	880	1,980	634
Antimony	3	1 U	1.0 U	1.31 J	1.76 J	1.47 J	2.45	2.34	0.34 J	0.33 J	0.1 J	2 U	0.78 J	0.25 J	3.0 U	3.0 U	5.8	5.9	4.6	8.16 J+	4.33 J+	4.57 J+	4.74 J+	9.33	4.86
Arsenic	25	10 U	10.0 U	0.76 J	0.91 J	1.24	1.99	1.03	1 U	1 U	0.52 J	0.8 J	1.5	0.58 J	1.0 J	0.80 J	10 U	10 U	10.0 U	3.37	2.74 J+	2.52	1.48	2.3	1 U
Barium	1,000	124	114	102	83.7	86.4	32.6	88.1	132	131	88.6	88.4	120	134	120 J	110 J	20 U	20 U	44.4	26.1	45.5	32.4	46.4	89.1 J+	132
Beryllium	3	3 U	3.0 U	1 U	0.06 J	0.2 J	0.09 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	1.0 U	3 U	3 U	0.200 J	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium	5	5 U	5.0 U	1 U	1 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	2.0 U	2.0 U	5 U	5 U	5.0 U	1 UJ	1 U	1 U	1 U	0.34 J	1 UJ
Calcium	NC	29,100	102,000 N	127,000	115,000	114,000	30,600	109,000	130,000	132,000	98,900	93,500	47,000 J-	48,800 J-	100,000 J	97,000 J	15,600	14,900	13,500 J	15,800	26,500	16,400	22,400	21,000 J+	48,200
Chromium	50	10 U	4.3 J	7.72	4.2	4.17	3.95	7.01	2.49	3.09	3.59 J+	3.02 J+	4.17 J	1.08 J	3.1	1.9 J	10 U	10 U	16.5	7.95	3.78	6.56	7.51	9.16	5.48
Cobalt	NC	2	0.435 J	1.12	0.14 J	0.39 J	0.58 J	0.65 J	0.65 J	0.86 J	0.19 J	0.29 J	0.54 J	0.13 J	0.82 J	0.56 J	1 U	1 U	2.2	0.49 J	0.38 J	0.61 J	0.13 J	1.46	0.64 J
Copper	200	20 U	5.4 J	20.9	4.54	9.26	13.6	14.4	8.36	9.74	2.54	3.94 J+	42.9 J	13 J	7.3 J	5.4 J	20 U	20 U	20.7	11.5	6.38 J+	12.6	8.64	22.1	7.23
Iron	300	477 J	477	872	130	760	876	1,250	986	1,110	193	408	1,480 J	229 J	950 J	420 J	531 J	544 J	5,000	546	518 J	836	153	2,830	871
Lead	25	7.1 J	4.9 J	11.3	2.8	8.52	8.22	5.95	5.81 J+	6.45 J+	1.43	3.88	9.14 J	2.18 J	6.6	4.9	11.6 J	11.4 J	13.0	2.76	1.88	4.21	0.67 J	7.69	3.13 J+
Magnesium	35,000	43,500	41,100	34,900	31,500	24,100	7,200	25,400	35,200	36,700	32,200 J	30,900 J	13,700 J-	14,800 J-	33,000 J	31,000 J	1,000 U	1,000 U	1,250	287 J	568	416 J	500 U	1,010 J+	2,820
Manganese	300	376	182	204	12.3	27.6	30.8	80.9	107	116	45.5	54.2	49.1 J	9.89 J	170 J	140 J	33	33.6	132	34.3	19.1 J	29.3	6.09	72.4	34.8
Mercury	0.7	0.2 U	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.045 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U	0.50 U	0.079 J	0.2 U	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	7.6	5.7	5.7	1.09	1.25	1.53	2.46	2.13	2.64	1.8 J+	1.81 J+	2.93 J	1.33 J	2.3 J	1.4 J	1.1	1.3	6.4	1.3	1.39	1.36	0.32 J	4.29	1.68
Potassium	NC	21,700	10,500	5,780	4,600	4,510	30,000 N	5,530	4,190	4,390	4,270 J-	3,850 J-	3,800 J-	3,430 J-	5,500 J	5,100 J	4,280	4,280	9,950	11,200	9,190	6,430	4,900 J-	5,130 J+	6,640
Selenium	10	1.4 J	1.9 J	2.54 J	2.14 J	5 U	5 U	5 U	5 U	5 U	2.43 J	2.41 J	5 U	5 U	1.7 J	1.4 J	0.896 J	0.905 J	1.2 J	5 U	5 U	5 U	5 U	5 U	5 U
Silver	50	10 U	10.0 U	0.21 J	0.39 JN	0.15 J	0.09 J	1 U	R	R	1 UJ	1 UJ	R	R	2.0 U	2.0 U	10 U	10 U	10.0 U	1 U	1 UJ	1 U	1 U	0.58 J	R
Sodium	20,000	148,000 J	94,600	90,400	81,200	83,200	44,900	97,000	130,000	134,000	112,000	106,000	127,000	133,000	88,000 J	84,000 J	58,000 J	57,400 J	38,600	26,900	33,700	25,400	10,700	26,100 J+	32,700
Thallium	0.5	1 U	1.0 U	1 U	0.12 J	0.04 J	0.07 J	0.27 J	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U	2.0 U	1 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1.9 J+	0.09 J
Vanadium	NC	2 U	2.0 U	2.53 J	1.96 J	2.36 J	4.14 J	2.74 J	5 UJ	5 UJ	0.91 J	1.2 J	2.52 J	1.03 J	2.2	1.5 J	5	5.6	18.3	11.4	5.54	8.15	7.38	6.65 J+	5 UJ
Zinc	2,000	15.9 J	4.2 J	72.3	10.27	35	53.3	27	27.4 J+	28.2 J+	20.9 J	24 J	35.1 J	15 J	35 J	40 U	21.5	25.2	57.4	30.7 J+	12.5 J+	25.3 J+	32 J+	45.7 J	15.2 J+
Chloride	250,000	237,000	241,000	205,000	214,000	224,000	93,000	207,000	261,000	267,000	218,000	209,000	226,000	191,000	210,000 J	220,000 J	25,600	25,600	20,100	19,400	23,500	26,500	9,900	5,600	8,300 J+

Notes:
ug/L - micrograms per liter.
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J+ - Estimated value; biased high.
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Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type
exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values
for Class GA water, June 1998 with the April 2000 Addendum.
^ - Duplicate analysis outside control limits.

Table 7
Summary of Groundwater Sample Metals and Chloride Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-102S 8/18/2022	MW-102S 10/2/2023	MW-102S 9/19/2024	MW-103D 5/22/2015	MW-103D 3/25/2016	MW-103D 10/19/2016	MW-103D 3/17/2017	MW-103D 6/14/2017	MW-103D 08/09/2018	MW-103D 10/02/2019	MW-103D 3/23/2021	MW-103D 8/17/2022	MW-103D 9/28/2023	MW-103D 9/18/2024	MW-103I 5/22/2015	MW-103I 3/24/2016	MW-103I 10/19/2016	MW-103I 3/17/2017	MW-103I 6/14/2017	MW-103I 08/08/2018	MW-103I 10/02/2019	MW-103I 3/23/2021	MW-103I 8/17/2022	MW-103I 9/28/2023	MW-103I 9/18/2024
METALS	Class GA Value (ug/L)																									
Aluminum	NC	251	145 J	91 J	134	100 U	20 U	17.3 J	20 U	26.9 J+	50.9	53.6 J+	17.6 J	11.9 J	170 J	180	69.5 J	22	20.1	29.6	96.3	18.7 J	165	8.69 J	38.5	130 J
Antimony	3	4.42	8.3	4.1	1 U	1.0 U	2 U	2 U	2 U	2.19 J	2 U	0.17 J	2 U	0.33 J	3.0 U	1 U	1.0 U	1.19 J	1.2 J	0.9 J	2.27	0.64 J	0.23 J	0.17 J	0.17 J	3.0 U
Arsenic	25	0.79 J	2.17	0.91 J	5.8 J	10.0 U	5.14 J+	1.32 J+	4.53 J+	2.76 J+	1 U	0.15 J	1.95	0.22 J	2.0 U	11.7	5.1 J	6.27	8.87	8.18	8.01	8.54	0.78 J	7.14	0.79 J	6.8 B
Barium	1,000	87.7	145	110 J	32.7	24.8 J+	33.6	55	38.4	48.6	12.9 J+	10 U	67.5	4.97 J	68 J	230	256	243	117	118	122	146	54.1	309	47.8	130
Beryllium	3	1 U	1 U	1.0 U	3 U	3.0 U	1 U	1 U	1 U	1 U	0.11 J	1 U	1 U	0.16 J	1.0 U	3 U	3.0 U	1 U	1 U	1 U	0.15 J	1 U	1 U	1 U	1 U	1.0 U
Cadmium	5	1 U	0.14 J	2.0 U	5 U	5.0 U	1 UJ	1 U	1 UJ	1 UJ	1 U	1 U	1 U	0.14 J	0.15 J	5 U	5.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.20 J
Calcium	NC	36,800	84,900 J-	50,000	3,040	2,550 J	3,520	19,800	4,900	6,900	7,710 J+	3,690	11,200	4,910 J-	12,000 J	35,800	78,700 N	113,000	33,300	34,500	31,000	45,300	9,110	80,100	7,320 T	35,000
Chromium	50	3.6 J+	1.19 J	2.0 U	10 U	10.0 U	2 U	2 U	2 U	0.65 J	1.11 J	0.5 J	2 U	2 U	2.0 U	13.3	0.400 J	1.23 J	1.19 J	1.39 J	1.99 J	1.17 J	2.74	1.61 J	0.58 J	2.0 U
Cobalt	NC	0.34 J	1.26	0.30 J	1 U	0.061 J	0.08 J	1 U	0.18 J	0.4 J	0.38 J	0.26 J	0.25 J	0.22 J	0.61 J	1 U	0.415 J	0.22 J	0.31 J	0.28 J	0.36 J	0.37 J	0.53 J	0.34 J	0.45 J	0.65 J
Copper	200	3.92	15.6 J	4.5 J	20 U	20.0 U	2.84	4.22 J+	4.08 J+	8.43	19.2	27.5	3.12 J+	12.9 J	55	20 U	2.4 J	6.52	5.04	6.85	12	7.25	27.5	1.35 J	11.7	120 B
Iron	300	395	340 J	170 J	189 J	100 UJ	50 U	124 J	59.4 J+	324	4,040	3,490	178	299 J	5,700 J	8,690 J	2,530	1,010	1,990	3,620	5,820	2,090	3,360	1,330	4,020	12,000
Lead	25	1.49	5.04 J	1.2 J	11.5 J	5.0 U	1 UJ	1.9 J	1 U	2.43	4.85	6.59	0.88 J	1.24 J	8.7 J+	16.9 J	5.0 U	4.22	2.56	2.51	5.18	1.71	8.29	0.66 J	4.43	28
Magnesium	35,000	3,120 J	23,400 J-	3,600	3,960	2,990	5,030	890	5,570	7,890	1,770 J+	691	17,000 J	1,150 J-	15,000 J	49,800	78,500	187,000	44,400	45,800	39,300	62,900	2,110	91,400 T	1,830 T	31,000
Manganese	300	21.1	31.7 J	79	159	122	180	120 J	184	224	175	85.1	357	21.5 J	410 J	816	891	681	580	605	541	844	244	807	153	650 B
Mercury	0.7	0.2 U	0.2 U	0.50 U	0.2 U	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U	0.2 U	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U
Nickel	100	1.88 J+	3.71 J	10 U	1.6	1.0 U	0.25 J	7.64	0.39 J	1.33	1.92	1.37 J+	1.29 J+	2.37 J	2.1 J	3.8	4.4	0.5 J	0.68 J	0.62 J	1.23	0.58 J	2.41	0.93 J	1.97	2.8 J
Potassium	NC	6,740 J-	7,900 J-	5,200	15,400	12,400	19,000	21,400	17,600	18,900 J-	18,800	4,440	32,300 J-	24,200 J-	31,000 J	28,800	28,400	54,200	25,700	26,100	26,500 N	28,600	9,720	36,400 T	33,400 T	28,000
Selenium	10	5 U	14.5	1.1 J	2.4	4.4	5 U	5 U	1.95 J	5 U	5 U	5 U	10.56	5 U	10 U	2 U	12.4	5 U	1.83 J	5 U	5 U	3.87 J	5 U	12	5 U	10 U
Silver	50	1 UJ	R	2.0 U	10 U	10.0 U	1 U	1 UJ	1 U	1 U	1 U	R	1 UJ	R	2.0 U	10 U	10.0 U	0.28 J	0.38 JN	0.15 J	0.1 J	1 UN	1 UJ	1 UT	1 U	2.0 U
Sodium	20,000	22,300	162,000	18,000	386,000 J	369,000	509,000	34,300	456,000	490,000	10,300 J+	6,040	712,000	5,990	720,000 J	188,000 J	449,000	1,030,000	199,000	202,000	169,000	267,000	12,600	592,000	6,490	130,000
Thallium	0.5	1 U	0.11 J	2.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U	1 U	1.0 U	1 U	1 U	1 U	0.04 J	1 U	1 U	1 U	1 U	2.0 U
Vanadium	NC	1.2 J	1.65 J	1.1 J	3.1	1.1 J	3.76 J	5 U	3.36 J	1.85 J	5 U	5 U	1.55 J	0.1 J	2.0 J	0.929 J	2.0 U	1.52 J	2.41 J	1.3 J	1.46 J	1.05 J	0.75 J	0.7 J	0.27 J	0.79 J
Zinc	2,000	15.1 J	80.7 J	40 U	15.3 J	4.1 J	15.5 J+	67.5	17.1 J+	70.5 J+	36.2 J	105	13.2 J	118 J	160 J+	13.7 J	7.9 J	39	35.6	35.6	301	42.7	352	22.7 T	92.2	280
Chloride	250,000	11,600	295,000	6,200 J	351,000	391,000	453,000	23,700	544,000	494,000	15,700	12,100 J+	1,000,000	9,700	970,000 J	296,000	947,000	1,500,000	322,000	336,000	269,000	458,000	10,400	1,060,000	9,800	300,000

Notes:
ug/L - micrograms per liter.
B - Analyte detected in associated method blank.
J - Estimated value.
J+ - Estimated value; biased high.
J- - Estimated value; biased low.
N - Matrix spike recovery outside control limits.
NC - No Criterion.
R - Rejected data point.
T - Indicates that a quality control parameter doesn't meet the control lie
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
^ - Duplicate analysis outside control limits.

Table 7
Summary of Groundwater Sample Metals and Chloride Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-103S 5/22/2015	MW-103S 3/24/2016	MW-103S 10/19/2016	MW-103S 3/17/2017	MW-103S 6/14/2017	MW-103S 08/08/2018	MW-103S 10/02/2019	MW-103S 3/24/2021	MW-103S 8/17/2022	MW-103S 9/28/2023	MW-103S 9/19/2024	MW-104D 5/22/2015	MW-104D 3/25/2016	MW-104D 10/19/2016	MW-104D 3/17/2017	MW-104D 6/14/2017	MW-104D 08/08/2018	MW-104D 10/02/2019	MW-104D 3/23/2021	MW-104D 8/17/2022	MW-104D 9/28/2023	MW-104D 9/18/2024
METALS	Class GA Value (ug/L)																						
Aluminum	NC	100 U	135 J+	20 U	21.4 J	67.7	175	137	114 J+	173	49.2 J	370 J	100 U	161 J+	46.1	18.8 J	22.1	201	108	165	7.17 J	15.1 J	63 J
Antimony	3	1 U	1.0 U	2 U	6.75 J+	2 U	2.13 J	2 UJ	0.22 J	2 U	0.41 J	3.0 U	2 U	1.0 U	2 U	2 U	2 U	3.34	0.87 J	1.12 J	1.7 J	0.31 J	3.0 U
Arsenic	25	10 U	10.0 U	1.46 U	2.87 J+	1.02 U	1.91 U	1.08 U	1 U	1.08	0.85 J	1.4 J	10 U	10.0 U	3.57 U	3.99 J+	1 U	3.1	2.43	1.68	0.96 J	1.67	1.1 JB
Barium	1,000	163	93.7	159	155 J+	176	234	278 J+	485	334	420	430 J	124	62.1	86.3	92.5 J+	87.1	83.3	85.5	86.4	64.6	69	67
Beryllium	3	3 U	3.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	3 U	3.0 U	1 U	1 U	1 U	0.26 J	1 U	1 U	5 U	1 U	1.0 U
Cadmium	5	5 U	5.0 U	1 UJ	0.11 J	1 UJ	1 UJ	1 U	1 UJ	1 U	0.29 J	2.0 U	5 U	5.0 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	0.19 J	2.0 U
Calcium	NC	65,800	39,500 J	67,200	55,500	64,900	93,700	101,000 J+	170,000	110,000	135,000 J-	160,000 J	184,000	177,000 J	171,000	146,000	124,000	177,000	154,000	161,000	109,000	105,000 T	180,000
Chromium	50	10 U	10.0 U	4.93	2 U	2 U	1.29 J	1.62 J	0.97 J	2 U	0.79 J	2.0 U	10 U	10.0 UJ	2 U	2 U	2 U	1.14 J	1.7 J	2.56	2.13	0.41 J	2.0 U
Cobalt	NC	1 U	0.633 J	0.41 J	1 U	0.38 J	0.4 J	1 U	0.34 J	0.56 J	0.32 J	0.49 J	16.2	4.8	7.58	4.66 J+	5.47	14.7	6.26	3.34	1.75	1.77	2.1
Copper	200	20 U	0.700 J	4.05	3.39 J+	4.31 J+	3.43	17.8	3.69	3.89	2.45 J	29	20 U	2.5 J	5.69	4.07 J+	4.37 J+	1.99 J	7.56	13.8	1.01 J	4.8	4.8 JB
Iron	300	1,220 J	468	2,190	669 J	1,990	1,120	2,910	6,650	2,350	1,790 J	2,400 J	8,360 J	4,330	5,800	5,540 J	4,670	5,340	5,250	4,970	2,570	2,890	4,300
Lead	25	2 J	5.0 U	1.14 J+	1 U	1.88	3.68	5.31	3.3 J+	6.9	2.79 J	11 J+	5.5 J	5.0 UJ	1 J+	1.03 J	1.07 J+	1.78	2.0 J	5.79	5 U	2.31	1.3 J
Magnesium	35,000	90,600	41,500	74,800	56,100	66,600	154,000	160,000	175,000	158,000 J	219,000 J-	280,000 J	635,000	368,000	632,000	504,000	487,000	652,000	580,000	641,000	367,000 T	331,000 T	630,000
Manganese	300	191	114	259	188 J	255	187	236 J+	679	230	227 J	220 J	4,780	2,550	5,650	4,520 J	3,540	3,370	3,680	3,140	3,050	3,140	2,600 B
Mercury	0.7	0.2 U	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U	0.2 U	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U
Nickel	100	2.7	4.3	2.94	1.53	1.04	1	1.57	1.18 J+	1.42 J+	0.91 J	1.6 J	12.1	32.6	8.16	5.41	5.34	13.8	8.34	5.6	4.77	4.89	3.3 J
Potassium	NC	73,200	38,600	66,700	54,600	56,300	85,000 J-	82,000	89,700	88,300 J-	107,000 J-	120,000 J	236,000	281,000	209,000	181,000	349,000	220,000	N	185,000	200,000	157,000 T	220,000
Selenium	10	12.5	36.3	2.15 J	7.31	6.56 J-	5 U	21.7	6.72	20.5	5.84	10 U	36.9	25.1	5 U	7.41	5 UJ	5 U	32.1	32.3	31.4	5 U	1.1 JB
Silver	50	10 U	10.0 U	1 U	1.04 UJ	1 U	1 U	1 U	1 U	1 UJ	R	2.0 U	10 U	10.0 U	1 U	1 UJ	1 U	0.08 J	1 UN	1 UJ	1 UT	1 U	2.0 U
Sodium	20,000	1,480,000 J	1,190,000	1,390,000	1,160,000	1,120,000	1,820,000	1,850,000 J+	1,840,000	1,890,000	2,400,000	2,400,000 J	5,370,000 J	5,200,000	33,300,000	532,000	4,840,000	5,720,000	6,140,000	5,820,000	3,950,000	4,060,000	5,600,000
Thallium	0.5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	0.21 J	2.0 U	2 U	1.0 U	1 U	1 U	1 U	0.08 J	5 U	1 U	5 U	0.16 J	2.0 U
Vanadium	NC	4.8	3.3 J-	5.64 J-	6.38 J-	4.26 J	3.7 J	5 UJ	5.05	3.24 J	1.87 J	3.7	4 U	2.0 UJ	0.71 J	5 UJ	0.54 J	0.88 J	0.78 J	1.02 J	0.23 J	0.22 J	0.69 J
Zinc	2,000	20 U	2.5 J	18 J+	8.92 J+	19.9 J+	22.9 J+	20.8 J	6.53 J+	14 J	6.1 J	40 U	20 U	2.0 J	10.1 J+	8.84 J+	25 J+	72.2	111	268	18.1 T	60.2	62
Chloride	250,000	2,290,000	2,130,000	1,610,000	1,710,000	1,830,000	3,190,000	3,100,000	2,660,000	4,240,000	4,300,000	4,400,000 J	9,690,000	9,610,000	8,990,000	9,140,000	8,920,000	9,950,000	9,370,000	86,200,000	7,140,000	6,950,000	9,600,000

Notes:
ug/L - micrograms per liter.
B - Analyte detected in associated method blank.
J - Estimated value.
J+ - Estimated value; biased high.
J- - Estimated value; biased low.
N - Matrix spike recovery outside control limits.
NC - No Criterion.
R - Rejected data point.
T - Indicates that a quality control parameter doesn't meet the control lir
U - Analyte was not detected at specified quantitation limit.
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Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type
exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values
for Class GA water, June 1998 with the April 2000 Addendum.
^ - Duplicate analysis outside control limits.

Table 7
Summary of Groundwater Sample Metals and Chloride Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-104I 5/21/2015	MW-104I 3/25/2016	MW-104I 3/25/2016	MW-104I 10/19/2016	MW-104I 3/17/2017	MW-104I 6/14/2017	MW-104I 08/08/2018	MW-104I 10/02/2019	MW-104I 3/23/2021	MW-104I 8/17/2022	MW-104I 9/28/2023	MW-104I 9/18/2024	MW-104S 5/22/2015	MW-105D 5/21/2015	MW-105D 3/24/2016	MW-105D 10/18/2016	MW-105D 3/16/2017	MW-105D 6/14/2017	MW-105D 08/08/2018	MW-105D 10/02/2019	MW-105D 3/22/2021	MW-105D 8/17/2022
METALS	Class GA Value (ug/L)			Field Dup																			
Aluminum	NC	100 U	117 J+	100 U	48.2	41.2 J	51	100 U	15.1 J	21.3 J+	15.3 J	102 J	93 J	100 U	412	27.6 J	28	22.5	11.2 J	25.7	22.4	106	34.1
Antimony	3	1 U	1.0 U	1.0 U	2 U	2.67 J+	2 U	2.28 J	2 UJ	0.17 J	2 U	2 U	3.0 U	1 U	5 U	5.0 U	3.63	6.16	4.5	3.76	1.83 J	0.71 J	0.26 J
Arsenic	25	10.5	9.2 J	9.2 J	12.3 J+	11.1 J+	12.7	11.9	11.2	0.85 J	9.92	10.7	9.5 J	10 U	10 U	10.0 U	2.68	2.34	1.18	0.82 J	0.83 J	0.71 J	0.39 J
Barium	1,000	234	184	163	174	197 J+	224	189	157 J+	26.5	293	285	240 J	214	71.4	40.9	46.5	48.9	2.77 J	9.86 J	7.29 J	44.4	12.8
Beryllium	3	3 U	3.0 U	3.0 U	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U	1.0 U	3 U	3 U	3.0 U	1 U	1 U	1 U	0.06 J	1 U	1 U	1 U
Cadmium	5	5 U	5.0 U	5.0 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 U	0.13 J	2.0 U	5 U	5 U	5 U	5.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Calcium	NC	13,300	13,000 J	12,000 J	14,500	15,500	16,800	14,700	14,700 J+	6,060	24,900	23,600 J-	21,000 J	134,000	236,000	146,000 N	133,000	53,100	4,350	4,040	4,800	91,000	8,180
Chromium	50	10 U	10.0 U	10.0 U	2 U	2 U	2 U	0.55 J	0.61 J	2 U	2 U	0.59 J	2.0 U	10 U	17.7	10.0 U	2.43	2.35	1.3 J	1.76 J	1.84 J	2.15	1.2 J
Cobalt	NC	1.3	1.2	1.0	1	1.11 J+	1.34	1.1 J	1.09 J+	0.09 J	1.34	1.31	0.84 J	1 U	2.2 J	2.1 J	0.98 J	1.06	0.47 J	0.3 J	0.29 J	0.91 J	0.26 J
Copper	200	20 U	2.0 J	20.0	3.23	4.33 J+	7.18	0.35 J	3.94 J+	9.52	2 U	6.68 J	10 U	28.4	102	2.2 J	16	13.1	9.11	12.2	10.58	6.37	6.68
Iron	300	2,650 J	2,430	1,870	2,240	2,030 J	3,220	2,740	2,540	560	3,430	3,970 J	2,000 J	110 J	3,820 J	758	630	292	149	270	1,290	3,050	703
Lead	25	9.1 J	5.0 U	5.0 U	3.45	3.21 J	7.82	1.77	1.36	2.92 J+	1.29	5.13 J	1.9 J	5.8 J	19.2 J	5.0 U	2.75	1.35	0.97 J	1.93	2.12	3.34	2.49
Magnesium	35,000	28,100	23,500	22,200	32,800	31,800	34,500	30,700	32,800 J+	2,110	49,200 J	46,200 J-	37,000 J	79,200	730,000	351,000	499,000	80,400	7,570	2,730	2,540	208,000	2,180 T
Manganese	300	1,120	899	829	1,020	1,120 J	1,190	835	674	21.3 J+	858	939 J	620 J	112	4,080	1,830	1,360	260	43.4	6.84	23.2	1,150	27.1
Mercury	0.7	0.2 U	0.200 U	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U	0.2 U	0.197 J	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	1.6	2.2	1.9	0.98 J	1.31	1.4	5 U	1 U	1 U	1.78 J+	1.63 J	10 U	3.3	8.3	12.3	3.77	9.43	3.26	1.91	1.72	2.15	1.77
Potassium	NC	48,300	34,200	32,100	40,200	38,000	41,800	42,500 J-	36,800	14,600	42,400 J-	41,400 J-	35,000 J	47,900	271,000	231,000	318,000	473,000	179,000	92,100 N	76,600	108,000	30,200 T
Selenium	10	2.2	3.8	4.0	5 U	5 U	5 UJ	5 U	5 U	5 U	9.02	5 U	10 U	6.2	54.8	118	5 U	7.11	5 U	5 U	5 U	6.83	5 U
Silver	50	10 U	10.0 U	10.0 U	1 U	1 UJ	1 U	1 U	1 U	1 U	R	2.0 U	10 U	10 U	10 U	10.0 U	0.15 J	0.16 JN	0.15 J	0.4 J	1 UN	1 UJ	1 UT
Sodium	20,000	289,000 J	267,000	262,000	305,000	241,000	243,000	206,000	208,000 J+	9,690	438,000	559,000	630,000 J	650,000 J	6,260,000 J	4,270,000	28,200,000	1,400,000	231,000	43,000	34,800	1,950,000	13,500
Thallium	0.5	1 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U	1 U	5 U	0.207 J	1 U	1 U	1 U	0.22 J	1 U	0.08 J	1 U
Vanadium	NC	2 U	2.0 UJ	2.0 UJ	0.7 J	5 UJ	0.52 J	0.3 J	5 UJ	5 U	0.29 J	0.43 J	0.93 J	3.9	10 U	10.0 U	2.39 J	5.08	2.16 J	2.83 J	2.27 J	0.95 J	0.65 J
Zinc	2,000	12.7 J	18.1 J	6.8 J	26.4 J+	89	48	37.5 J+	9.11 J	44.5 J+	15.1 J	27.9 J	40 U	39.3	13.1 J	20.0 U	42.4	22.1	23.7	70.9	144	349	556 T
Chloride	250,000	353,000	317,000	330,000	321,000	321,000	346,000	274,000	269,000	10,000 J+	767,000	814,000	850,000 J	1,020,000	10,600,000	8,570,000	3,440,000	652,000	282,000	22,500	15,600	1,850,000	14,500

Notes:
ug/L - micrograms per liter.
B - Analyte detected in associated method blank.
J - Estimated value.
J+ - Estimated value; biased high.
J- - Estimated value; biased low.
N - Matrix spike recovery outside control limits.
NC - No Criterion.
R - Rejected data point.
T - Indicates that a quality control parameter doesn't meet the control lin
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
^ - Duplicate analysis outside control limits.

Table 7
Summary of Groundwater Sample Metals and Chloride Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-105D 9/27/2023	MW-105D 9/18/2024	MW-105I 5/21/2015	MW-105I 3/23/2016	MW-105I 10/18/2016	MW-105I 3/16/2017	MW-105I 6/14/2017	MW-105I 08/08/2018	MW-105I 10/02/2019	MW-105I 3/22/2021	MW-105I 8/17/2022	MW-105I 9/27/2023	MW-105I 9/18/2024	MW-105S 5/21/2015	MW-105S 3/23/2016	MW-105S 10/18/2016	MW-105S 3/16/2017	MW-105S 6/14/2017	MW-105S 08/08/2018	MW-105S 10/02/2019	MW-105S 3/22/2021	MW-105S 8/17/2022	MW-105S 9/28/2023	MW-105S 9/18/2024
METALS	Class GA Value (ug/L)																								
Aluminum	NC	69.5	66 J	318	100 U	205	38.1 J	56.5	91.6	5.39 J	44.1	22.5	17.9 J	370	100 U	100 U	20 U	208 J	37.6	159	134	20 U	11.3 J	31.3 J	69 J
Antimony	3	0.45 J	3.0 U	2 U	1.0 U	2 U	2 U	2 U	3.08	0.79 J	0.21 J	0.18 J	0.18 J	3.0 U	2 U	1.0 U	2 U	2 U	2 U	2.65 J	2 UJ	0.19 J	2 U	0.13 J	3.0 U
Arsenic	25	0.29 J	0.62 JB	25.6	9.4 J	25.1 J+	1 U	11.8 J+	12.3	8.71	6.45	4.3	0.36 J	11 B	10 U	10.0 U	1 U	34.7 J+	1 U	1.24 J+	1.89 J+	1 U	0.28 J	0.19 J	2.0 U
Barium	1,000	13.2	15	180	73.6	130	125	95.1	77.7	71.4	125	195	15.2	90	132	127	127	200	110	98.4	116 J+	151	107	99.7	53 J
Beryllium	3	1 U	1.0 U	3 U	3.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	3 U	3.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Cadmium	5	1 U	0.15 J	5 U	5.0 U	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	0.17 J	5 U	5.0 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 U	1 U	0.072 J	J
Calcium	NC	9,370 T	10,000	32,200	21,200 J	23,400	89,900	23,600	15,000	20,500	26,100	26,600	13,700 T	12,000	117,000	105,000 J	102,000	23,200	112,000	96,200	88,200 J+	136,000	81,300	70,900 J-	70,000 J
Chromium	50	1.04 J	2.0 U	10 U	10.0 U	2 U	2 U	2 U	1.18 J	0.77 J	0.82 J	7.37	2 U	4.2	10 U	10.0 U	2 U	2 U	2 U	1.46 J	2.56	0.8 J	2 U	2.41 J	2.0 U
Cobalt	NC	0.37 J	0.59 J	0.596 J	0.296 J	0.39 J	0.36 J	0.4 J	0.21 J	0.19 J	0.39 J	0.38 J	0.18 J	0.81 J	1 U	0.493 J	0.16 J	0.51 J	0.3 J	0.47 J	1 U	0.26 J	0.2 J	0.26 J	0.29 J
Copper	200	6.85	8.9 JB	20 U	1.3 J	16.8	3.84 J+	5.89 J+	16.7	4.31	5.16	3.22	9.99	19 B	20 U	20.0 U	2 U	10.4 J+	4.91 J+	23.4	30.1	3.54	2 U	2.48 J	10 U
Iron	300	1,040	1,500	4,960 J	859	4,130	457 J	658	2,660	134	3,840	1,510	948	13,000	126 J	353	74.9	6,310 J	278	2,530	10,500	912	351	958 J	990 J
Lead	25	2.5	2.6 J	11 J	5.0 U	16.5	1.7 J	2.45	6.01	0.43 J	2.32	1.54	1.47	12	5 J	5.0 U	1 UJ	8.53 J	1.62	7.07	6.1	1 U	0.49 J	1.06 J	1.4 J
Magnesium	35,000	2,760 T	2,200	43,800	34,100	44,400	47,900	43,000	18,400	38,400	47,000	52,300 T	3,430 T	20,000	75,300	58,300	63,700	42,100	63,300	46,500	46,800 J+	97,600	46,300 J	38,600 J-	33,000 J
Manganese	300	27.5	72 B	43.3	10.0 U	44.6	251 J	14.4	30.7	11.9	29	35.6	20.4	99 B	379	261	248	21.5 J	253	258	200	142	111	104 J	73 J
Mercury	0.7	0.2 U	0.50 U	0.166 J	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U	0.042 J	0.200 U	0.2 U	0.141 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U
Nickel	100	2.26	2.2 J	2.7	1.5 J+	1.03 J-	1.89	0.61 J	1.2	0.3 J	0.85 J	3.51	1.69	2.4 J	2.3	4.8	0.48 J	1.31	0.96 J	1.48	1.56	1 U	1 U	1.5 J	10 U
Potassium	NC	38,700 T	21,000	39,400	29,800	38,600	30,500	37,600	29,200 N	31,300	34,200	40,500 T	27,200 T	20,000	44,000	35,600	37,500	35,000	34,800	33,500 J-	32,100	44,300	34,400 J-	31,100 J-	28,000 J
Selenium	10	5 U	10 U	4 U	3.4	5 U	5 U	5 UJ	5 U	5 U	5 U	6.92	5 U	0.92 JB	3.1	9.0	5 U	5 U	5 UJ	5 U	5 U	7.23	5 U	10 U	10 U
Silver	50	1 U	2.0 U	10 U	10.0 U	1 U	1 UJ	1 U	0.08 J	1 UN	1 UJ	1 UT	1 U	2.0 U	10 U	10.0 U	1 U	1 UJ	1 U	1 U	1 U	R	1 UJ	R	2.0 U
Sodium	20,000	15,500	8,800	263,000 J	246,000	338,000	424,000	312,000	176,000	328,000	301,000	417,000	10,500	350,000	433,000 J	442,000	576,000	289,000	391,000	373,000	411,000	474,000	408,000	371,000	290,000 J
Thallium	0.5	1 U	2.0 U	2 U	1.0 U	1 U	1 U	1 U	0.05 J	0.03 J	1 U	1 U	1 U	2.0 U	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U
Vanadium	NC	0.57 J	0.61 J	8	3.1 J-	7.09 J-	5 U	4.91 J	4.01 J	4.44 J	1.26 J	1.11 J	0.26 J	4.6	1.5 J	2.0 UJ	2.3 J	10.43	2.59 J	2.73 J	5 UJ	1.49 J	1.49 J	3.3	
Zinc	2,000	217	310	20.6	10.6 J	77.9	32.3 J+	23 J+	183	4.57	205	89 T	72.6	540	24	7.0 J	14.2 J+	57.9	23.3 J+	110	554 J	16.9 J+	30.3 J	130 J	140 J+
Chloride	250,000	17,300	13,000	358,000	346,000	376,000	569,000	420,000	269,000	443,000	457,000	641,000	15,000	480,000	562,000	652,000	736,000	384,000	543,000	473,000	565,000	523,000	547,000	498,000	390,000 J

Notes:
ug/L - micrograms per liter.
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J+ - Estimated value; biased high.
J- - Estimated value; biased low.
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NC - No Criterion.
R - Rejected data point.
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U - Analyte was not detected at specified quantitation limit.
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Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
^ - Duplicate analysis outside control limits.

Table 7
Summary of Groundwater Sample Metals and Chloride Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-106D 5/20/2015	MW-106D 3/24/2016	MW-106D 10/18/2016	MW-106D 3/16/2017	MW-106D 6/13/2017	MW-106D 08/08/2018	MW-106D 10/01/201910/01/2019		MW-106D 3/23/2021	MW-106D 8/16/2022	MW-106D 9/27/2023	MW-106D 9/17/2024	MW-106I 5/21/2015	MW-106I 3/24/2016	MW-106I 10/18/2016	MW-106I 3/16/2017	MW-106I 6/13/2017	MW-106I 6/13/2017	MW-106I 08/07/2018	MW-106I 10/01/2019	MW-106I 3/22/2021	MW-106I 8/16/2022	MW-106I 9/27/2023	MW-106I 9/17/2024
METALS	Class GA Value (ug/L)								Field Dup										Field Dup						
Aluminum	NC	156	168	119	8.98 J	42.7	310	352	304	23.4	19.9 J	18.6 J	120 J	102	64.6 J	12.4 J	20.3	20 U	20 U	49.4	42.3	5.91 J	20.2	12.3 J	200 U
Antimony	3	2 U	2.0 U	5.24	0.38 J	2.73	2.54	2 UJ	2 UJ	0.25 J	0.48 J	0.34 J	3.7	2 U	0.310 J	1.34 J	0.56 J	2 U	2 U	2.89	0.8 J	0.24 J	0.31 J	0.17 J	3.0 U
Arsenic	25	20.8	13.1	15.4	7.35	13.8	13.6	12.6 J+	12.6 J+	0.56 J	10.21	0.1 J	12 B	10 U	6.4 J	7.88	7.56	6.83 J+	6.87 J+	6.22	5.72	8.91	6.42	7.39	8.3 B
Barium	1,000	92.9	55.2	53.1	43.3	51	55.3	48.7 J+	48 J+	46.8	46.9	11.4	47	35.4	14.1 J	24.9	34.7	36.6	36.6	48.8	83.6	91	81.6	55	68
Beryllium	3	3 U	3.0 U	1 U	1 U	0.1 J	0.08 J	1 U	1 U	1 U	1 U	1 U	0.072 J	3 U	3.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U
Cadmium	5	5 U	5.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U	5 U	5.0 U	1 U	1 U	1 UJ	1 UJ	1 U	1 U	1 U	1 U	1 U	2.0 U
Calcium	NC	55,400	49,700 N	47,800	11,800	44,900	44,100	41,500 J+	40,700 J+	17,200	35,000	8,100 T	34,000	19,300	8,530 N	10,400	8,320	9,970	10,100	12,300	14,500	15,400	13,800	9,140 T	11,000
Chromium	50	10 U	10.0 U	1.51 J	0.52 J	0.79 J	2.47	1.97 J	1.86 J	1.49 J	1.89 J	0.43 J	2.0 U	10 U	0.600 J	0.33 J	1.7 J	2 U	2 U	1.14 J	1.2 J	2 U	0.61 J	0.53 J	2.0 U
Cobalt	NC	2.1	0.998 J	0.79 J	0.13 J	0.58 J	0.94 J	1 U	1 U	0.29 J	0.33 J	0.12 J	0.51 J	0.405 J	0.128 J	0.08 J	0.66 J	0.1 J	0.09 J	0.2 J	0.2 J	0.13 J	0.13 J	0.08 J	0.066 J
Copper	200	24.5	0.700 J	2.44	3.97	3.67	12.1	9.29	8.82	15.6	2.08	5.03	3.7 JB	20 U	1.7 J	3.07	6.43	5.69 J+	5.34 J+	13.2	12.5	1.7 J	2.05	2.04	10 U
Iron	300	5,020 J	3,800	4,280	40.8 J	3,880	5,260	3,840	3,720	566	2,020	529	1,900	159 J	92.5 J	73.6	217	89.1	86.7	662	707	52.8	172	49.4 J	300 U
Lead	25	5 J	5.0 U	1.56	1.56	0.59 J	5.47	1.7	1.52	3.63	1.11	1.52	3.0 U	2.5 J	5.0 U	1.4	0.76 J	1.41	1.38	5.9	3.19	1 U	1.03	0.51 J	3.0 U
Magnesium	35,000	167,000	123,000	150,000	36,400	133,000	128,000	133,000	136,000	3,290	101,000 T	1,430 T	89,000	58,400	20,800	32,800	69,800	28,300	29,100	34,700	42,100	46,800	39,100 T	22,100 T	24,000
Manganese	300	2,040	1,770	2,050	4.42	2,020	1,890	1,790	1,790	93.4	1,450	25.9	1,100	10.7	5.1 J	5.5	44.9	5.56	5.34	35.2	33.6	6.28	13.2	3.99	4.3 J
Mercury	0.7	0.2 U	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U	0.042 J	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.13 J	0.2 U	0.2 U	0.081 J	0.50 U
Nickel	100	5.9	3.9	1.43	0.46 J	0.67 J	2.03	1.64	1.65	1.87	0.72 J	1.08	10 U	2 U	1.1	0.29 J	3.83	0.38 J	0.28 J	0.98 J	0.73 J	0.36 J	0.62 J	0.66 J	10 U
Potassium	NC	122,000	87,400	93,100	38,200	83,000	76,600 N	77,800	79,600	26,900	77,300 T	10,300 T	71,000	53,600	27,600	36,700	182,000	35,400	36,300	37,700 N	37,600	45,400	40,500 T	28,700 T	32,000
Selenium	10	16.6	39.1	5 U	3.64 J	4.17 J	2.35 J	16.7	18.6	5 U	19.4	5 U	10 U	6.4	10.0	2.21 J	4.88 J	3.27 J	2.55 J	3.11 J	6.77	2.89 J	10.09	1.54 J	1.3 J
Silver	50	10 U	10.0 U	0.32 J	0.14 JN	0.42 J	0.21 J	1 U	1 U	1 UJ	1 UT	1 U	2.0 U	10 U	10.0 U	0.08 J	0.2 JN	1 U	1 U	0.2 J	1 UN	1 UJ	1 UT	1 U	2.0 U
Sodium	20,000	2,150,000 J	1,980,000	13,300,000	762,000	2,070,000	2,040,000	2,040,000 J+	2,010,000 J+	47,200	1,600,000	7,830	1,600,000	1,040,000 J	576,000	767,000	1,360,000	649,000	664,000	690,000	757,000	870,000	729,000	580,000	660,000
Thallium	0.5	2 U	1.0 U	1 U	1 U	1 U	0.06 J	1 U	1 U	1 U	0.25 J	1 U	0.59 JB	2 U	1.0 U	1 U	1 U	1 U	1 U	0.14 J	1 U	1 U	1 U	1 U	2.0 U
Vanadium	NC	4 U	2.0 U	0.85 J	9.78	0.4 J	1.14 J	5 UJ	5 UJ	0.2 J	0.26 J	0.09 J	0.90 J	7.2	5.5	8.2	2.85 J	6.93 J-	6.97 J-	6.3	5.53	7.01	5.85	6.12	7.0
Zinc	2,000	20 U	2.7 J	17.1	17.6	12.6	183	19.2 J	19.9 J	163	58.8 T	60.5	46	20 U	41.8	35.2	22.5	35.6 J+	33.6 J+	151	94.8	7.49	12.7 T	9.92	40 U
Chloride	250,000	3,370,000	3,230,000	3,150,000	1,040,000	3,330,000	3,169,000	3,120,000	3,000,000	83,600	2,410,000	11,800	2,100,000	1,430,000	812,000	890,000	1,690,000	954,000	936,000	1,030,000	665,000	1,050,000	1,020,000	720,000	770,000

Notes:
ug/L - micrograms per liter.
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exceed NYSDEC GW Class GA Value.
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for Class GA water, June 1998 with the April 2000 Addendum.
^ - Duplicate analysis outside control limits.

Table 7
Summary of Groundwater Sample Metals and Chloride Data Exceeding Class GA Criteria
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

Sample Location: Sample Date:		MW-106S 5/20/2015	MW-106S 3/24/2016	MW-106S 10/18/2016	MW-106S 3/16/2017	MW-106S 6/13/2017	MW-106S		MW-106S 10/01/2019	MW-106S 3/22/2021	MW-106S 8/16/2022	MW-106S 9/27/2023	MW-106S 9/17/2024	FB 5/19/2015	FB 3/23/2016	FB 10/17/2016	FB 3/13/2017	FB 6/13/2017	FB 8/7/2018	FB 8/8/2018	FB 10/01/2019	FB 3/23/2021	FB 8/16/2022	FB 10/2/2023	FB 9/19/2024
METALS	Class GA Value (ug/L)	Field Dup																							
Aluminum	NC	100 U	27.9 J	4.68 J	10.47 J	59.4	20 U	20 U	53.4	20 U	8.36 J	23.2 J	200 U	100 UJ	37.8 J	2.24 J	20 U	20 U	20 U	20 U	20 U	33	20 U	20 U	200 U
Antimony	3	1 U	1.0 U	1.38 J	0.39 J	1.42 J	3.35 J	3.03 J	0.83 J	2 UJ	2 U	2 U	3.0 U	1 UJ	1 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	3.0 U
Arsenic	25	10 U	10.0 U	0.39 J	0.71 J	0.55 J	1 U	1 U	0.61 J	1 U	0.11 J	0.1 J	2.0 U	10 UJ	10 U	1 U	1 U	1 U	1 U	1 U	0.16 J	1 U	1 U	1 U	2.0 U
Barium	1,000	173	153	177	231	168	147	146	115	130	125	108	91 J	20 UJ	20 U	10 U	0.25 J	10 U	10 U	10 U	42.1	0.6 J	10 U	10 U	5.0 U
Beryllium	3	3 U	3.0 U	1 U	1 U	0.07 J	1 U	1 U	1 U	1 U	1 U	1 U	1.0 U	3 UJ	3 U	1 U	1 U	1 U	1 U	1 U	0.45 J	1 U	1 U	1 U	1.0 U
Cadmium	5	5 U	5.0 U	1 U	1 U	1 U	1 UJ	1 UJ	1 U	1 UJ	1 U	1 U	2.0 U	5 UJ	5 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U
Calcium	NC	230,000	210,000 N	216,000	194,000	196,000	171,000	170,000	168,000	171,000	161,000	152,000 J-	150,000 J	1,000 UJ	1,000 UN	24.5 J	48.4 J	500 U	500 U	500 U	29,500	168 J	500 U	500 U	200 J
Chromium	50	10 U	10.0 U	7.94	0.47 J	0.87 J	0.79 J	1.41 J	0.93 J	2 U	2 U	0.51 J	2.0 U	10 UJ	0.700 J	0.08 J	0.12 J	0.19 J	2 U	2 U	2 U	0.38 J	2 U	2 U	2.0 U
Cobalt	NC	1 U	0.376 J	0.06 J	0.11 J	0.14 J	0.06 J	0.05 J	0.22 J	0.09 J	0.11 J	0.13 J	0.10 J	1 UJ	1 U	1 UJ	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U
Copper	200	20 U	20.0 U	1.9 J	2.74	6.12	4.24	4.72	10.84	2 U	2 U	1.2 J	10 U	20 UJ	20 U	2 U	2.43 J+	2 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U
Iron	300	1,350 J	239	579	90.7	1,100	248	241	1,090	145 J+	388	1,240 J	1,400 J	100 UJ	100 U	4.05 J	50 U	50 U	50 U	50 U	71.5 J+	42.2 J	50 U	50 U	300 U
Lead	25	3.7 J	5.0 U	0.17 J	0.38 J	1.81	0.35 J	0.19 J	1.74	1 U	0.42 J	0.96 J	3.0 U	50 UJ	5 U	0.14 J	1 U	1 U	1 U	1 U	1 U	0.65 J	1 U	1 U	3.0 U
Magnesium	35,000	52,400	44,300	56,700	57,500	51,500	44,100	45,200	42,200	45,100	38,300 J	35,900 J-	34,000 J	1,000 UJ	1,000 U	500 U	12.2 J	500 U	500 U	500 U	8,590	33.2 J	500 U	500 U	1,000 U
Manganese	300	799	420	362	370	345	223	229	213	229	170	207 J	200 J	10 UJ	1.1 J	1 UJ	0.27 J	1 U	1 U	1 U	5.57	2.78	1.99 J+	1 U	1.3 J
Mercury	0.7	0.082 J	0.200 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.14 J	0.2 U	0.2 U	0.2 U	0.50 U	0.087 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.50 U
Nickel	100	4.1	8.1	3.52	0.59 J	1.26	0.3 J	0.62 J	0.88 J	1 U	1.19 J+	0.71 J	10 U	1 UJ	0.149 J	1 UJ	0.07 J	1 U	1 U	1 U	0.12 J	0.16 J	0.34 J	1 U	10 U
Potassium	NC	35,800	29,100	41,200	34,300	31,800	31,200 J-	32,000 J-	28,900	27,700	26,700 J-	25,500 J-	24,000 J	2,000 UJ	49.0 J	500 U	500 U	500 U	500 U	500 U	1,800	500 U	55 J	500 U	160 J
Selenium	10	3.2	7.1	1.54 J	3.59 J	2.01 J	5 U	5 U	5 U	5 U	5.32	5 U	10 U	2 UJ	2 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	10 U
Silver	50	10 U	10.0 U	0.1 J	0.16 JN	0.31 J	1 U	1 U	1 UN	R	1 UJ	R	2.0 U	10 UJ	10 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U
Sodium	20,000	389,000 J	409,000	618,000	520,000	441,000	448,000	465,000	372,000	352,000	306,000	306,000	240,000 J	1,000 UJ	1,000 U	500 U	500 U	500 U	500 U	500 U	28,400	521 J+	500 U	500 U	1,000 U
Thallium	0.5	1 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U	1 UJ	0.029 J	0.05 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.0 U
Vanadium	NC	3.8	0.908 J	1.66 J	3.91 J	1.94 J	1.59 J	1.68 J	1.68 J	5 U	1.07 J	1.14 J	1.7 J	2 UJ	2 U	5 U	0.06 J	5 U	5 U	5 U	0.69 J	0.09 J	5 U	5 U	2.0 U
Zinc	2,000	20 U	2.7 J	12.5	12.1	19	20.5 J+	22.7 J+	10.56	2.97 J+	12.7 J	46.1 J	77 J+	20 UJ	20 U	6.32	3.46	4.04	8.89	8.77	22.7	5.67	3.23	2 U	36 J
Chloride	250,000	532,000	667,000	874,000	853,000	808,000	716,000	695,000	573,000	440,000	472,000	462,000	300,000 J	2,000 UJ	2,000 U	150 U	150 U	150 U	150 U	150 U	600 U	1,000	600 U	600 U	2,000 U

Notes:
ug/L - micrograms per liter.
B - Analyte detected in associated method blank.
J - Estimated value.
J+ - Estimated value; biased high.
J- - Estimated value; biased low.
N - Matrix spike recovery outside control limits.
NC - No Criterion.
R - Rejected data point.
T - Indicates that a quality control parameter doesn't meet the control lir
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed NYSDEC GW Class GA Value.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the April 2000 Addendum.
^ - Duplicate analysis outside control limits.

Table 8
Summary of Groundwater Oil Sample Data
Bush Terminal Landfill Piers 1-4
Brooklyn, NY

PARAMETER	SAMPLE NAME	MW-104S
	LAB SAMPLE ID	R1602946-001
	DATE SAMPLE COLLECTED	3/28/2016
SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs) (Method 8270D)		Result (µg/kg)
Acenaphthene		66,000 J
Anthracene		43,000 J
Benz(a)anthracene		35,000 J
Bis(2-ethylhexyl) Phthalate		410,000
Benzo(a)pyrene		28,000 J
Benzo(b)fluoranthene		23,000 J
Benzo(g,h,i)perylene		15,000 J
Chrysene		33,000 J
Fluoranthene		84,000 J
Naphthalene		11,000 J
Phenanthrene		83,000 J
Pyrene		120,000
PETROLEUM PRODUCT HYDROCARBON SCAN (Method 310.13)		
Fuel Oil No. 2		10,000 U
Fuel Oil No. 4		10,000 U
Fuel Oil No. 6		10,000 U
Gasoline		Absence U
Kerosene		10,000 U
Lube Oil		Absence U
n-Dodecane		137,000

Notes:

µg/kg - micrograms per kilogram

U - analyzed for but not detected.

J - indicates an estimated value

Gasoline and Lube Oil are reported qualitatively.

Total response is reported as n-Dodecane.

Table 9
Gas Monitoring Well Test Results
Bush Terminal Landfill Piers 1-4, Brooklyn, New York

Sample Location Sample Date	VP-1 & VP-1R																																				
	6/14/2006	6/22/2006	8/2/2006(#)	11/1/2006		3/12/2007		4/6/2007		5/10/2007		9/7/2007		5/26/2015(*)		2/1/2016		3/28/2016		10/17/2016		3/13/2017		7/31/2017(^)		8/8/2018(+)		10/1/2019		6/17/2021		8/16/2022(!)		9/27/2023		9/17/2024	
	VP-1	VP-1	VP-1	AMBIENT	VP-1	AMBIENT	VP-1	AMBIENT	VP-1	AMBIENT	VP-1	AMBIENT	VP-1	AMBIENT	VP-1	AMBIENT	VP-1R	AMBIENT	VP-1R	AMBIENT	VP-1R	AMBIENT	VP-1R	AMBIENT	VP-1R	AMBIENT	VP-1R	AMBIENT	VP-1R	AMBIENT	VP-1R	AMBIENT	VP-1R	AMBIENT	VP-1R	AMBIENT	VP-1R
PID (ppm)	9	6	5.0	0.00	1.8	0.0	0.0	0.0	0.0	0.0	1.0	0.0	16.4	NM	NM	NM	0.6	0.0	0.3	0.0	0.4	0.0	0.2	0.0	0.8	0.1	1.3	0.0	11.2	0.0	0.7	0.0	2.2	0.0	1	0.1	0.3
FID (ppm)	24	16	NM	0.5	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.6	NM	NM	0.0	4.3	0.0	6	0.0	9.2	0.0	10.4	0.0	0.0
Methane (%)	0	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM	NM	NM	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.3	0.3	0.0	0.1	0.1	0.5	
Carbon Dioxide (%)	0	NM	1.8	0.0	1.4	0.0	1.0	0.0	0.0	0.8	0.0	2.9	NM	NM	NM	NM	1.3	0.2	1.3	0.1	3.6	0.1	2.5	0.0	3.7	0.1	4.2	0.0	1.9	0.0	0.7	0.0	0.5	0.0	0.5	0.0	0.8
Oxygen (%)	16.4	NM	12.4	20.7	16.0	20.9	18.3	20.8	21.0	20.7	17.9	20.6	13.8	NM	NM	NM	19.5	18.9	20.6	20.9	16.6	20.9	17.3	21.5	17.6	20.6	15.9	20.9	18.6	21.7	21.7	22.7	21.5	21.7	20.1	21.2	21.3
Barometric Pressure (in., Hg)	NM	NM	30.0	NM	NM	30.6	30.6	29.7	29.6	29.9	29.9	30.2	30.2	NM	NM	NM	NM	29.53	29.53	29.94	29.94	30.41	30.41	29.9	29.9	29.78	29.78	30.04	30.00	30.03	30.02	30.04	30.04	30.35	30.35	30.21	30.21

Sample Location		VP-2 & VP-2R																																				
Sample Date	6/14/2006	6/22/2006	8/2/2006(#)	11/1/2006		3/12/2007		4/6/2007		5/10/2007		9/7/2007		5/26/2015(*)		2/1/2016		3/28/2016		10/17/2016		3/13/2017		6/15/2017 & 07/31/2017(^)		8/8/2018(+)		10/1/2019		6/17/2021		8/16/2022		9/27/2023		9/17/2024		
	VP-2	VP-2	VP-2	AMBIENT	VP-2	AMBIENT	VP-2	AMBIENT	VP-1	AMBIENT	VP-1	AMBIENT	VP-2	AMBIENT	VP-2	AMBIENT	VP-2R	AMBIENT	VP-2R	AMBIENT	VP-2R	AMBIENT	VP-2R	AMBIENT	VP-2R	AMBIENT	VP-2R	AMBIENT	VP-2R	AMBIENT	VP-2R	AMBIENT	VP-2R	AMBIENT	VP-2R	AMBIENT	VP-2R	
PID (ppm)	9	8	4,500	0.00	0.6	0.0	0.0	0.0	0.0	0.0	5.5	0.0	6.8	NM	NM	NM	0.0	0.0	0.5	0.0	0.8	0.0	0.5	0.0	0.5/52	0.1	0.4	0.1	2.0	0.0	0.7	0.0	0.7	0.0	0	0.0	0.3	
FID (ppm)	10	9	NM	0.4	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM	NM	NM	0.0	0.2	0.0	0.0	0.0	0.0	0/0	0.3/0	NM	NM	0.0	3.6	0	6	0.0	6	0.0	0.3	0.0	9.1	
Methane (%)	0	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.1	0.0	0	0.3	0.3	0.0	0.0	0.1	0.3	
Carbon Dioxide (%)	0.7	NM	1.5	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.2	0.0	2.2	NM	NM	NM	NM	0.0	0.2	0.6	0.1	2.1	0.1	1.7	0.1	1.2/2.4	0.1	2.7	0.1	2.3	0.0	1.2	0.0	0.1	0.0	0.8	0.0	2.9
Oxygen (%)	18.6	NM	18.1	20.6	19.9	20.9	20.6	20.6	21.1	20.6	19.3	20.6	17.2	NM	NM	NM	NM	20.5	20.6	20.2	20.9	19.0	20.9	20.1	20.4/21.4	19.1/17.5	20.7	18.2	20.1	19.6	21.7	19.7	22.3	22.4	20.9	19.6	21.3	18.3
Barometric Pressure (in., Hg)	NM	NM	30.0	NM	NM	30.6	30.6	29.7	29.7	29.9	29.9	30.2	30.2	NM	NM	NM	NM	NM	29.53	29.53	29.94	29.94	30.41	30.41	30.1/29.9	30.1/29.9	29.78	29.78	30	30	30.04	29.97	30.04	30.04	30.35	30.35	30.21	30.21

Sample Location		VP-3																																				
Sample Date	6/14/2006 VP-3	6/22/2006 VP-3	8/2/2006(#) VP-3	11/1/2006		3/12/2007		4/6/2007		5/10/2007		9/7/2007		5/26/2015		2/1/2016		3/28/2016		10/17/2016		3/13/2017		6/13/2017		8/8/2018(+)		10/1/2019		6/17/2021		8/16/2022		9/27/2023		9/17/2024		
	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3	AMBIENT	VP-3
PID (ppm)	1	1	200	0.00	1.2	0.0	0.5	0.0	0.0	0.0	0.0	0.0	5.8	0.0	5.3	NM	0.2	0.0	0.2	0.0	0.4	0.0	0.4	0.0	0.5	0.1	0.3	0.0	81.4	0.0	1	0.0	0.8	0.0	0.0	0.0	1.4	
FID (ppm)	2	3	NM	0.1	0.00	0.0	0.0	0.0	0.1	0.0	0.0	0.0	29.0	0.0	0.0	NM	NM	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.3	NM	NM	0.0	7.1	0.0	8	0.0	7.1	0.0	4.1	0.0	8.4	
Methane (%)	0	NM	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	NM	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0	0.3	0.3	0.0	0.1	0.1	0.4	
Carbon Dioxide (%)	0.2	NM	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.1	NM	0.0	0.2	0.2	0.1	0.3	0.1	0.2	0.1	0.0	0.0	0.2	0.0	4.7	0.0	0.2	0.0	0.5	0.0	0.3	0.0	0.8	
Oxygen (%)	14.7	NM	13.2	20.6	20.6	20.9	19.1	20.6	20.9	20.7	15.1	20.6	7.2	21.1	19.7	NM	20.5	20.6	20.2	20.9	20.3	20.9	20.5	19.3	19	20.7	19.0	20.4	18.3	21.7	20.3	22.5	21.0	21.1	19.6	21.3	19.8	
Barometric Pressure (in., Hg)	NM	NM	30.0	NM	NM	30.6	30.6	29.7	29.7	29.9	29.9	30.3	30.3	30.18	30.3	NM	NM	29.53	29.53	29.94	29.94	30.41	30.41	29.9	29.9	29.78	29.78	30.01	30.02	30.04	30.03	30.04	30.04	30.35	30.35	30.21	30.21	

Sample Location Sample Date	VP-4																																					
	6/14/2006	6/22/2006	8/2/2006(#)	11/1/2006		3/12/2007		4/6/2007		5/10/2007		9/7/2007		5/26/2015		2/1/2016		3/28/2016		10/17/2016		3/13/2017		6/13/2017		8/8/2018(+)		10/1/2019		6/17/2021		8/16/2022		9/27/2023		9/17/2024		
	VP-4	VP-4	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	0.03	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	AMBIENT	VP-4	
PID (ppm)	2	0	3,000	0.4	1.6	0.0	16.5	0.0	0.0	0.0	0.2	0.0	0.0	0.0	6.4	NM	0.3	0.0	0.0	0.0	1.3	0.0	1.0	0.0	0.6	0.1	0.2	0.0	26.8	0.0	2.2	0.0	0.1	0.0	0.4	0.0	2.0	
FID (ppm)	1	1	NM	0.00	0.00	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.5	0.3	NM	NM	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM	0.1	6.8	0.1	9	0.0	6	0.0	6.1	0.2	7.2
Methane (%)	0	NM	0.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.2	NM	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.4	0.3	0.0	0.4	0.1	0.3			
Carbon Dioxide (%)	2.5	NM	4.1	0.0	2.5	0.0	1.6	0.0	0.0	1.2	0.0	3.5	0.0	3.5	NM	0.5	0.2	1.2	0.1	2.1	0.1	1.8	0.2	1.2	0.1	2.4	0.0	1.7	0.4	1.3	0.0	2.4	0.0	1.8	0.0	3.1		
Oxygen (%)	15.8	NM	13.0	20.5	15.3	20.9	18.8	20.8	20.8	20.6	18.3	20.6	12.7	20.8	12.7	NM	20.1	20.6	18.9	20.9	18.3	20.9	17.1	19.0	20.6	20.0	14.3	20.5	18.1	20.1	18.2	22.3	19.0	22.4	19.8	21.2	17.1	
Barometric Pressure (in., Hg)	NM	NM	30.0	NM	NM	30.6	30.6	29.6	29.6	29.9	29.9	30.3	30.3	30.23	30.3	NM	NM	29.53	29.53	29.95	29.94	30.41	30.41	29.9	29.9	29.74	29.74	30.04	30.04	30.04	30.01	30.04	30.04	30.35	30.35	30.21	30.21	

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Table 10
Pond Bottom Sand Cover Thickness Measurements
Bush Terminal Landfill Pier 1-4, Brooklyn, New York

Location	Longitude	Latitude	2019/2020 Gauge Depth	2019/2020 Sand Thickness (in.)	2023 Gauge Depth	2023 Sand Thickness (in.)	2023 Change (in.)	2024 Gauge Depth	2024 Sand Thickness (in.)	2024 Change (in.)
Gauge-1	W074.019161 (d)	N040.654437 (d)	0.4	32	0.66	35.1	3.1	0.80	36.8	1.7
Gauge-2	W074.019458 (d)	N040.654598 (d)	0.8	36	1.12	39.8 +	3.8	1.30	42.0 +	2.2
Gauge-3	W074.019865 (d)	N040.654836 (d)	0.6	36	0.62	36.2 +	0.2	0.60	36.0 +	-0.2
Gauge-4	W074.020056 (d)	N040.654619 (d)	0.6	27	0.88	30.4	3.4	0.99	31.7	1.3
Gauge-5	W074.020451 (d)	N040.654385 (d)	0.6	9	0.74	10.7	1.7	0.76	10.9	0.2
Gauge-6	W074.019749 (d)	N040.654346 (d)	0.4	10	0.64	12.9	2.9	0.64	12.9	0.0
Gauge-7	W074.019035 (d)	N040.654098 (d)	0.9	24	0.75	22.2	-1.8	0.78	22.6	0.4
Gauge-8	W074.018762 (d)	N040.654143 (d)	0.6	29	0.68	30.0	1.0	0.66	29.7	-0.2
Gauge-9	W074.018373 (d)	N040.653973 (d)	0.8	36	0.88	37.0 +	1.0	0.86	36.7 +	-0.2
Gauge-10	W074.018723 (d)	N040.653844 (d)	0.6	19	NR	NR	NR	0.60	19.0	0.0
Gauge-11	W074.018809 (d)	N040.654073 (d)	1	16	0.82	13.8	-2.2	0.86	14.3	0.5
Gauge-12	W074.018528 (d)	N040.653873 (d)	0.8	7	0.75	6.4	-0.6	0.84	7.5	1.1
Gauge-13	W074.019677 (d)	N040.654473 (d)	1	12	1.38	16.6	4.6	1.48	17.8	1.2
Gauge-14	W074.019370 (d)	N040.654393 (d)	0.9	6	0.88	5.8	-0.2	0.90	6.0	0.2

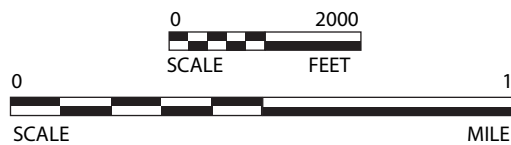
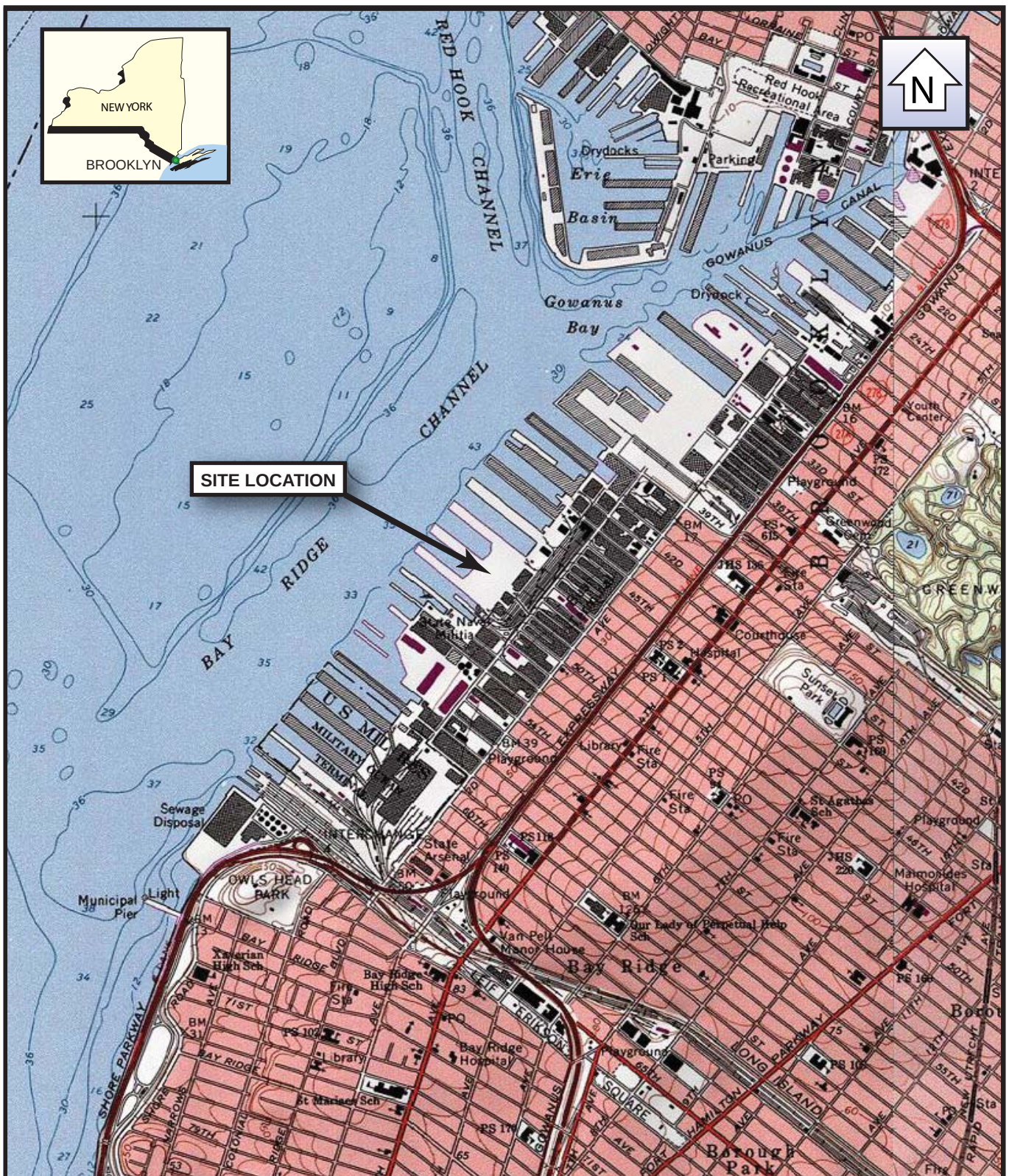
+ indicates sand cover depth greater than 36 inch maximum measurement with the metal yard stick in the original 2019/2020 measurements.

Red colored values indicate a decrease of 1 inch or more since last measurement.

Blue colored values indicate an increase of 1 inch or more since last measurement.

Yellow highlighted location indicates less than 1 foot of sand cover.

FIGURES



1:24000

BASE CREATED WITH TOPO™ © 1996 WILDFLOWERS PRODUCTIONS,
www.topo.com 7.5' USGS TOPOGRAPHIC MAPS



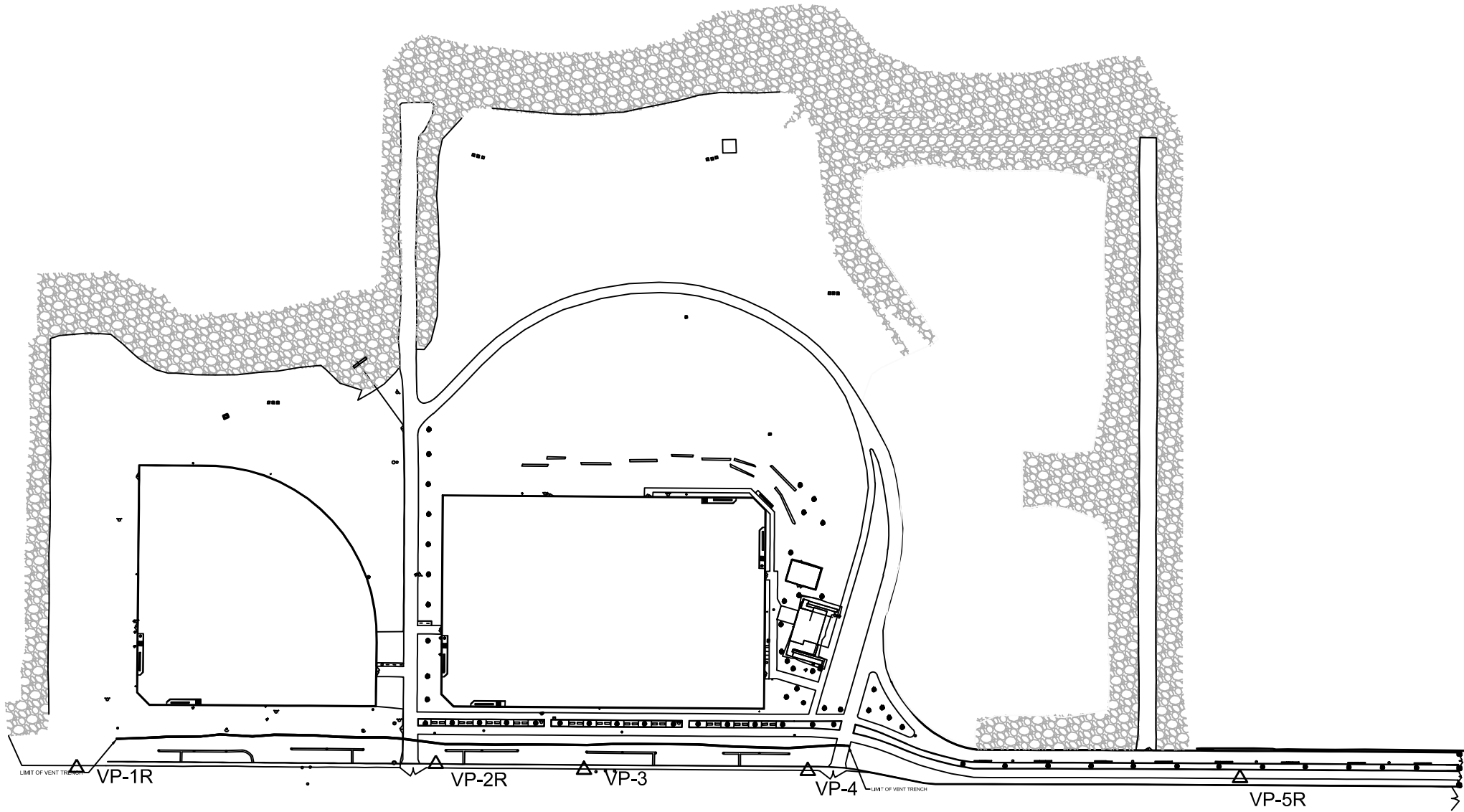
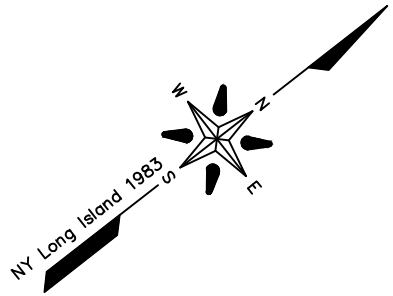
21 Griffin Road North
Windsor, CT
Phone: 860.298.9692

NEW YORK CITY ECONOMIC DEVELOPMENT CORP.
BUSH TERMINAL LANDFILL PIERS 1-4,
BROOKLYN, NEW YORK

FIGURE 1 SITE LOCATION MAP

DATE: 08/2014

PROJECT NO. 177603.0220.000000

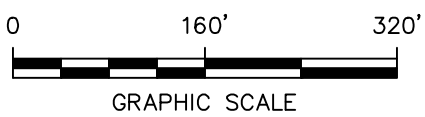


LEGEND		
VP-3	▲	GAS MONITORING WELL LOCATION
VP-1R	▲	REPLACEMENT GAS MONITORING WELL LOCATION (INSTALLED 2/1/16)

FINAL COORDINATES FOR MONITORING WELLS		
DESC.	NORTH	EAST
VP-1R	176536.62	978521.62
VP-2R	176868.16	978775.16
VP-3	176999.62	978886.49
VP-4	177203.71	979047.64
VP-5R	177594.35	979363.26

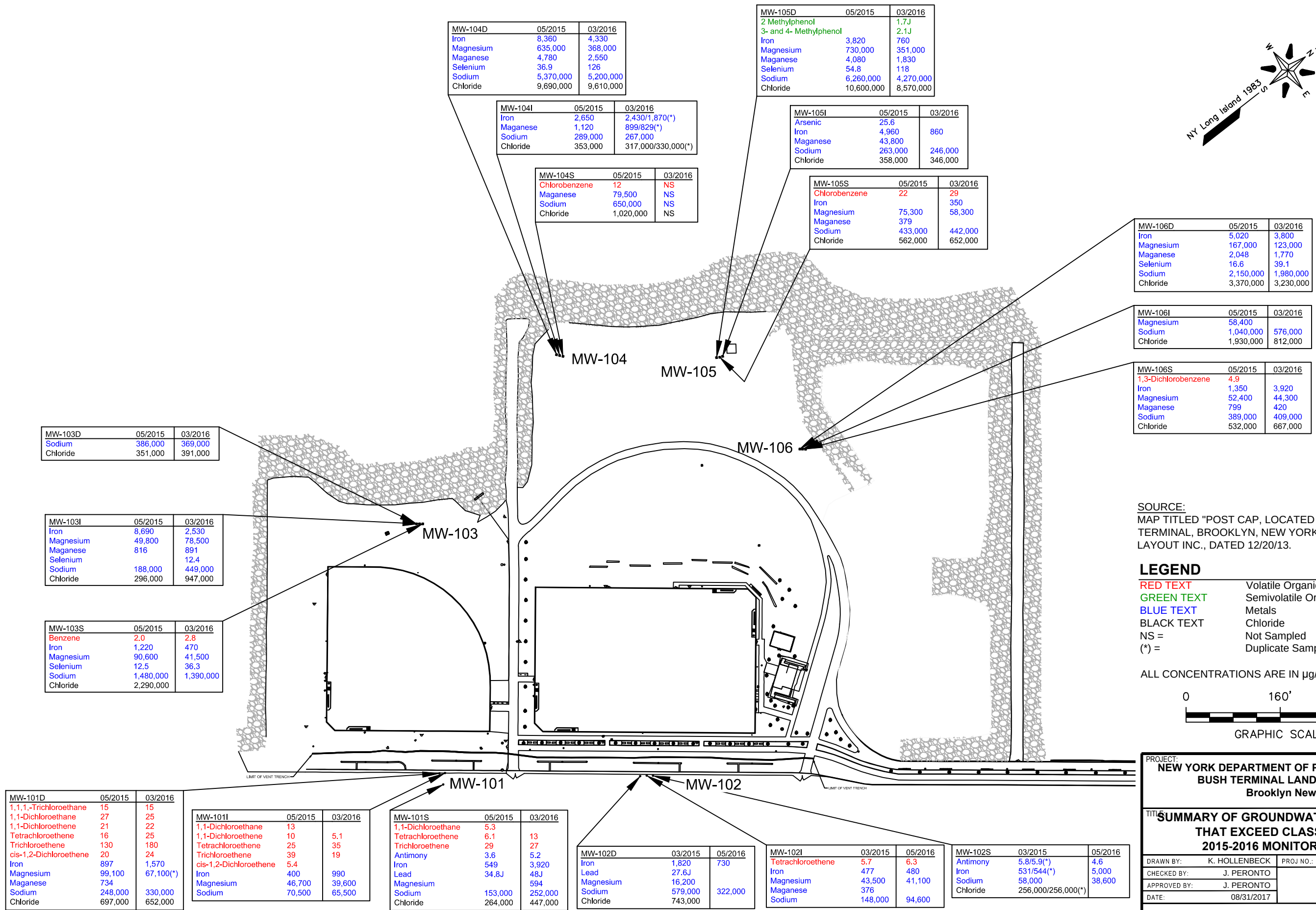
- NOTES
- SYSTEM OF COORDINATES IS BASED UPON NAD 1983 NEW YORK LONG ISLAND.

SOURCE:
MAP TITLED "POST CAP, LOCATED AT BUSH TERMINAL, BROOKLYN, NEW YORK", BY LAYOUT INC., DATED 12/20/13.



PROJECT: NEW YORK DEPARTMENT OF PARKS & RECREATION BUSH TERMINAL LANDFILL PIERS 1-4 Brooklyn New York	
TITLE: GAS MONITORING WELL LOCATIONS	
DRAWN BY: K. HILLENBECK	PROJ NO.: 236180-000005-000000
CHECKED BY: J. PERONTO	FIGURE 2
APPROVED BY: J. PERONTO	
DATE: 08/04/2017	
	
21 Griffin Road North Windsor, CT 06095 Phone: 860.298.9692 www.trcsolutions.com	
FILE NO.:	Plate-1 Rev-1.dwg

11x17 -- ATTACHED REFS: TRC FINAL SURVEY -- ATTACHED IMAGES: DRAWING NAME: J:\CAD\NYC\BUSH Terminal Quarterly Monitoring Report-236180-000005\ Plate-1 Rev-1.dwg --- PLOT DATE: August 31, 2017 - 3:39PM --- LAYOUT: Figure 3A

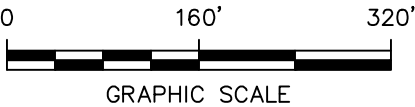


SOURCE:
MAP TITLED "POST CAP, LOCATED AT BUSH
TERMINAL, BROOKLYN, NEW YORK", BY
LAYOUT INC., DATED 12/20/13.

LEGEND

RED TEXT Volatile Organic Compounds
GREEN TEXT Semivolatile Organic Compounds
BLUE TEXT Metals
BLACK TEXT Chloride
NS = Not Sampled
(*) = Duplicate Sample Results

ALL CONCENTRATIONS ARE IN µg/L.



PROJECT:
**NEW YORK DEPARTMENT OF PARKS & RECREATION
BUSH TERMINAL LANDFILL PIERS 1-4
Brooklyn New York**

TITLE:
**SUMMARY OF GROUNDWATER CONSTITUENTS
THAT EXCEED CLASS GA VALUES
2015-2016 MONITORING PERIOD**

DRAWN BY:	K. HOLLENBECK	PROJ NO.:	254798-000005-000000
CHECKED BY:	J. PERONTO		
APPROVED BY:	J. PERONTO		
DATE:	08/31/2017		

FIGURE 3A



21 Griffin Road North
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FILE NO.: Plate-1 Rev-1.dwg

11x17 -- ATTACHED REFS: TRC FINAL SURVEY -- ATTACHED IMAGES: DRAWING NAME: J:\CAD\NYCDPR\Bush Terminal Quarterly Monitoring Report-236180-000005\Plate-1 Rev-2.dwg --- PLOT DATE: November 09, 2018 - 1:25PM --- LAYOUT: Figure 3B

MW-104S	10/2016	03/2017	06/2017
Chlorobenzene	10.1	9.1	13.3
Phenol	NS	6.9J	
Bis(2-ethylhexyl)phthalate	NS	22.8	6.8
Chloride	NS	NS	NS

MW-104I	10/2016	03/2017	06/2017
Phenol		3.4J	
Iron	2,240	2,030	3,220
Magnesium	32,800	31,800	
Manganese	1,020	1,120	1,190
Sodium	305,000	241,000	243,000
Chloride	321,000	321,000	346,000

MW-104D	10/2016	03/2017	06/2017
Antimony	5.24		
Iron	5,800	5,540	4,670
Magnesium	187,000	504,000	487,000
Manganese	5,650	4,520	3,540
Sodium	33,300,000	532,000	4,840,000
Chloride	8,990,000	9,140,000	8,920,000

MW-103I	10/2016	03/2017	06/2017
Phenol		3.4J	
Iron	1,010	1,990	3,620
Magnesium	187,000	44,400	45,800
Manganese	681	580	605
Sodium	1,030,000	199,000	202,000
Chloride	1,500,000	322,000	336,000

MW-103D	10/2016	03/2017	06/2017
Phenol		2.2J	
Sodium	509,000	34,300	456,000
Chloride	453,000		544,000

MW-103S	10/2016	03/2017	06/2017
Benzene	2.3	2.6	3.0
Phenol		4.5J	
Antimony		6.75	
Iron	2,190	669	1,990
Magnesium	74,800	56,100	66,600
Sodium	1,390,000	1,160,000	1,120,000
Chloride	1,610,000	1,710,000	1,830,000

MW-101D	10/2016	03/2017	07/2017
1,1-Dichloroethene	22.9	21.9	26.3
1,1-Dichloroethane	25.6	26.8	38.3
cis-1,2-Dichloroethene	21.9	22	23.3
1,1,1-Trichloroethane	14.5	16.1	21.2
Trichloroethene	140	160	130
Tetrachloroethene	14.1	25.4	17.3
Iron		1,050	2,280
Magnesium	72,600	56,600	64,800
Manganese			386
Sodium	440,000	403,000	392,000
Chloride	711,000	700,000	808,000

MW-101I	10/2016	03/2017	07/2017
Trichloroethene	16.2	19.2	16.4
Tetrachloroethene	15.5	26.8	26.2
Antimony		5.86	
Iron	633	2,510	698
Magnesium	48,800	46,900	53,100
Sodium	84,300	68,700	55,500
Chloride			

MW-105D	10/2016	03/2017	06/2017
Acetone	66.3		
Benzene	13.1		
Phenol	6.2J	4.9J	
2-Methylphenol	12.1	4.3JQ	
3+4-Methylphenols	16.1		
Antimony	3.63	6.16	4.5
Iron	630		
Magnesium	499,000	80,400	
Manganese	1,360		
Sodium	2,820,000	1,400,000	231,000
Chloride	344,000	652,000	282,000

MW-105I	10/2016	03/2017	06/2017
Arsenic	25.1		
Iron	4,130	457	658
Magnesium	44,400	47,900	43,000
Sodium	338,000	424,000	312,000
Chloride	376,000	569,000	420,000

MW-105S	10/2016	03/2017	06/2017
Chlorobenzene	5.7	11.2	12.9
3,4-Methylphenol	3.0J		
Arsenic		34.7J+	
Iron		6,310	
Magnesium	63,700	42,100	63,300
Sodium	576,000	289,000	391,000
Chloride	736,000	384,000	543,000

MW-106D	10/2016	03/2017	06/2017
Antimony	5.24		
Iron	4,280		3,880
Magnesium	150,000	36,400	133,000
Manganese	2,050		2,020
Sodium	13,300,000	762,000	2,070,000
Chloride	3,150,000	1,040,000	3,330,000

MW-106I	10/2016	03/2017	06/2017
Phenol		4.4J	
Magnesium	32,800	69,800	28,300/29,100(*)
Sodium	767,000	1,360,000	649,000/664,000(*)
Chloride	890,000	1,690,000	954,000/936,000(*)

MW-106S	10/2016	03/2017	06/2017
Phenol			1,100
Iron			
Magnesium	56,700	57,500	51,500
Manganese	362	370	345
Sodium	618,000	520,000	441,000
Chloride	874,000	853,000	808,000

SOURCE:
MAP TITLED "POST CAP, LOCATED AT BUSH
TERMINAL, BROOKLYN, NEW YORK", BY
LAYOUT INC., DATED 12/20/13.

LEGEND

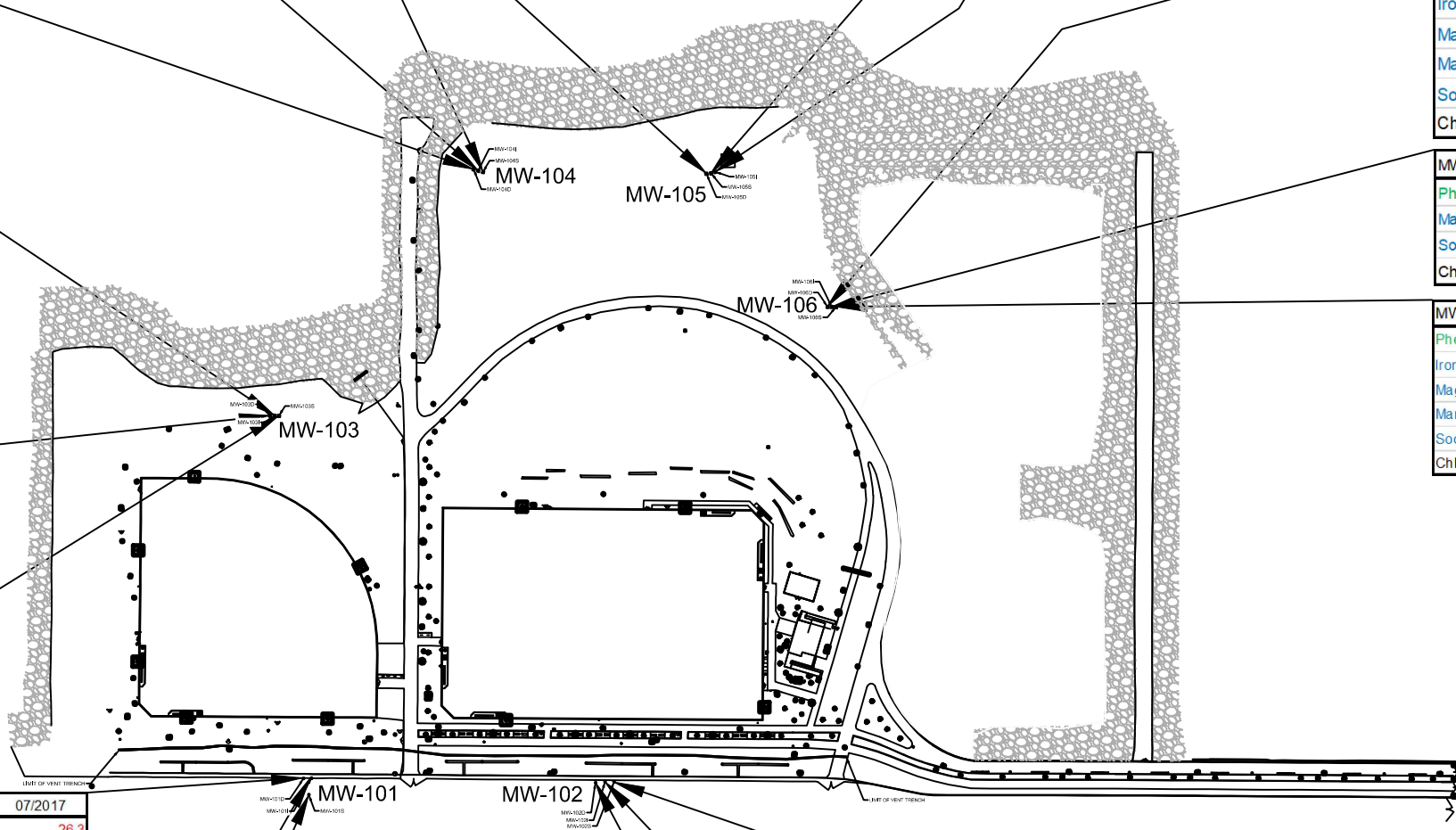
RED TEXT Volatile Organic Compounds
GREEN TEXT Semivolatile Organic Compounds
BLUE TEXT Metals
BLACK TEXT Chloride
NS = Not Sampled
(*) = Duplicate Sample Results

ALL CONCENTRATIONS ARE IN µg/L.

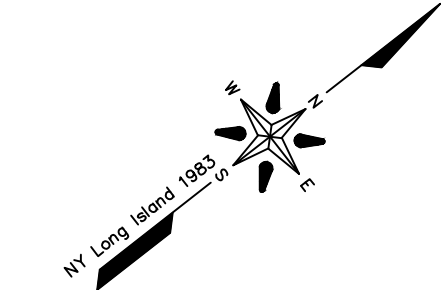
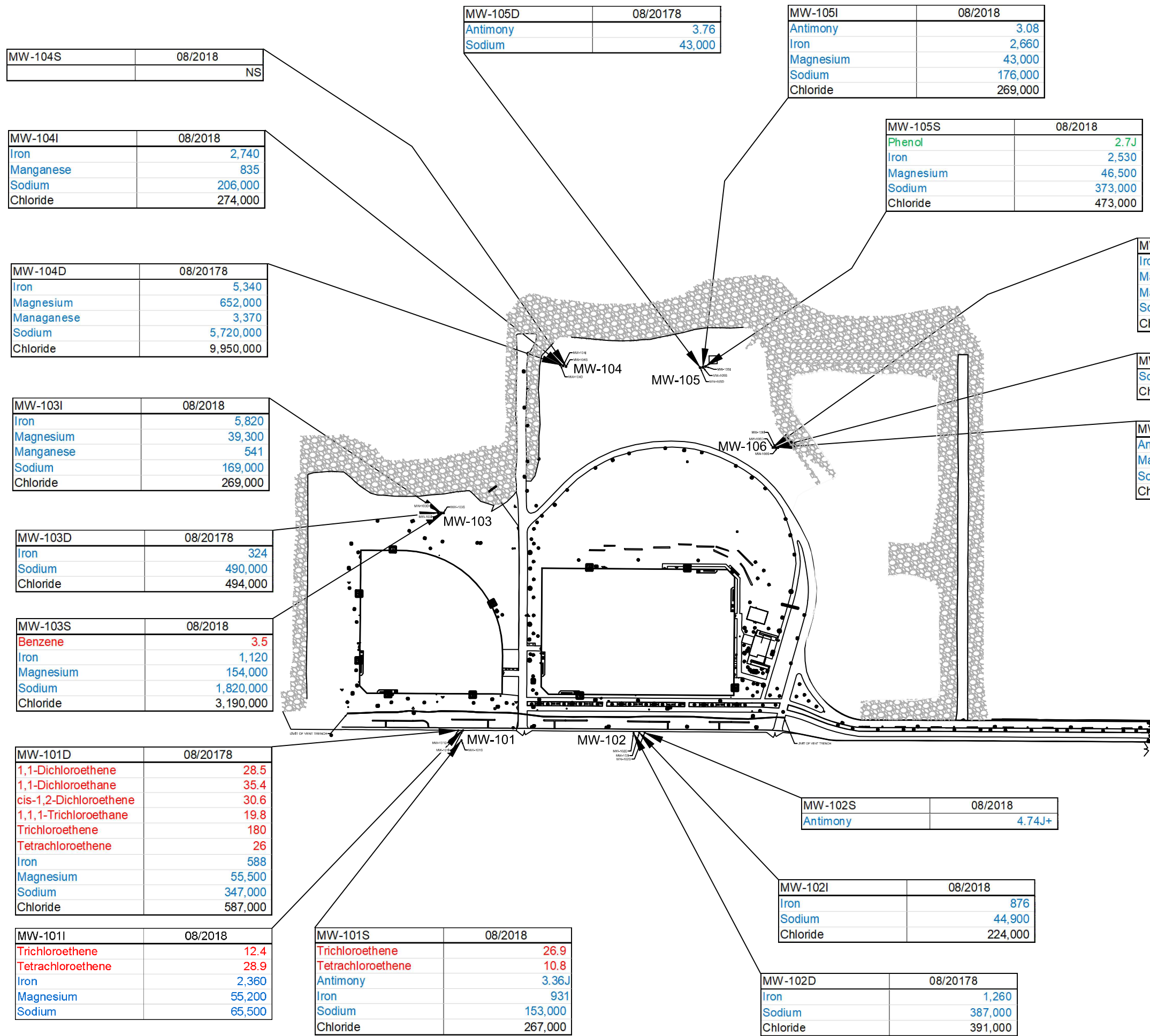


GRAPHIC SCALE

PROJECT: NEW YORK DEPARTMENT OF PARKS & RECREATION BUSH TERMINAL LANDFILL PIERS 1-4 Brooklyn New York	
TITLE: SUMMARY OF GROUNDWATER CONSTITUENTS THAT EXCEED CLASS GA VALUES 2016-2017 MONITORING PERIOD	
DRAWN BY: K. HOLLENBECK	PROJ NO.: 254798-000005-000000
CHECKED BY: J. PERONTO	FIGURE 3B
APPROVED BY: J. PERONTO	
DATE: 11/06/2018	
FILE NO.: Plate-1 Rev-2.dwg	
21 Griffin Road North Windsor, CT 06095 Phone: 860.298.9692 www.trcsolutions.com	



11x17 -- ATTACHED REF: TRC FINAL SURVEY -- ATTACHED IMAGES: DRAWING NAME: J:\CAD\NYC\BUSH Terminal\Annual Monitoring Report\254798-000001\2017-2018 Report.dwg --- PLOT DATE: October 09, 2018 - 11:45AM --- LAYOUT: Figure 3C

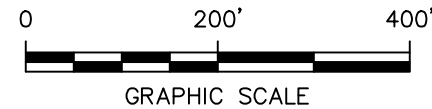


SOURCE:
MAP TITLED "POST CAP, LOCATED AT BUSH
TERMINAL, BROOKLYN, NEW YORK", BY
LAYOUT INC., DATED 12/20/13.

LEGEND

RED TEXT Volatile Organic Compounds
GREEN TEXT Semivolatile Organic Compounds
BLUE TEXT Metals
BLACK TEXT Chloride
NS = Not Sampled
(*) = Duplicate Sample Results

ALL CONCENTRATIONS ARE IN µg/L.



PROJECT: NEW YORK DEPARTMENT OF PARKS & RECREATION BUSH TERMINAL LANDFILL PIERS 1-4 Brooklyn New York	
TITLE: SUMMARY OF GROUNDWATER CONSTITUENTS THAT EXCEED CLASS GA VALUES 2017-2018 MONITORING PERIOD	
DRAWN BY: K. HOLLENBECK	PROJ NO.: 254798-000001-000007
CHECKED BY: J. PERONTO	FIGURE 3C
APPROVED BY: J. PERONTO	
DATE: 10/09/2018	
	
21 Griffin Road North Windsor, CT 06095 Phone: 860.298.9692 www.trcsolutions.com	
FILE NO.:	2017-2018 Report.dwg

11x17 - ATTACHED REF: TRCFINAL SURVEY - ATTACHED IMAGES
DRAWING NAME: J:\CAD\NYCDPR\Bush Terminal\Annual Monitoring Report-363822.0000071-2018-2019 Report.dwg --- PLOT DATE: March 09, 2020 - 10:05AM --- LAYOUT: Figure 3D

MW-104S	10/2019
	Not Sampled (*)
(*) Oil present in well.	

MW-104I	10/2019
Phenol	6.5J
Iron	2,540
Manganese	674
Sodium	208,000J+
Chloride	269,000

MW-104D	10/2019
Phenol	4.5J
Iron	5,250
Magnesium	580,000
Managanese	3,680
Selenium	32.1
Sodium	6,140,000
Chloride	9,370,000

MW-103I	10/2019
1,1-Dichloroethane	5.8
Vinyl Chloride	2.9
Phenol	6.9J
Iron	2,090
Magnesium	62,900
Manganese	844
Sodium	267,000
Chloride	458,000

MW-103D	10/2019
3,4-Methylphenol	4.1J
Phenol	7.6J
Iron	4,040

MW-103S	10/2019
Benzene	1.8
Phenol	7.3J
Iron	2,910
Magnesium	160,000
Selenium	21.7
Sodium	1,850,000
Chloride	3,100,000

MW-101D	10/2019
1,1-Dichloroethene	9.2
1,1-Dichloroethane	10.6
cis-1,2-Dichloroethene	9.4
Trichloroethene	84.0
Tetrachloroethene	13.5
Phenol	6.2J
Iron	580J+
Sodium	294,000
Chloride	438,000

MW-101I	10/2019
1,1-Dichloroethane	5.9
Trichloroethene	15.8
Tetrachloroethene	37.3
Phenol	4.6J
Iron	2,360
Magnesium	55,200
Sodium	65,500

MW-101S	10/2019
Trichloroethene	17.3
Tetrachloroethene	11.8
Phenol	3.6J
Iron	454J+
Sodium	127,000

MW-105D	10/2019
Phenol	9.4J
Sodium	34,800

MW-105I	10/2019
Phenol	6.1J
Antimony	3.08
Iron	2,660
Magnesium	38,400
Sodium	328,000
Chloride	443,000

MW-105S	10/2019
Chlorobenzene	8.7
Phenol	7.3J
Iron	10,500
Magnesium	46,800J*
Sodium	411,000
Chloride	565,000

MW-106D	10/2019
Iron	3,840/3,720
Magnesium	133,000/136,000
Managanese	1,790/1,740
Selenium	16.7/18.6
Sodium	2,040,000/2,010,000
Chloride	3,120,000/3,000,000

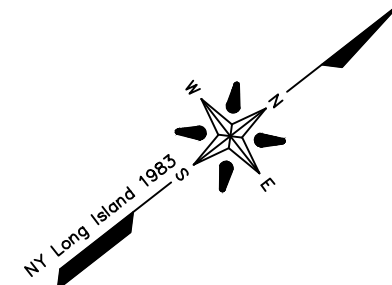
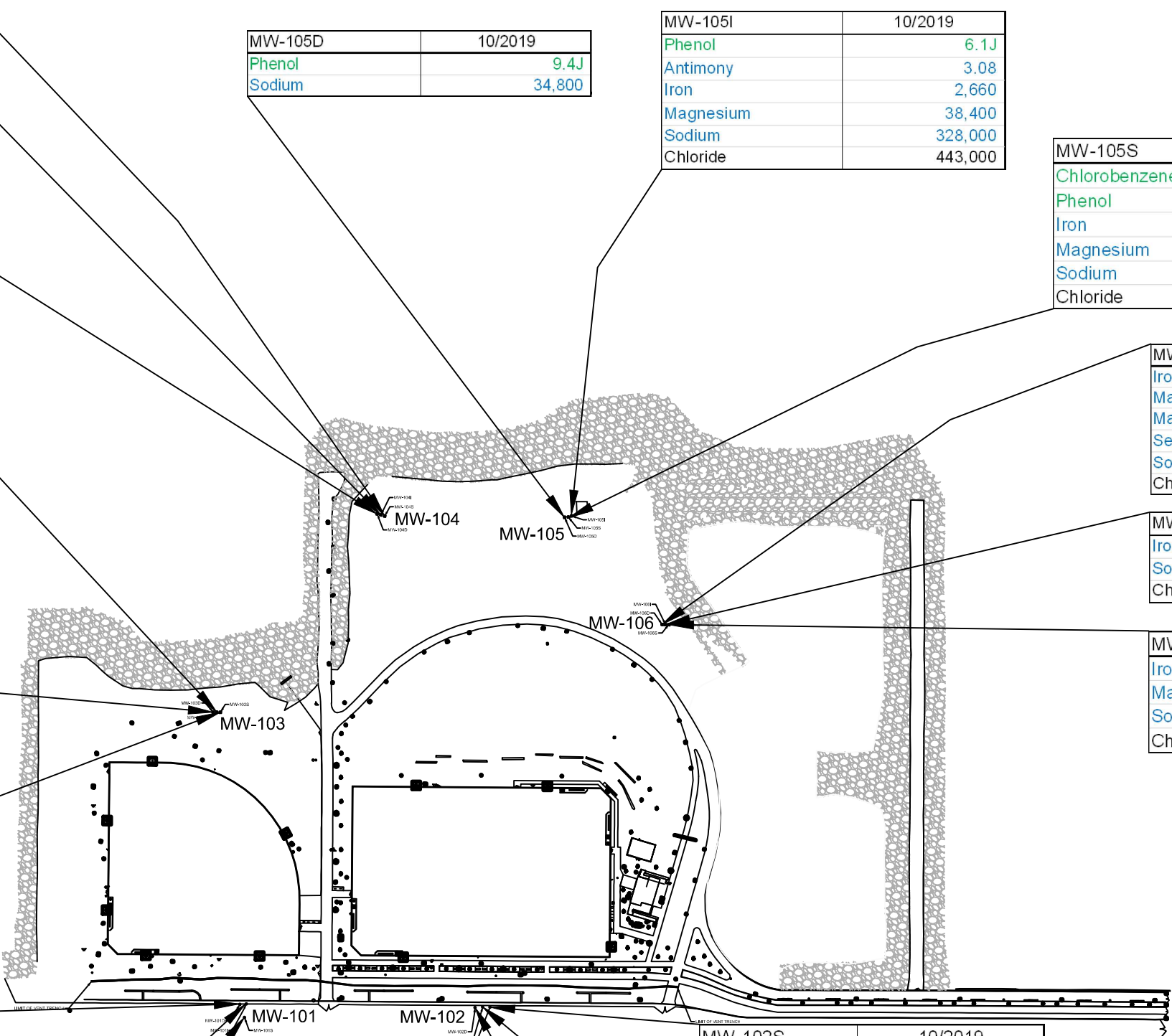
MW-106I	10/2019
Iron	707
Sodium	757,000
Chloride	665,000

MW-106S	10/2019
Iron	1,090
Magnesium	42,200
Sodium	372,000
Chloride	573,000

MW-102S	10/2019
Phenol	7.5J
Antimony	9.33
Iron	2,830
Sodium	26,100J+
Thallium	1.9J*

MW-102I	10/2019
Trichloroethene	5.4
Tetrachloroethene	11.5
Phenol	4J
Iron	1,250
Sodium	97,000

MW-102D	10/2019
Phenol	6.8J
Iron	2,340
Sodium	362,000
Chloride	365,000



SOURCE:
MAP TITLED "POST CAP, LOCATED AT BUSH
TERMINAL, BROOKLYN, NEW YORK", BY
LAYOUT INC., DATED 12/20/13.

LEGEND
RED TEXT Volatile Organic Compounds
GREEN TEXT Semivolatile Organic Compounds
BLUE TEXT Metals
BLACK TEXT Chloride
NS = Not Sampled
(*) = Duplicate Sample Results

ALL CONCENTRATIONS ARE IN µg/L.
0 200' 400'
GRAPHIC SCALE

PROJECT:
**NEW YORK DEPARTMENT OF PARKS & RECREATION
BUSH TERMINAL LANDFILL PIERS 1-4
Brooklyn New York**

TITLE:
**SUMMARY OF GROUNDWATER CONSTITUENTS
THAT EXCEED CLASS GA VALUES
2018-2019 MONITORING PERIOD**

DRAWN BY: R. HAMILTON
CHECKED BY: J. PERONTO
APPROVED BY: J. PERONTO
DATE: 03/08/2020

PROJ NO.: 363822.000007
FIGURE 3D



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FILE NO.: 2018-2019 Report.dwg

MW-104S	3/2021
	Not Sampled (*)
(*) Oil present in well.	

MW-104I	3/2021
Iron	560

MW-104D	3/2021
Antimony	1.12
Iron	4,970
Magnesium	641,000
Managanese	3,140
Sodium	5,820,000
Chloride	86,200,000

MW-103I	3/2021
Phenol	2.4J
Iron	3,360

MW-103D	3/2021
Iron	3,490

MW-103S	3/2021
Benzene	2.0
Iron	6,650
Magnesium	175,000
Manganese	679
Sodium	1,840,000
Chloride	2,660,000

MW-101D	3/2021
1,1-Dichloroethane	8.3
1,1-Dichloroethene	6.8
cis-1,2-Dichloroethene	5.5
Trichloroethene	41.4
Tetrachloroethene	9.1
Iron	724
Magnesium	36,300
Sodium	236,000
Chloride	338,000

MW-101I	3/2021
1,1-Dichloroethane	20.9
1,1-Dichloroethene	29.3
cis-1,2-Dichloroethene	28.3
Trichloroethene	27.2
Tetrachloroethene	26.9
Iron	737
Magnesium	57,400
Sodium	91,200
Chloride	311,000

MW-105D	3/2021
Phenol	3.4J
Iron	3,050
Magnesium	208,000
Managanese	1,150
Sodium	1,950,000
Chloride	1,850,000

MW-105I	3/2021
Phenol	3.3J
Iron	3,840
Magnesium	47,000
Sodium	301,000
Chloride	457,000

MW-105S	3/2021
Chlorobenzene	5.5
Iron	912
Magnesium	97,600
Sodium	474,000
Chloride	523,000

MW-106D	3/2021
Iron	566
Sodium	47,200

MW-106I	3/2021
Phenol	3.4J
Magnesium	46,800
Sodium	870,000
Chloride	1,050,000

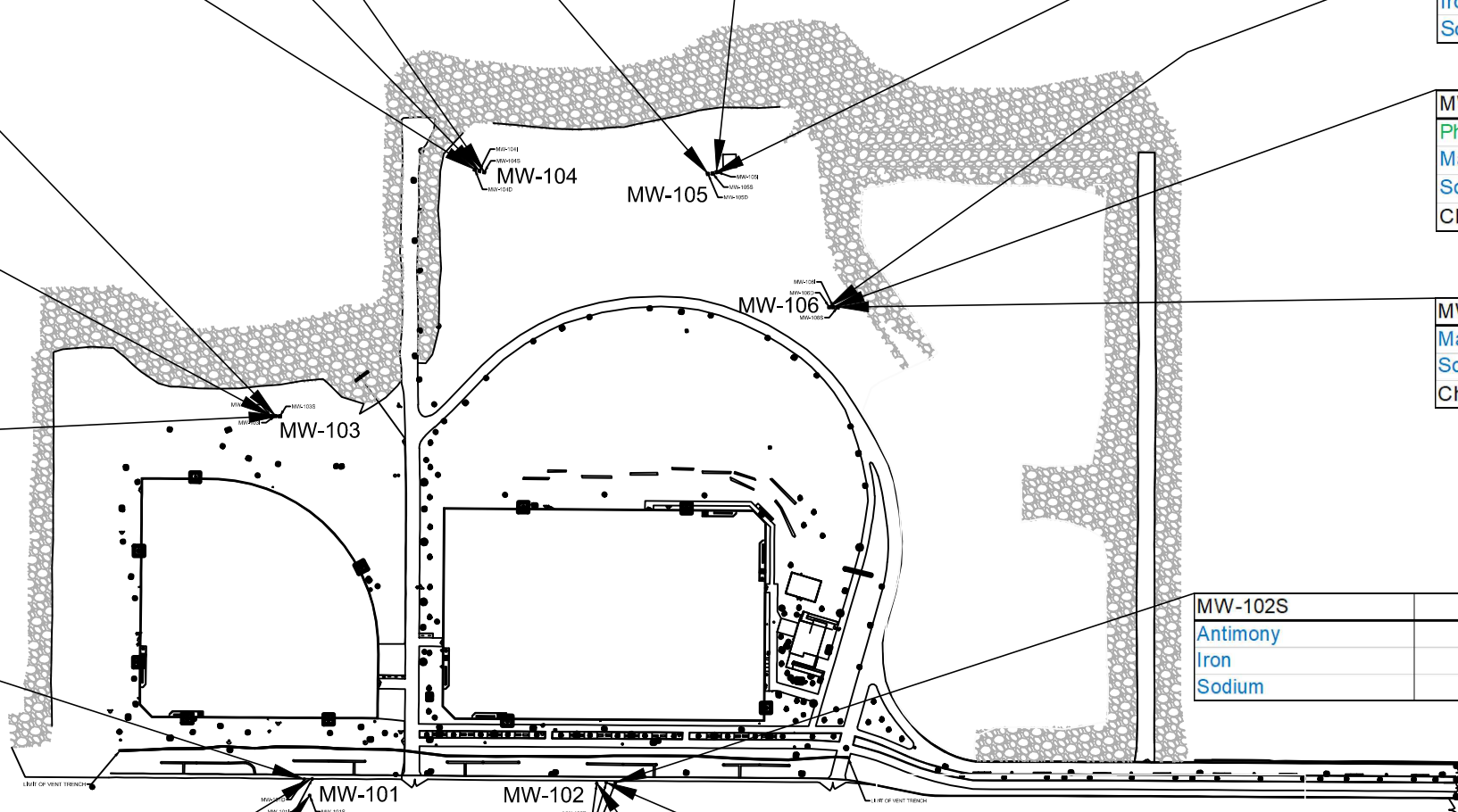
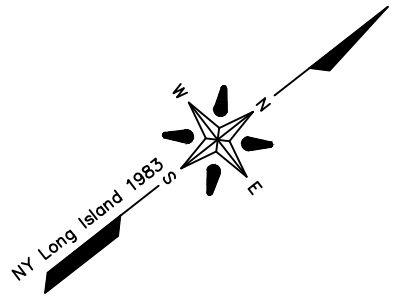
MW-106S	3/2021
Magnesium	45,100
Sodium	352,000
Chloride	440,000

MW-102S	3/2021
Antimony	4.86
Iron	871
Sodium	32,700

MW-101S	3/2021
1,1-Dichloroethane	5.9
1,1-Dichloroethene	6.8
cis-1,2-Dichloroethene	6.3
Trichloroethene	21.8
Tetrachloroethene	10.7
Phenol	2.2J
Iron	1,360
Lead	25.1
Magnesium	35,600
Manganese	613
Sodium	158,000
Chloride	268,000

MW-102I	3/2021
cis-1,2-Dichloroethene	7.7/7.9
Trichloroethene	27.9/27.5
Tetrachloroethene	54.4/54.2
Iron	986/1,110
Magnesium	35,200/36,700
Sodium	130,000/134,000
Chloride	261,000/267,000

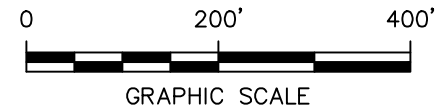
MW-102D	3/2021
Iron	15,700
Lead	82.2
Manganese	818
Sodium	289,000
Chloride	258,000



SOURCE:
MAP TITLED "POST CAP, LOCATED AT BUSH
TERMINAL, BROOKLYN, NEW YORK", BY
LAYOUT INC., DATED 12/20/13.

LEGEND
RED TEXT Volatile Organic Compounds
GREEN TEXT Semivolatile Organic Compounds
BLUE TEXT Metals
BLACK TEXT Chloride
NS = Not Sampled
(*) = Duplicate Sample Results

ALL CONCENTRATIONS ARE IN µg/L.



PROJECT: NEW YORK DEPARTMENT OF PARKS & RECREATION BUSH TERMINAL LANDFILL PIERS 1-4 Brooklyn New York	
TITLE: SUMMARY OF GROUNDWATER CONSTITUENTS THAT EXCEED CLASS GA VALUES 2020-2021 MONITORING PERIOD	
DRAWN BY: R. HAMILTON	PROJ NO.: 435627.000007
CHECKED BY: J. PERONTO	FIGURE 3E
APPROVED BY: J. PERONTO	
DATE: 12/15/2022	
	
21 Griffin Road North Windsor, CT 06095 Phone: 860.298.9692 www.trccompanies.com	
FILE NO.:	2020-2021 Report.dwg

11x17 -- ATTACHED REFS: TRC FINAL SURVEY -- ATTACHED IMAGES: DRAWING NAME: J:\CAD\NYCDPR\Bush Terminal\Annual Monitoring Report\435627_2022 Report.dwg -- PLOT DATE: December 15, 2022 - 10:37AM -- LAYOUT: Figure 3F

MW-104S	8/2022
	Not Sampled (*)
(*) Oil present in well.	

MW-104I	8/2022
Iron	3,430
Magnesium	49,200
Managanese	858
Sodium	438,000
Chloride	767,000

MW-104D	8/2022
Antimony	
Iron	2,570
Magnesium	367,000
Managanese	3,050
Selenium	31.4
Sodium	3,950,000
Chloride	7,140,000

MW-103I	8/2022
Phenol	
Iron	1,330
Magnesium	91,400
Managanese	807
Selenium	12
Sodium	592,000
Chloride	1,060,000

MW-103D	8/2022
Iron	
Managanese	357
Selenium	11
Sodium	712,000
Chloride	1,000,000

MW-103S	8/2022
Benzene	1.2
Iron	2,350
Magnesium	158,000
Selenium	20.5
Sodium	1,890,000
Chloride	4,240,000

MW-101D	8/2022
1,1-Dichloroethane	18.7
1,1-Dichloroethene	15.3
cis-1,2-Dichloroethene	10.3
Trichloroethene	18.0
Tetrachloroethene	7.1
Iron	401
Magnesium	42,000
Sodium	142,000
Chloride	256,000

MW-101I	8/2022
1,1-Dichloroethane	18.8
1,1-Dichloroethene	18.9
cis-1,2-Dichloroethene	21.1
Trichloroethene	20.1
Tetrachloroethene	7.0
Iron	443
Magnesium	39,900
Sodium	178,000
Chloride	330,000

MW-105D	8/2022
Phenol	
Iron	703
Magnesium	
Managanese	
Sodium	
Chloride	

MW-105I	8/2022
Phenol	
Iron	1,510
Magnesium	52,300
Sodium	417,000
Chloride	641,000

MW-105S	8/2022
Chlorobenzene	7.3
Iron	351
Magnesium	46,300
Sodium	408,000
Chloride	54,700

MW-106D	8/2022
Iron	2,020
Magnesium	101,000
Managanese	1,450
Selenium	19.4
Sodium	1,600,000
Chloride	2,410,000

MW-106I	8/2022
Magnesium	39,100
Selenium	10.09
Sodium	729,000
Chloride	1,020,000

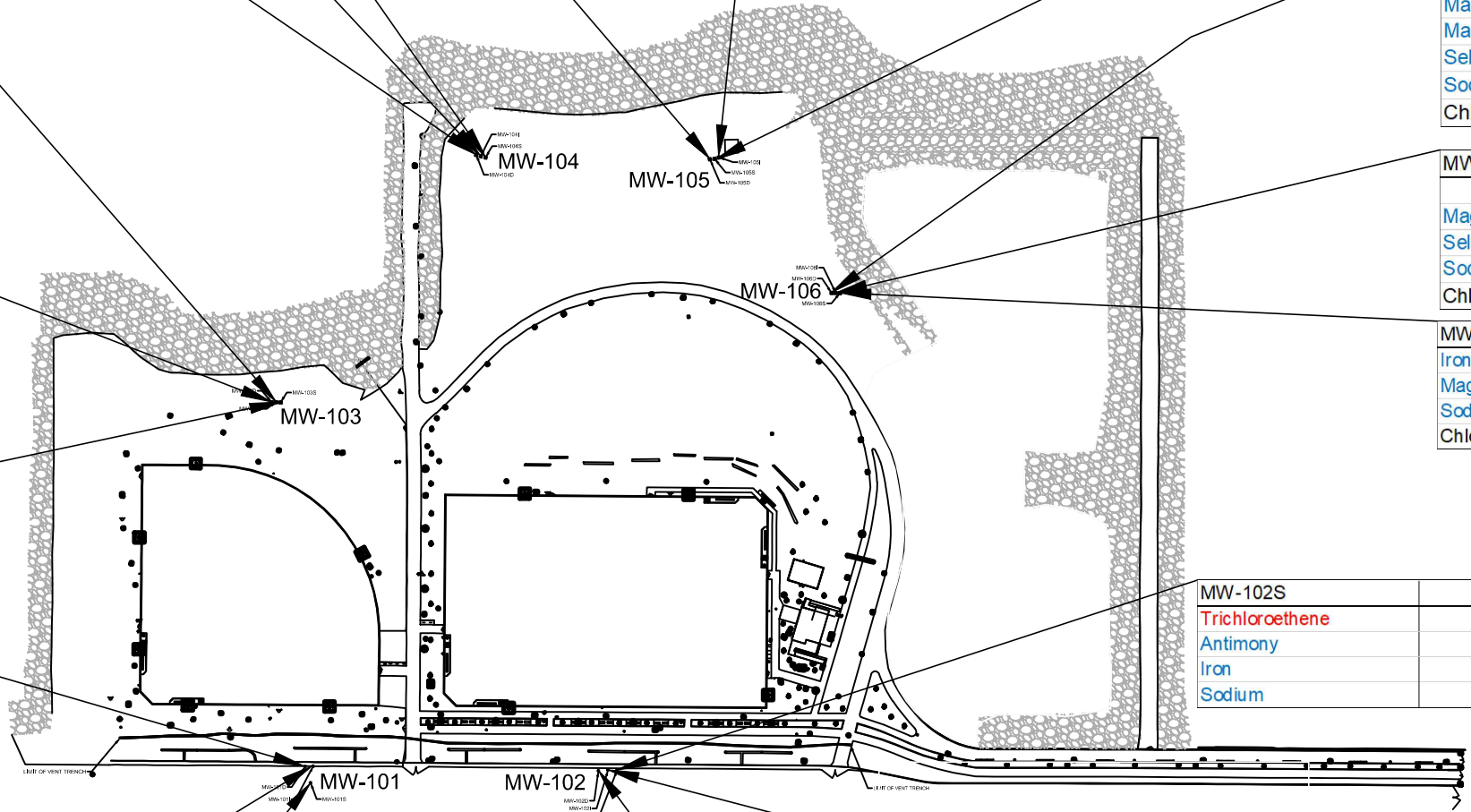
MW-106S	8/2022
Iron	388
Magnesium	38,300
Sodium	306,000
Chloride	472,000

MW-102S	8/2022
Trichloroethene	16.7
Antimony	4.42
Iron	395
Sodium	22,300

MW-102I	8/2022
cis-1,2-Dichloroethene	
Trichloroethene	20.7/18.2
Tetrachloroethene	35.5/33.7
Iron	193/408
Magnesium	
Sodium	112,000/106,000
Chloride	

MW-102D	8/2022
Iron	613
Lead	
Manganese	
Sodium	329,000
Chloride	318,000

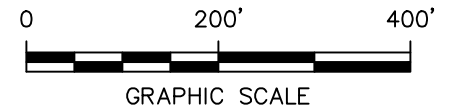
MW-101S	8/2022
1,1-Dichloroethane	8.7
1,1-Dichloroethene	10.9
cis-1,2-Dichloroethene	16.5
Trichloroethene	30.0
Tetrachloroethene	10.7
Iron	344
Lead	
Magnesium	
Manganese	
Sodium	135,000
Chloride	



SOURCE:
MAP TITLED "POST CAP, LOCATED AT BUSH
TERMINAL, BROOKLYN, NEW YORK", BY
LAYOUT INC., DATED 12/20/13.

LEGEND
RED TEXT Volatile Organic Compounds
GREEN TEXT Semivolatile Organic Compounds
BLUE TEXT Metals
BLACK TEXT Chloride
NS = Not Sampled
(*) = Duplicate Sample Results

ALL CONCENTRATIONS ARE IN µg/L.



PROJECT: NEW YORK DEPARTMENT OF PARKS & RECREATION BUSH TERMINAL LANDFILL PIERS 1-4 Brooklyn New York	
TITLE: SUMMARY OF GROUNDWATER CONSTITUENTS THAT EXCEED CLASS GA VALUES 2022 MONITORING PERIOD	
DRAWN BY: R. HAMILTON	PROJ NO.: 435627.000007
CHECKED BY: J. PERONTO	FIGURE 3F
APPROVED BY: J. PERONTO	
DATE: 12/15/2022	
	
21 Griffin Road North Windsor, CT 06095 Phone: 860.298.9692 www.trccompanies.com	
FILE NO.:	2022 Report.dwg

11x17 -- ATTACHED XREFS: TRC FINAL SURVEY -- ATTACHED IMAGES: DRAWING NAME: J:\CAD\NYC Economic Development Corporation\Bush Terminal\Annual Monitoring Report-539973\000006\ 2023 Report.dwg --- PLOT DATE: November 14, 2024 - 10:28AM --- LAYOUT: Figure 3G

MW-104S	9/2023
Not Sampled (*)	
(*) Oil present in well.	

MW-104I	9/2023
Iron	3,970J
Magnesium	46,200J
Managanese	939J
Sodium	559,000
Chloride	814,000

MW-104D	9/2023
Iron	2,890
Magnesium	331,000T
Managanese	3,140
Sodium	4,060,000
Chloride	6,950,000

MW-103I	9/2023
Iron	4,020
Chloride	1,060,000

MW-103D	9/2023
Chloride	1,000,000

MW-103S	9/2023
Benzene	1.8
Iron	1,790J
Magnesium	219,000J
Sodium	2,400,000
Chloride	4,300,000

MW-101D	10/2023
Iron	9,520J
Lead	31.9J
Magnesium	340J
Sodium	29,600

MW-101I	10/2023
Chloride	330,000

MW-101S	10/2023
Iron	780

MW-105D	9/2023
Iron	1,040

MW-102D	9/2023
1,1-Dichloroethane	5.2
1,1-Dichloroethene	6.7
cis-1,2-Dichloroethene	5.5
Trichloroethene	5.7
Tetrachloroethene	18.4
Iron	12,300
Lead	36.1
Manganese	932
Sodium	129,000

MW-105I	9/2023
Iron	948

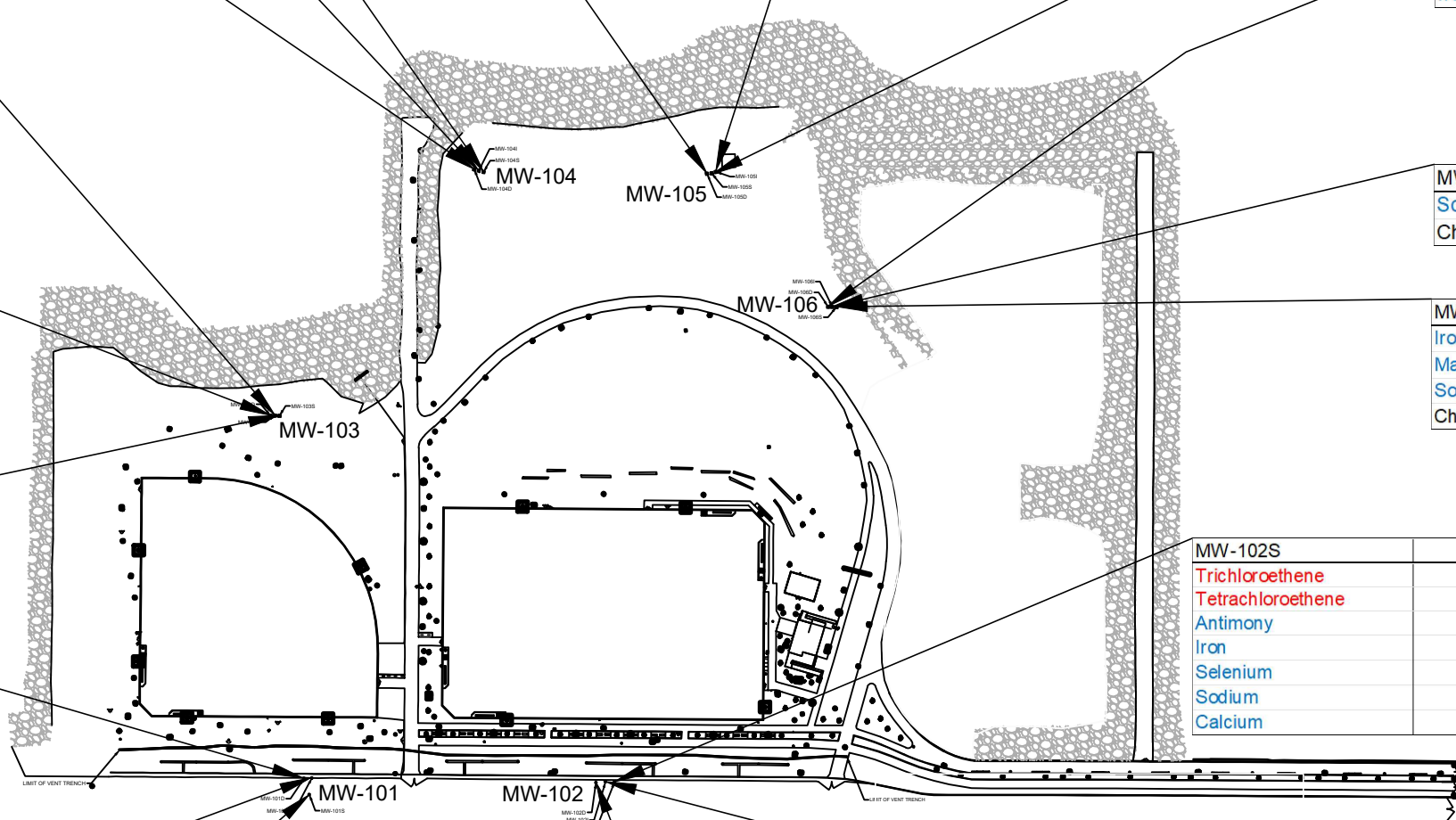
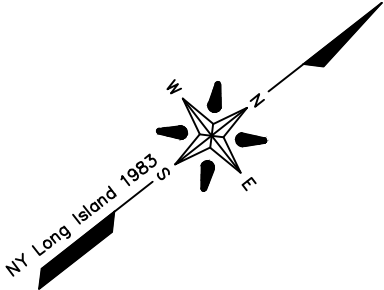
MW-105S	9/2023
Chlorobenzene	5.8
Iron	958J
Magnesium	38,600J
Sodium	371,000
Chloride	498,000

MW-106I	9/2023
Sodium	580,000
Chloride	720,000

MW-106S	9/2023
Iron	1,240
Magnesium	35,900
Sodium	306,000
Chloride	462,000

MW-102S	10/2023
Trichloroethene	16.0
Tetrachloroethene	5.9
Antimony	8.3
Iron	340J
Selenium	14.5
Sodium	162,000
Calcium	295,000

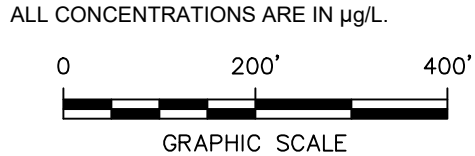
MW-102I	10/2023
1,1-Dichloroethene	10.4/9.2
cis-1,2-Dichloroethene	10.5/9.4
Trichloroethene	48.6/43.1
Tetrachloroethene	18.4/16.3
Iron	1,480J/229J
Sodium	127,000/133,000



SOURCE:
MAP TITLED "POST CAP, LOCATED AT BUSH
TERMINAL, BROOKLYN, NEW YORK", BY
LAYOUT INC., DATED 12/20/13.

LEGEND

RED TEXT Volatile Organic Compounds
GREEN TEXT Semivolatile Organic Compounds
BLUE TEXT Metals
BLACK TEXT Chloride
NS = Not Sampled
(*) = Duplicate Sample Results



PROJECT:
NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION
BUSH TERMINAL LANDFILL PIERS 1-4
Brooklyn, New York

TITLE:
**SUMMARY OF GROUNDWATER CONSTITUENTS
THAT EXCEED CLASS GA VALUES**
2023 MONITORING PERIOD

DRAWN BY: R. HAMILTON
CHECKED BY: J. PERONTO
APPROVED BY: J. PERONTO
DATE: 11/14/2024

PROJ NO.: 539973.000006
FIGURE 3G

21 Griffin Road North
Windsor, CT 06095
Phone: 860.298.9692
www.trccompanies.com

FILE NO.: 2023 Report.dwg

11x17 -- ATTACHED REF'S: TRC FINAL SURVEY -- ATTACHED IMAGES: DRAWING NAME: J:\CAD\NYC Economic Development Corporation\Bush Terminal\Annual Monitoring Report-539973\000006\ 2024 Report.dwg --- PLOT DATE: November 14, 2024 - 11:10AM --- LAYOUT: Figure 3H

MW-104S	9/2024
Not Sampled (*)	
(*) Oil present in well.	
MW-104I	9/2024
Iron	2,000J
Magnesium	37,000J
Managanese	620J
Sodium	630,000J
Chloride	850,000J

MW-104D	9/2024
Iron	4,300
Magnesium	630,000
Managanese	2,600B
Sodium	5,600,000
Chloride	9,600,000

MW-103I	9/2024
Vinyl Chloride	3.4
Iron	12,000
Lead	28
Managanese	650B
Sodium	130,000
Chloride	300,000

MW-103D	9/2024
Iron	5,700J
Managanese	410J
Sodium	720,000J
Chloride	970,000J

MW-103S	9/2024
Benzene	2.5
Benzo(a)anthracene	0.71J
Iron	2,400J
Magnesium	280,000J
Sodium	2,400,000J
Chloride	4,400,000J

MW-101D	9/2024
Trichloroethene	10.0
Iron	1,900J
Sodium	170,000J

MW-101I	9/2024
1,1-Dichloroethene	5.2
Trichloroethene	30.0
Tetrachloroethene	25.0
Sodium	190,000

MW-101S	9/2024
Trichloroethene	8.4
Tetrachloroethene	5.3
Antimony	11
Sodium	150,000

MW-105D	9/2024
Iron	1,500

MW-105I	9/2024
Iron	13,000
Sodium	350,000
Chloride	480,000

MW-105S	9/2024
Chlorobenzene	6.4
Iron	990J
Sodium	290,000J
Chloride	390,000J

MW-106D	9/2024
Iron	1,900
Magnesium	89,000
Managanese	1,100
Sodium	1,600,000
Thallium	0.59JB
Chloride	2,100,000

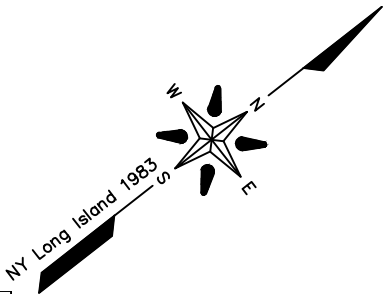
MW-106I	9/2024
Sodium	600,000
Chloride	770,000

MW-106S	9/2024
Iron	1,400J
Sodium	240,000J
Chloride	300,000J

MW-102S	9/2024
Tetrachloroethene	6.7
Antimony	4.1

MW-102I	9/2024
Tetrachloroethene	24.0/25.0
Iron	950/420J
Magnesium	
Sodium	88,000/84,000J

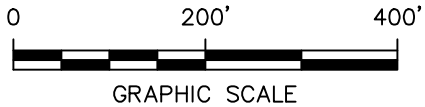
MW-102D	9/2024
Iron	5,900
Lead	32.0
Manganese	360
Sodium	290,000
Chloride	330,000



SOURCE:
MAP TITLED "POST CAP, LOCATED AT BUSH
TERMINAL, BROOKLYN, NEW YORK", BY
LAYOUT INC., DATED 12/20/13.

LEGEND	
RED TEXT	Volatile Organic Compounds
GREEN TEXT	Semivolatile Organic Compounds
BLUE TEXT	Metals
BLACK TEXT	Chloride
NS =	Not Sampled
(*) =	Duplicate Sample Results

ALL CONCENTRATIONS ARE IN µg/L.



PROJECT: NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION BUSH TERMINAL LANDFILL PIERS 1-4 Brooklyn, New York		
TITLE: SUMMARY OF GROUNDWATER CONSTITUENTS THAT EXCEED CLASS GA VALUES 2024 MONITORING PERIOD		
DRAWN BY: R. HAMILTON	PROJ NO.: 539973.000006	
CHECKED BY: J. PERONTO	FIGURE 3H	
APPROVED BY: J. PERONTO		
DATE: 11/14/2024		
	21 Griffin Road North Windsor, CT 06095 Phone: 860.298.9692 www.trccompanies.com	
FILE NO.:	2024 Report.dwg	

APPENDIX A
INSTITUTIONAL AND ENGINEERING CONTROLS
CERTIFICATION FORM



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site No.	B00031	Site Details	Box 1
Site Name Bush Terminal Landfill Piers 1-4			
Site Address: 47th to 52nd Street and 1st Ave to Gowanus Bay		Zip Code: 11232	
City/Town: Brooklyn			
County: Kings			
Site Acreage: 21.200			
July 27, 2021		October 15, 2024	
Reporting Period: ~~November 09, 2021~~ to ~~November 09, 2024~~			
			YES NO
1. Is the information above correct? Reporting period start date equal to end date of last PRR IC EC certification. End date here equal to date of last TRC inspection. If NO, include handwritten above or on a separate sheet.			☐ ☒
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?			☐ ☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?			☐ ☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? Pier 2 repair permits with PRR= NYSDEC Tidal Wetlands Permit 2-6102-00586/00005 dated 01/12/2022 & NYC SBS Work Permit Application Number 20210047 dated 11/10/2022 If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.			☒ ☐
5. Is the site currently undergoing development?			☐ ☒

Box 2		
YES NO		
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial		
☒ ☐		
7. Are all ICs in place and functioning as designed?		
☒ ☐		

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Description of Institutional ControlsParcelOwnerInstitutional Control**3-725-200**

NYC Parks EDC

Site Management Plan
Ground Water Use Restriction
Landuse Restriction

Implement and maintain institutional and site use controls (environmental easement, site inspections/certifications, access controls, engineered controls and signage) to ensure the future integrity of the remedial measures that are taken at the site and to prevent future exposures to soil related contamination.

All engineering controls must be operated and maintained as specified in the SMP.

All engineering controls on the controlled property must be inspected at a frequency and in a manner defined in the SMP.

Groundwater, soil vapor and other environmental or public health monitoring must be performed as defined in the SMP.

The property may only be used for restricted residential use that includes active recreational use as defined in 6 NYCRR subparagraph 375-1.8 (g)(2)(ii) provided that the long-term institutional and engineering controls are employed.

The property may not be used for a higher level of use, such as unrestricted or residential use as defined in 6 NYCRR subparagraph 375-1.8 (g) without additional remediation and amendment of the environmental easement, as approved by the NYSDEC.

All future activities on the property that may disturb contaminated material must be conducted in accordance with the SMP.

The use of groundwater underlying the property is prohibited.

The potential for vapor intrusion must be evaluated for any buildings developed on the landfill site.

Vegetable gardens and farming on the property are prohibited.

Description of Engineering ControlsParcelEngineering Control**3-725-200**

Cover System

Placement of 2 feet of clean cover and underlying demarcation fabric over the landfill to prevent exposures to surface soils and underlying soil/fill materials.

Placement of 1 to 2 feet of clean soil cover and underlying demarcation fabric over the bottoms of the 2 onsite tidal ponds.

Placement of stone rip rap along the landfill shoreline and piers to stabilize the site edges.

Passive landfill gas management to control landfill gas migration and landfill gas monitoring to ensure that unsafe conditions do not develop in the future.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO



2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

(a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO



**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. B00031

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Ian Taylor at NYCEDC
One Liberty Plaza, New York, NY 10006,
print name print business address

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.


Ian Taylor (Dec 16, 2024 10:22 EST)

On behalf of City of NY

12/16/2024

Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

Date

EC CERTIFICATIONS

Box 7

Professional Engineer Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

TRC Engineers, Inc.

I James Peronto at 1407 Broadway, Suite 3301, New York, NY 10018,
print name print business address

am certifying as a Professional Engineer for the Owner
(Owner or Remedial Party)



A handwritten signature in black ink, appearing to read "James Peronto", written over a horizontal line.

Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification

Stamp
(Required for PE)

12/06/2024

Date

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.