Queens West Development

Parcel 9

QUEENS, NEW YORK

2012 Periodic Review Report and Annual Certification

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ATC Project Number:

015.75420.0014

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1.0 INTRODUCTION

In January of 2012, AvalonBay Communities Inc., (AvalonBay), retained Cardno ATC to prepare the Periodic Review Report (PRR) for 2012 (formerly referred to as Site Management Report) and Annual Certification of Institutional and Engineering Controls for the site, which is identified as Queens West Development – Parcel 9. The following introductory and background discussions are according to the PRR prepared by AKRF Engineering, P.C. (AKRF) and dated February 2008.

The Queens West Development is a project of the Queens West Development Corporation (QWDC), a subsidiary of New York State's Empire State Development Corporation (NYSEDC), under the collective sponsorship of the Port Authority of New York and New Jersey, the New York City Economic Development Corporation (NYCEDC), and Empire State Development Corporation. The overall Queens West Development site comprises 74 acres along the East River in Hunters Point, Queens, extending from Anable Basin to the north to Newtown Creek to the south (Figure 1). Stage I of the development involved construction of residential buildings on the portion of the site between 47th Road and 50th Avenue. The development sites in this area were designated as Parcels 8, 9, 10, and 11, as shown on Figure 2.

In August 1998, a Voluntary Cleanup Agreement (VCA) was entered into between New York State Department of Environmental Conservation (NYSDEC) and QWDC. This agreement covered Parcels 8, 9, and 11 and the portion of Center Boulevard between Parcels 8 and 9. In July 2000, the VCA was amended to allow it to be divided into separate agreements for each parcel, which would be executed by the designated developer for the parcel. Accordingly, after AvalonBay was selected as the developer of Parcels 8, 9, and 11, AvalonBay executed separate agreements for each of the three parcels in September 2000. In March 2004, AvalonBay requested that NYSDEC transition Parcels 8 and 9 into the Brownfield Cleanup Program (BCP), with the BCP Agreements for both parcels being signed by the NYSDEC and becoming effective on June 28, 2005.

Subsurface contamination at Parcel 9 was remediated between August 2005 and May 2006 in accordance with the NYSDEC-approved Remedial Work Plan (revised August 2005). The site remediation was documented in a Final Engineering Report (FER) dated December 2006, and on-going site management requirements were specified in a Site Management Plan (SMP), which was included as an attachment to the FER. NYSDEC issued a Certificate of Completion for Parcel 9 on December 29, 2006. The purpose of this PRR and Annual Certification is to document on-going site management activities associated with Engineering and Institutional Controls for the site during the 2012 calendar year, and to certify those controls in accordance with the SMP.

2.0 BACKGROUND

2.1 SITE DESCRIPTION

Parcel 9 is located in the Hunters Point section of Queens, New York. The parcel is bound by 5th Street on the east, 48th Avenue on the south, Center Boulevard on the west, and 47th Road on the north. It has a total area of approximately 1.79 acres, and is defined as Lots 1, 5, and 19 of Tax Block 19 of Queens County. The site is currently occupied by an L-shaped high-rise apartment building located in the western and southwestern portions of the site, a multi-level parking garage located in the eastern portion of the site, with townhouses located south of the garage, along 48th Avenue. Approximately 2,300 square feet of retail space are located on the ground floor of the residential building, along Center Boulevard. A courtyard and driveway are located in the center of the site, providing access to the parking garage and loading dock from 47th Road. A Site Plan is provided as Figure 3.

2.2 REMEDIAL INVESTIGATION FINDINGS

2.2.1 Geology, Hydrogeology and Subsurface Characteristics

The geotechnical studies conducted prior to site redevelopment indicated that the top 10 to 12 feet of soil on the parcel consisted of historic urban fill material. This was underlain in most borings by a layer of alluvial sand up to 17 feet thick. A stratum of soft gray organic silty clay, generally less than 10 feet thick and representing old marsh deposits, was present inter-layered in the sand at many locations. Below the sand and organic deposits was a layer of glacial till up to 30 feet thick. This consisted of compact fine to coarse sand with some gravel, silt, clay, clay pockets, and boulders. The surface of the till was found at an elevation of -10 to -12 feet (Queens Borough Datum) over most of the parcel, dipping sharply to a depth of -30 feet in the southwest corner of the parcel. Bedrock was encountered at elevation -20 to -30 feet over most of the parcel, dipping in the southwest corner, to a minimum elevation of -55 feet.

Groundwater studies performed at the site and in surrounding areas indicated a general groundwater flow direction towards the west or southwest, with some tidal influence at locations close to the river. A localized groundwater depression in 47th Road, approximately 150 feet west of 5th Street, was noted in some studies. It is speculated that this depression was due to a leak in the storm sewer piping that runs under 47th Road.

2.2.2 Nature and Extent of Contamination

Soil Contamination

Cumulative results from the previous studies on Parcel 9 indicated the presence of two separate types of soil contamination on the site. Petroleum contamination, including the presence of light non-aqueous phase liquid (LNAPL) was centered in the north-central portion of the site. Coal tar contamination, including the presence of dense non-aqueous phase liquid (DNAPL), was found in the southwestern portion of the site, and along the western boundary of the site adjacent to Center Boulevard.

The petroleum-contaminated soil was characterized by high levels of benzene, toluene, ethylbenzene, and xylenes (BTEX), as well as other relatively light, monocyclic hydrocarbons, including cyclohexane and methylcyclohexane. Naphthalene was present in the petroleum-contaminated soil, but at lower levels than the monocyclic compounds. The heavier polycyclic aromatic hydrocarbons (PAHs) were present at relatively low concentrations (except for samples from the historic fill layer).

An area of deep contamination was identified in the southwestern portion of the site where DNAPL was found. This area corresponded to a low point in the lower confining layer (till or clay) where it is not unexpected that DNAPL would tend to accumulate. A second area of coal tar contamination was identified further north along the western boundary of the site. The coal tar-contaminated soil was characterized by high levels of naphthalene and 2-methylnaphthalene, with BTEX present, but at lower levels than naphthalene.

The surface soils on the site were characterized as historic fill material incorporating ash as well as brick, concrete, and other demolition debris. The fill contained higher and more variable concentrations of metals and heavy PAHs than the underlying native soils. Metals were detected generally at concentrations typical of soil background levels. Above-background concentrations of mercury were detected in a few soil samples. However, these appeared to be randomly distributed in the fill.

Groundwater Contamination

Petroleum and coal tar-related volatile organic compounds (VOCs) and semi volatile organic compounds (SVOCs) were present at elevated levels in groundwater samples from wells in the northwest quadrant of Parcel 9, and in the area of coal tar contamination at the southwestern corner and along the western edge of the parcel. The most common compounds detected were BTEX, naphthalene, and 2-methylnaphthalene. In general, the higher levels of naphthalene were associated with the coal tar contamination along the western edge of the site, and the higher levels of benzene were associated with the petroleum contamination in the north-central portion of the site. Metals were generally either not detected or detected at concentrations well below the Class GA groundwater standards. Polychlorinated biphenyls (PCBs) and pesticides were not detected in any of the groundwater samples analyzed.

2.3 SITE REMEDIATION

2.3.1 Soil Excavation

Remediation of the petroleum and coal tar contamination identified on Parcel 9 commenced in August 2005. The remediation was conducted in accordance with the approved Remedial Work Plan (RWP), dated May 2005 (Revised August 2005). The selected remedy consisted of excavating soil containing contaminant concentrations exceeding the Site-Specific Soil Action Levels (SSSALs), with soil excavation conducted under a temporary containment structure equipped with an air handling system to control fugitive odors and dust. The remedy also included installation of a permanent subsurface containment wall, constructed of steel sheet piles driven into the low permeability till layer, to facilitate soil removal and isolate the site from off-site contamination. The remediation program also included pumping out and removing several underground storage tanks that were discovered during soil excavation activities.

Excavation and off-site disposal of all contaminated soil from within the containment wall was completed on March 30, 2006. During remediation activities, soil excavation was terminated generally at the till layer based on field screening indicating the end of gross contamination and technical limitations of excavating the till, which consisted of densely packed clay, silt, and gravel, and contained numerous cobbles and boulders. Contaminated soil was removed from the southwestern portion of the excavation to the top of a dense clay layer at approximately 27 to 34 feet below grade, on top of the till layer. DNAPL was observed in an approximately six-inch interval in sandy material just above the clay layer, indicating that the clay was acting as a confining layer preventing downward migration of DNAPL in this portion of the site. These observations were consistent with findings from previous investigations, which identified

DNAPL in monitoring wells in the southwestern corner of the parcel.

Between March 30 and May 25, 2006, additional soil remediation was conducted outside of the sheeting line in an area of historic fill containing elevated naphthalene concentrations and three areas where underground storage tanks were discovered during excavation for foundations in the proposed parking garage area.

2.3.2 Engineering Controls

In addition to soil excavation and disposal, the RWP included the installation of engineering controls to prevent exposure to residual subsurface contamination at the site. The engineering controls, which consist of a site cover, hydraulic barrier, and sub-slab vapor mitigation system, are described in more detail below.

Site Cover

At the time that the FER was submitted, the site cover consisted of: concrete building foundations in the area of the high-rise residential building, townhouses, and portions of the garage; and a temporary cover of at least two feet of clean fill meeting NYSDEC TAGM 4046 RSCOs in the future courtyard area and the remaining portion of the garage not paved with concrete. Following completion of the building construction in the second half of 2007, a permanent site cover was installed in all areas not already covered by building foundations, and included: concrete over the entire garage area; paving in portions of the courtyard area; and two feet of top soil in the remainder of the courtyard and all perimeter landscaped areas.

Hydraulic Barrier

As described in Section 2.3.1., permanent interlocking steel sheeting was installed around the entire soil remediation area to facilitate excavation for soil remediation. The sheeting was installed such that it will also serve as a hydraulic barrier to isolate the site from off-site contamination. This was accomplished by driving the sheeting into the low-permeability till or clay layer, and sealing the seams in the sheeting with hydrocarbon-resistant Adeka gaskets to prevent infiltration of contaminants back onto the site. The hydraulic barrier was installed below grade, and does not require maintenance; however, routine groundwater monitoring is conducted as specified in the SMP to gauge the effectiveness of the barrier.

Vapor Mitigation System

Site remediation included the installation of a vapor mitigation system under the residential tower and townhouses. The system consists of a vapor barrier, a sub-slab gas collection network, steel pipe risers, and aboveground blowers/instrumentation. The vapor barrier consists of a 60-mil thick, spray-applied, LiquidBoot® gas vapor membrane. The subsurface gas collection pipe network consists of Schedule 40, 4-inch diameter PVC piping with 0.02-inch slots installed in a 12-inch thick layer of gas-permeable aggregate. The slotted piping is installed in four separate zones under the on-site residential buildings, as follows:

- Zone 1 - Northern wing of high-rise building (facing Center Boulevard)
- Zone 2 - Central tower portion of high-rise building
- Zone 3 - Southern wing of high-rise building (facing 48th Avenue)
- Zone 4 - Townhouses

In each zone, a length of solid 4-inch diameter Schedule 40 PVC piping leads from the slotted piping network to an interior riser. Temporary blower assemblies were connected to the risers and activated on December 22, 2006. Following completion of the building mechanical rooms, the temporary blowers were taken out of service and the permanent blowers were installed at their designated locations and activated on December 4, 2007.

2.3.3 Institutional Controls

Institutional controls incorporated into the site remedy include an environmental easement to prohibit certain on-site uses, and implementation of a SMP specifying soil management, operation, maintenance, monitoring, and reporting procedures during future site use. These Institutional Controls are described in more detail below.

Site Management Plan

An SMP was prepared to describe procedures and protocols for post-remediation management of the site. This SMP includes four plans: an Institutional and Engineering Control Plan for implementation and management of institutional and engineering controls; a Monitoring Plan for implementation of site monitoring; an Operation and Maintenance Plan for operation of the sub-slab vapor mitigation system; and a Site Management Reporting Plan for submittal of data, information, recommendations and certifications to NYSDEC The Institutional and Engineering Control Plan portion of the SMP includes detailed procedures for handling residual on-site contamination during future soil disturbance activities.

Environmental Easement

An environmental easement has been recorded for the site and includes the following site use restrictions:

- Use of the site for "Restricted Residential Use".
- All engineering controls (including the site cover and sub slab vapor depressurization and active venting system) must be operated and maintained as specified in the NYSDEC-approved Site Management Plan. No Engineering and Institutional Controls may be discontinued without a NYSDEC- approved amendment or extinguishment of the Environmental Easement and/or Site Management Plan.
- Annual inspections, certifications of Institutional & Engineering controls, Site usage, and Site Management Reporting to NYSDEC must be conducted in accordance with the NYSDEC-approved Site Management Plan.
- All future soil disturbance activities on the site that will impact residual contaminated material, including, but not limited to, building construction or expansion, sub-grade utility line construction or repair, must be conducted in accordance with the Soil Management provisions in the NYSDEC-approved Site Management Plan.
- Operation Monitoring and Maintenance (OM&M) of the sub-slab depressurization system must be performed in a manner specified in the NYSDEC-approved Site Management Plan.
- Groundwater and other environmental or public health monitoring required by the NYSDEC-approved Site Management Plan, and reporting of information thus obtained, must be performed

in a manner specified in that Plan.

- On-site environmental monitoring devices, including but not limited to, groundwater monitor wells and soil vapor probes, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the NYSDEC-approved Site Management Plan.

- The use of the groundwater underlying the site is prohibited without treatment rendering it safe for intended purpose.

- Vegetable gardens are prohibited.

- The site may not be used for a higher level of use such as unrestricted residential, without proper notification of NYSDEC of the change of use, approval of that use by the NYSDEC, and an amendment of the Site Management Plan approved by NYSDEC.

The environmental easement includes: a description of the use restrictions; a map showing the area of the restrictions; and a copy of the NYSDEC-approved SMP. The property deed and all subsequent instruments of conveyance will contain language indicating that the site is subject to the environmental easement. A copy of the environmental easement is included as an appendix to the SMP.

3.0 SITE COVER OPERATION AND MAINTENANCE

3.1 SITE COVER INSPECTION

Cardno ATC conducted an inspection of the entire site cover on December 20, 2012 to check the asphalt/concrete paving for cracking and/or signs of wear, and check for erosion of the soil cover in unpaved areas. All paving was found to be intact, with no signs of cracking or damage. No erosion was noted in the landscaped areas. Photographs documenting the December 20, 2012 inspection and a copy of the site cover inspection log are provided in Appendix A.

4.0 VAPOR MITIGATION SYSTEM OPERATION & MAINTENANCE

4.1 ROUTINE SYSTEM CHECKS

On-site representatives from AvalonBay conducted routine checks of the vapor mitigation system throughout the year to: ensure that the blowers were operational; record the blower runtimes as indicated on the control panels; and note any unusual conditions, such as leaks or odors. Routine checks were conducted on an approximately daily to weekly basis during the 2012 calendar year. Blower runtime data is summarized in Table 1. Copies of the routine system check log sheets are provided in Appendix B.

The zone 3 meter display was replaced on December 13, 2008, at which time the AKRF technician was able to decipher a final reading of 7415.4 hours from the broken meter. This value will be added to all subsequent readings from the new meter to calculate a total runtime for the Zone 3 blower.

Blower downtime for each zone was calculated by subtracting the blower runtimes logged during the routine system checks (converted to days), from the number of calendar days elapsed during the reporting period, as summarized in Table 1. No blower downtime was calculated for Zones 1, 2 and 4. Zone 3 was calculated to be down for approximately 22.4 days in August. For an unknown reason, the blower was shutdown. Upon being noticed, the unit was turned back on.

4.2 PERIODIC INSPECTIONS

Periodic system inspections were conducted by Cardno ATC personnel on a monthly basis. Copies of the inspection log sheets are provided in Appendix B. Activities conducted during the inspections included recording vacuum gauge and flow meter readings and adjusting system components to optimize system efficiency. All readings are summarized in Table 2. Vacuum readings generally ranged from 7.0 to 14.5 inches of water ("H2O) and total flow readings ranged from 174 to 355 cubic feet per minute (CFM), which are within the normal operating range of the blower. Lower vacuum readings of 4 to 5 "H2O were noted at the Zone 4 blower resulting from losses caused by the granulated activated carbon (GAC) adsorbers; however, these readings were within the operational range for the blower. The differential between pre-filter and post-filter vacuum readings was less than 1"H2O for all blowers. Vapor discharge sampling was conducted during the inspections on Mach 29, 2012, June 27, 2012, October 11, 2012 and December 20, 2012. The discharge sampling is described in more detail in Section 5.0.

4.3 MAINTENANCE

System maintenance and modifications conducted during the 2012 reporting period are summarized in the following table.

Date	Maintenance/Modifications Performed	Reason for Maintenance/Modifications
3/16/12	Changed out the carbon at Zone 4.	To maintain lower effluent vapor concentrations at Zone 4.

5.0 MONITORING

5.1 DISCHARGE MONITORING

Vapor effluent samples were collected at each blower on Mach 29, 2012, June 27, 2012, October 11, 2012 and December 20, 2012 to assess whether emissions met the standards in the NYSDEC publication "Air Guide-1: Guidelines for the Control of Toxic Air Contaminants (DAR-1, NYSDEC, 1991)".The vapor samples were collected directly from inline sample ports in the discharge piping at each blower using 6-liter Summa canisters equipped with flow regulators to allow sample collection over a 30-minute period. Upwind and downwind Summa canister air samples were also collected to record background concentrations in the vicinity of the site. System discharge monitoring results are discussed in Section 5.3.1.

5.2 GROUNDWATER MONITORING

5.2.1 Monitoring Well Sampling

Groundwater samples were collected on a quarterly basis during the 2012 reporting period, as summarized in the following table:

Sampling Dates	Wells Sampled
Mach 29, 2012	MW-2; MW-8; MW-11R; MW-12R; MW-15; MW-16; MW-17
June 27, 2012	MW-2; MW-8; MW-11R; MW-12R; MW-14; MW-15; MW-16
October 11, 2012	MW-2; MW-8; MW-11R; MW-12R; MW-14; MW-15; MW-16
December 20, 2012	MW-2; MW-8; MW-11R; MW-12R; MW-14; MW-15; MW-16

All samples were collected using low-flow sampling procedures in accordance with the project standard operating procedures (SOPs). The samples were submitted to CHEMTECH Consulting Group in Mountainside, New Jersey, a NYSDOH-approved laboratory and were analyzed for VOCs by EPA Method 8260 and SVOCs by EPA Method 8270. In addition, the depth to water was measured in all monitoring wells to determine groundwater elevation and flow patterns, and potential LNAPL was gauged at each well using an oil-water interface probe and/or weighted tape. Groundwater sampling logs are provided in Appendix C. Groundwater monitoring analytical results are discussed in Section 5.3.2.

5.3 DISCUSSION

5.3.1 Vapor Discharge Monitoring Results

Analytical results for the vapor discharge samples are provided in Appendix D and summarized in Table 3. Table 3 also lists Short-term and Annual Guideline Concentrations (SGCs and AGCs, respectively) provided in NYSDEC Air Guide 1. Several compounds, including, benzene, carbon tetrachloride, chloroform, methylene chloride, tetrachloroethene (PCE) and/or trichloroethene (TCE), were detected at concentrations exceeding their respective AGCs at one or more of the vapor mitigation system discharge points (i.e., stacks) for all of the sampling events. However, the detected concentrations did not exceed their respective SGCs. In addition, the detected concentrations for the 2012 reporting period (with the exception of methylene chloride) were lower than the detected concentrations for the 2010 and 2011 reporting periods. The following table summarizes the 2010, 2011 and 2012 detected concentrations.

Compound	NYSDEC SGC	NYSDEC AGC	2010 Range	2011 Range	2012 Range	2010 Mean	2011 Mean	2012 Mean
Benzene	1,300	0.13	ND – 9	ND – 9.3	ND – 5.3	2.9	2.9	1.66
Chloroform	150	0.043	ND - 14	ND - 16	ND – 8.99	2.24	4.1	1.87
Methylene Chloride	14,000	2.1	ND - 11	ND – 8.9	ND – 15.6	2.98	1.8	3.39
Tetrachloroethene (PCE)	1,000	1	ND - 111	ND - 68	ND – 49	14.5	10.4	6.49
Trichloroethene (TCE)	14,000	0.5	ND - 6	ND – 3.5	ND – 2.96	1.84	1.16	0.83

ND=Not detected

Based on the results of the 2008 vapor concentrations, a modeling analysis was performed by AKRF to determine whether the compounds that exceeded their respective AGCs would exceed the guideline concentrations at nearby receptors. The AKRF analysis was performed using the SCREEN3 model (United States Environmental Protection Agency, 1995), which simulates the atmospheric processes that disperse pollutants from an emissions source to predict concentrations at selected downwind receptor locations. The SCREEN3 model is USEPA-approved for evaluating maximum concentrations from point sources, such as the exhaust vents at the Parcel 9 site. The model is conservative because it uses worst-case meteorological conditions and incorporates the effects of building downwash and cavity regions. The modeling results indicated that maximum impacts occurred within 5 to 10 feet of each of the discharge points, with concentrations decreasing steadily away from the stack locations.

Modeled concentrations based on results from the December 29, 2008 sampling event indicated that hourly and annual impacts from all four zones were below the SGCs and AGCs, respectively. The detected concentrations for the 2012 reporting period (with the exception of methylene chloride) were lower than prior years and therefore a modeling analysis was not necessary and not preformed as part of the 2012 PRR. Additionally, as noted in the table above, the concentrations continue to show a decreasing trend.

5.3.2 Groundwater Monitoring Results

Fluid Level Measurements

Fluid level measurements collected in the monitoring wells are summarized in Table 4. No measurable LNAPL or DNAPL was detected in any of the wells with the exception of MW-14 during the March 2012 sampling event. Approximately 0.01 foot of product was measured in MW-14. Therefore, a groundwater sample was not collected from MW-14 during the 1st quarter. An oil absorbent well sock was placed in MW-14 and removed during the 2nd quarter sampling event. LNAPL was not measured in any of the wells for the 2nd, 3rd or 4th quarters.

Table 4 summarizes the water table elevations during the four sampling events. These elevations were calculated by subtracting the measured depths to water from the surveyed top of casing elevations for each well. The elevations ranged from 2.34 feet to -1.95 feet, relative to the Queens Borough Datum. Due to the large differences in water table elevations between adjacent monitoring wells, meaningful contours could not be developed from the data. The variability in elevations throughout the site can likely be attributed to subsurface obstructions and heterogeneities caused by utility conduits and vaults, variable backfill, and the sheet pile containment wall. These large-scale trends are consistent with the regional southwesterly groundwater flow direction documented in previous studies of the Queens West Development area.

Groundwater Analytical Results

Groundwater sampling analytical results for VOCs and SVOCs are provided in Appendix E and summarized in Tables 5 and 6, respectively. These tables also list the NYSDEC Ambient Water Quality Standards and Guidance Values (AWQVs) for Class GA Groundwater. Figure 4 illustrates the benzene, toluene, ethylbenzene and xylene (BTEX) and naphthalene concentrations detected in the monitoring wells during the four 2012 sampling events. Figure 4 also shows BTEX and naphthalene concentrations detected in the post-remediation monitoring wells during the previous reporting period (in December 2011). Benzene, toluene, ethylbenzene, xylene, and naphthalene concentrations within the containment wall (i.e., in wells MW-11R and MW-12R) were all non-detected during the 2012 reporting period, with the exception of benzene, which was detected in MW-12R during the March 29, 2012 sampling event at a concentration of 2.2 µg/l. Since September 2010, MW-12R did not have any BTEX/naphthalene detections and this detection of benzene during the March 29, 2012 sampling event is an anomaly. The detection may be as a result of cross contamination during field sampling activities. Nonetheless, these results indicate that the groundwater containment wall is effectively isolating the Parcel 9 site from contamination on surrounding properties, allowing natural attenuation of residual groundwater contamination within the barrier.

MW-8, located downgradient of the northwestern corner of the containment wall, exhibited maximum total BTEX and naphthalene concentrations of 61 µg/l and 4,300 µg/l, respectively; and MW-2, located downgradient from the southwestern corner of the containment wall, exhibited maximum total BTEX and naphthalene concentrations of 670 µg/l and 21.2 µg/l, respectively. These concentrations can be attributed to known coal tar and petroleum contamination in off-site areas not addressed by the Parcel 9 remediation.

In general, BTEX and naphthalene concentrations in wells MW-16 and MW-17, located in the eastern portion of the site, upgradient of the containment wall were all non-detected for each of the sampling events in 2012. *Please note that MW-17 was only sampled in March, 2012 and not during subsequent sampling events as approved by the NYSDEC case manager*. BTEX and naphthalene concentrations for MW-14 were all below or only slightly exceeded their respective AWQVs. These results are consistent with the findings from previous investigations, which did not identify significant soil or groundwater contamination in the eastern portion of the site. MW-15, located in the 48th Street sidewalk, just outside of the southeastern corner of the containment wall, contained a maximum benzene concentration of 100 µg/l, during the 2nd quarter sampling event. Benzene concentrations in MW-15 for the 1st, 3rd, and 4th quarter sampling events were all non-detected.

6.0 CONCLUSIONS AND RECOMMENDATIONS

A site wide inspection was conducted on December 20, 2012, as specified in the SMP to ensure that all aspects of the remedy were in-place and effective. A copy of the Site-Wide Inspection log is included in Appendix F. The inspection included a review of the site cover/vapor mitigation system monitoring logs and groundwater/vapor monitoring data. Based on this review and the data evaluation summarized in this report, the following conclusions and recommendations were developed:

- The permanent site cover is present and in good condition throughout all portions of the site.

- The active sub-slab vapor mitigation system was operated on a nearly continuous basis in for all four (4) zones (Zones 1, 2, 3, and 4) throughout the 2012 reporting period.

- Analytical results for the vapor discharge samples identified several compounds, including benzene, chloroform, methylene chloride, tetrachloroethene (PCE) and/or trichloroethene (TCE), at concentrations exceeding their respective AGCs at one or more of the vapor mitigation system discharge points (i.e., stacks) for all of the sampling events. However, no detected concentrations exceeded their respective SGCs. Additionally, the detected concentrations for the 2012 reporting period were generally lower than the detected concentrations for the 2010 and 2011 reporting periods.

- All vacuum and flow rate measurements collected from the vapor mitigation system during the 2012 reporting period were within the operational ranges for the system blowers.

- During the 2012 reporting period, contaminant levels in groundwater within the containment wall for MW-11R and MW-12R were all non-detected, with the exception of benzene, which was detected in MW-12R during the March 29, 2012 sampling event at a concentration of 2.2 µg/l. Since September 2010, MW-12R did not have any BTEX/naphthalene detections and this detection of benzene during the March 29, 2012 sampling event is an anomaly. The detection may be as a result of cross contamination during field sampling activities. Nonetheless, these results indicate that the groundwater containment wall is effectively isolating the Parcel 9 site from contamination on surrounding properties, allowing natural attenuation of residual groundwater contamination within the barrier.

Based on review of the analytical and filed data for the 2012 reporting year, Cardno ATC has the following recommendations:

- Continue the ongoing groundwater sampling, but reducing the groundwater monitoring from quarterly to semi-annual.

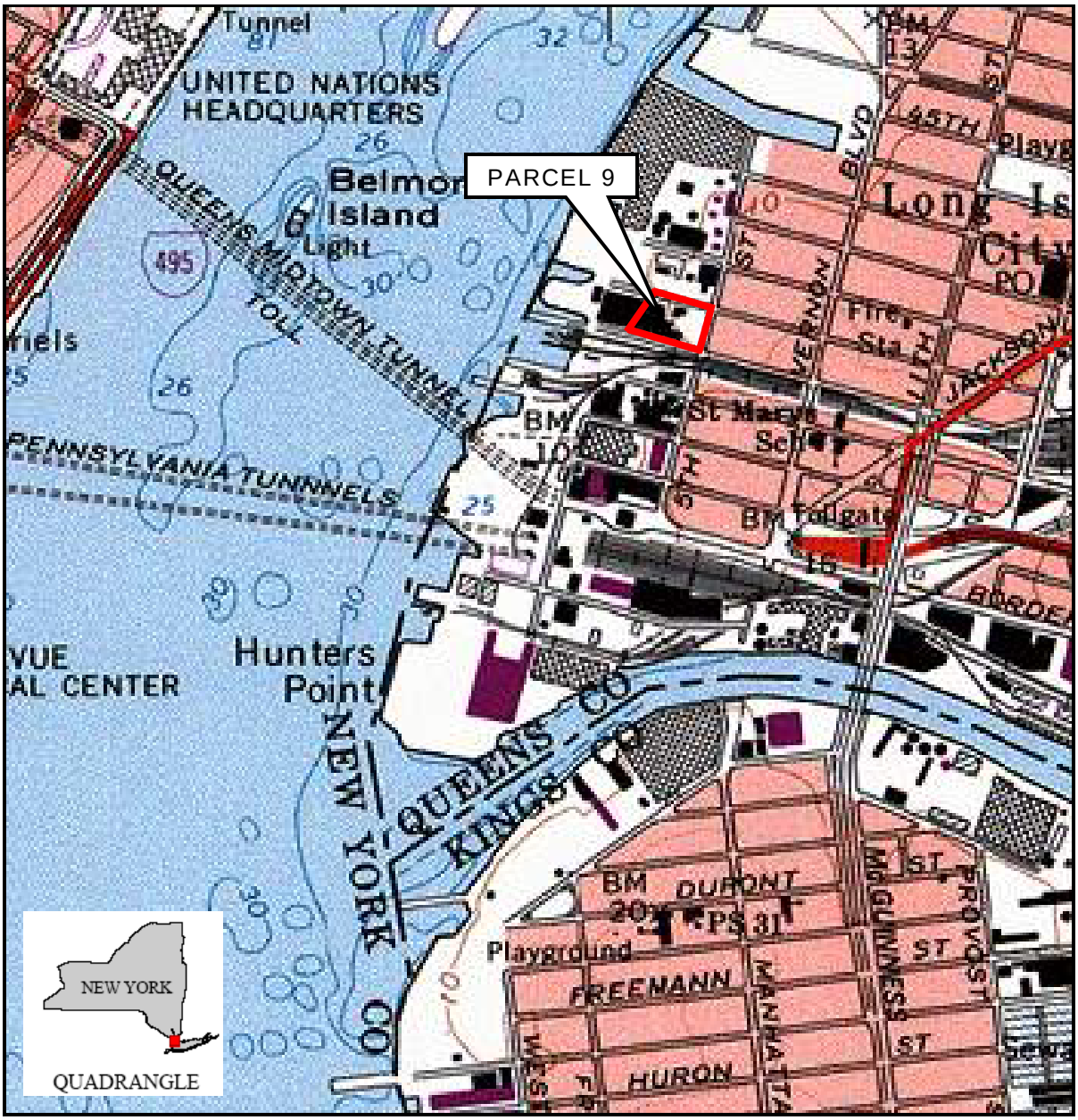
- Discontinue the quarterly vapor sampling and the use of the GAC adsorbers (which are located at Zone 4). The periodic inspections (including the vacuum and runtime readings) will continue to make sure the vapor mitigation system is continuously operating effectively and efficiently.

- All other monitoring will remain the same as identified in the 2006 SMP for the 2013 calendar year.

7.0 INSTITUTIONAL AND ENGINEERING CONTROL CERTIFICATION

The IC/EC Certification Form for the site was completed based on results from the site monitoring and inspections described in the report. A copy of the form is provided as Appendix G. The Certification Form indicates that all ICs/ECs at the site remain in place and effective.

FIGURES



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FIGURE 1 – SITE LOCATION MAP

Client:	Avalon Bay Communities
Site:	Queens West Parcel 9
Project No.:	015.75420.0014
Year:	1995
Scale:	As shown

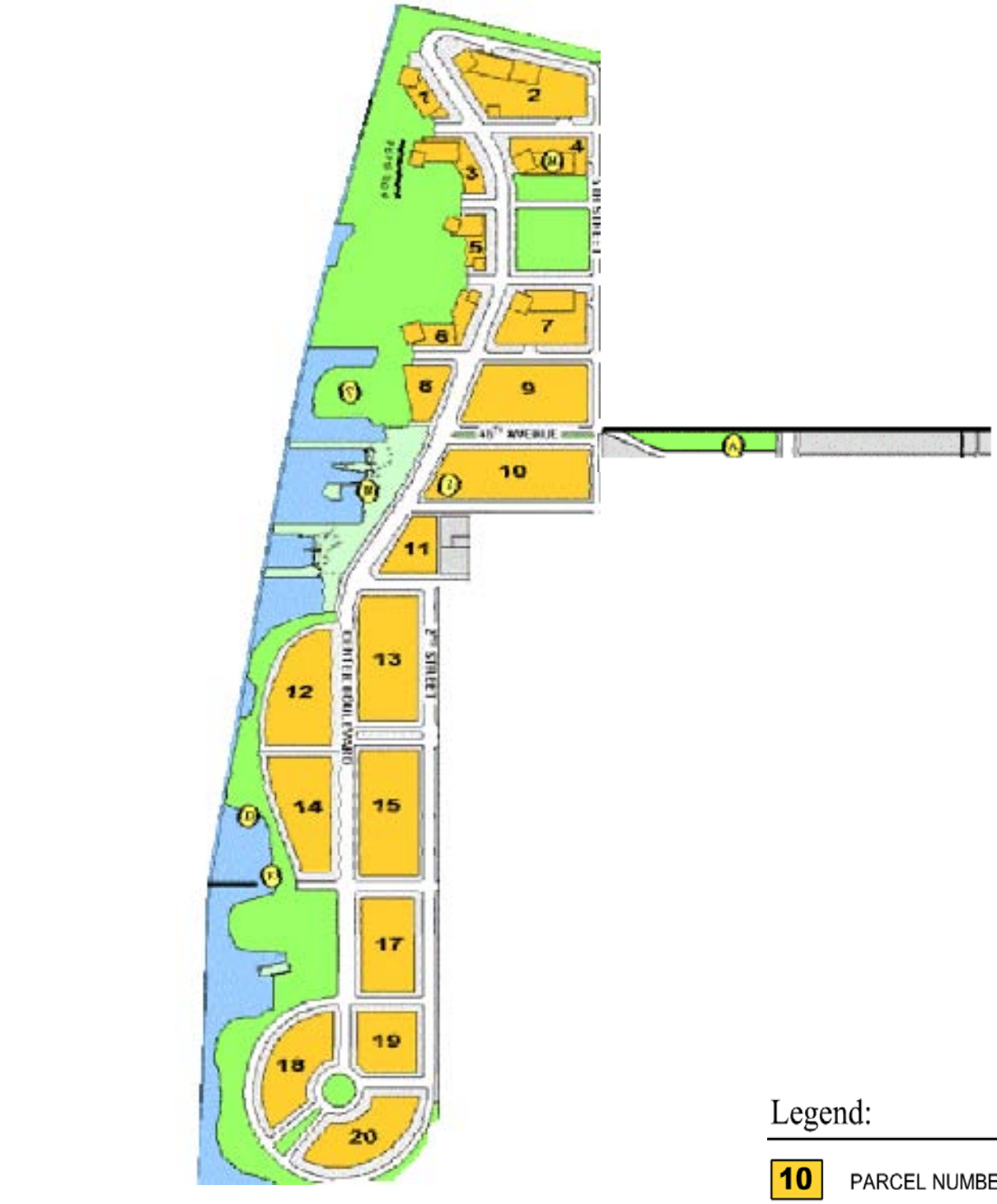


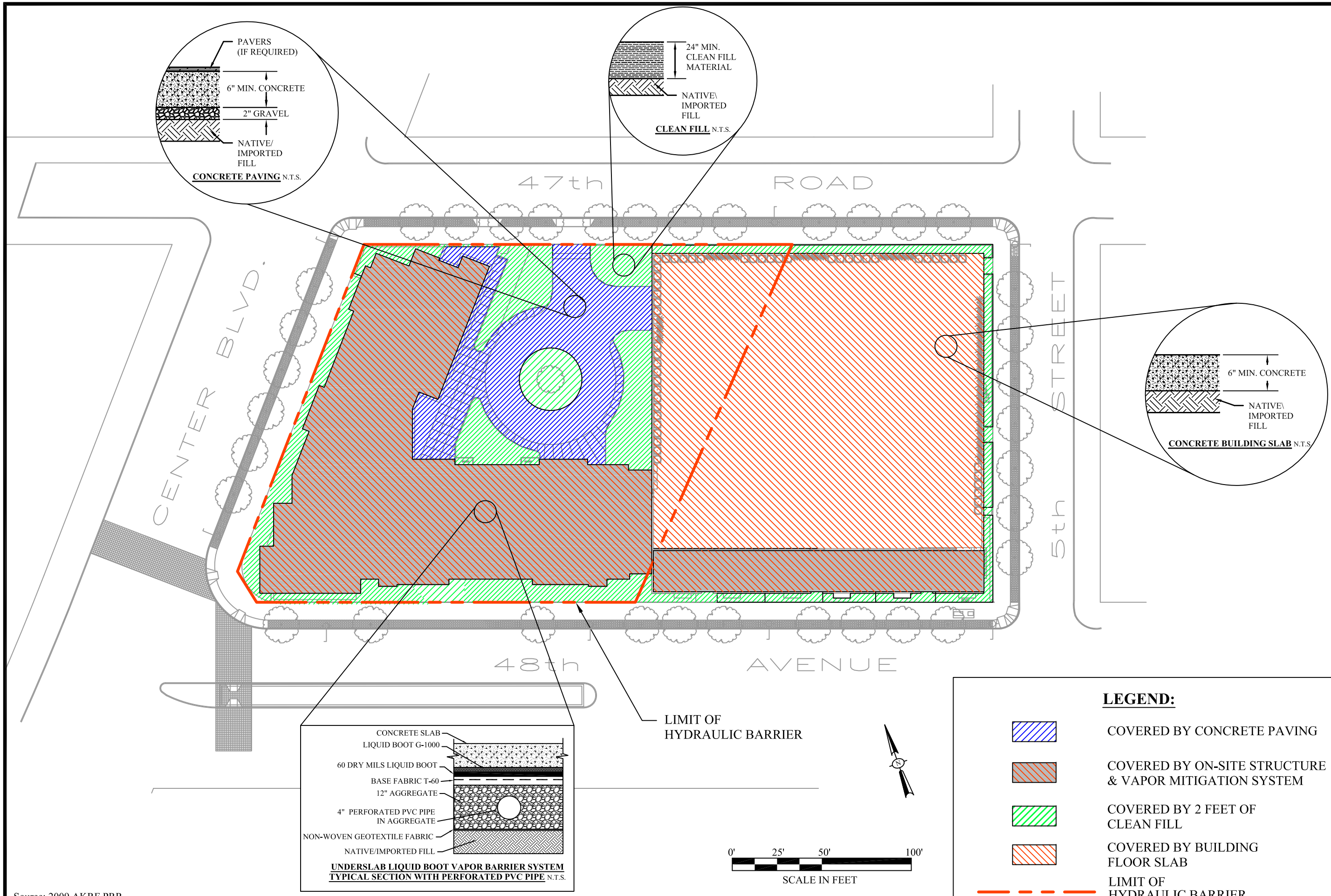
FIGURE 2 – QUEENS WEST DEVELOPMENT PARCELS

Cardno ATC
Shaping the Future

104 East 25th Street, 8th Floor
New York, NY 10010-2917
Phone (212) 353-8280 * Fax (212) 979-8447

N

Client: Avalon Bay Communities
Site: Queens West Parcel 9
Project No.: 015.75420.0014



Source: 2009 AKRF PRR

Cardno ATC
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104 EAST 25th STREET, NEW YORK, NY 10010
TEL: (212) 353-8280 FAX: (212) 979-8447

QUEENS WEST PARCEL 9
QUEENS, NEW YORK

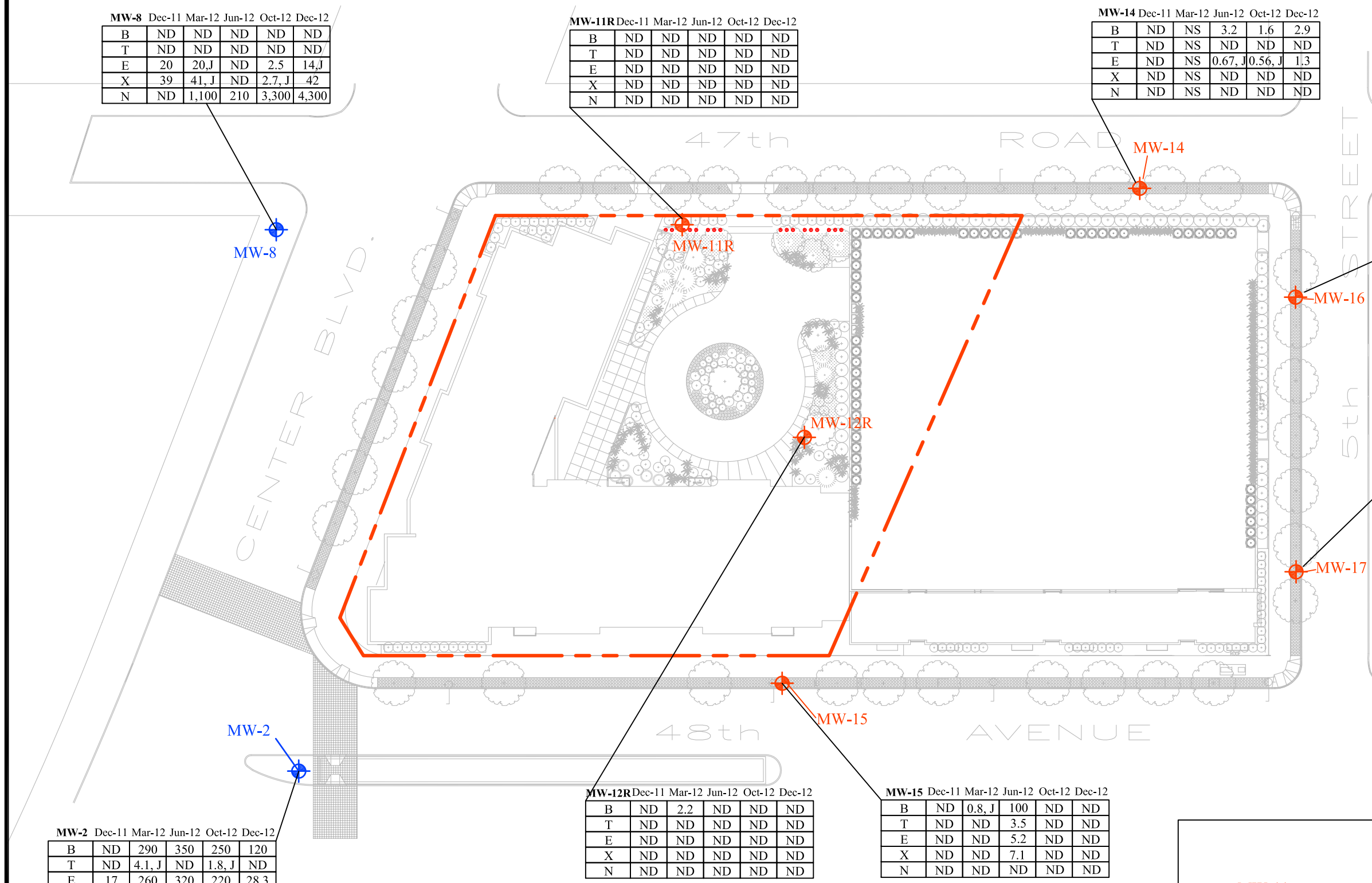
SITE PLAN & ENGINEERING CONTROLS

DATE
MARCH 2013

SCALE
As shown

PROJECT No.
15.75420.0014

FIGURE
3



MW-8 Dec-11 Mar-12 Jun-12 Oct-12 Dec-12

B	ND	ND	ND	ND	ND
T	ND	ND	ND	ND	ND
E	20	20,J	ND	2.5	14,J
X	39	41, J	ND	2.7, J	42
N	ND	1,100	210	3,300	4,300

MW-11R Dec-11 Mar-12 Jun-12 Oct-12 Dec-12

B	ND	ND	ND	ND	ND
T	ND	ND	ND	ND	ND
E	ND	ND	ND	ND	ND
X	ND	ND	ND	ND	ND
N	ND	ND	ND	ND	ND

MW-14 Dec-11 Mar-12 Jun-12 Oct-12 Dec-12

B	ND	NS	3.2	1.6	2.9
T	ND	NS	ND	ND	ND
E	ND	NS	0.67, J	0.56, J	1.3
X	ND	NS	ND	ND	ND
N	ND	NS	ND	ND	ND

MW-16 Dec-11 Mar-12 Jun-12 Oct-12 Dec-12

B	ND	ND	ND	ND	ND
T	ND	ND	ND	ND	ND
E	ND	ND	ND	ND	ND
X	ND	ND	ND	ND	ND
N	ND	ND	ND	ND	ND

MW-17 Dec-11 Mar-12 Jun-12 Oct-12 Dec-12

B	ND	ND	NS	NS	NS
T	ND	ND	NS	NS	NS
E	ND	ND	NS	NS	NS
X	ND	ND	NS	NS	NS
N	ND	ND	NS	NS	NS

MW-2 Dec-11 Mar-12 Jun-12 Oct-12 Dec-12

B	ND	290	350	250	120
T	ND	4.1, J	ND	1.8, J	ND
E	17	260	320	220	28.3
X	13.4	ND	ND	ND	ND
N	ND	23	21.2, J	8.8, J	3.7, J

MW-12R Dec-11 Mar-12 Jun-12 Oct-12 Dec-12

B	ND	2.2	ND	ND	ND
T	ND	ND	ND	ND	ND
E	ND	ND	ND	ND	ND
X	ND	ND	ND	ND	ND
N	ND	ND	ND	ND	ND

MW-15 Dec-11 Mar-12 Jun-12 Oct-12 Dec-12

B	ND	0.8, J	100	ND	ND
T	ND	ND	3.5	ND	ND
E	ND	ND	5.2	ND	ND
X	ND	ND	7.1	ND	ND
N	ND	ND	ND	ND	ND

0' 25' 50' 100'

SCALE IN FEET

ABBREVIATIONS

B	BENZENE
E	ETHYL BENZENE
T	TOLUENE
X	M/P-XYLENES AND O-XYLENE
N	NAPHTHALENE

LEGEND:

MW-11 — POST-REMEDIATION MONITORING WELL

MW-1 — PRE-EXISTING MONITORING WELL

LIMITS OF HYDRAULIC BARRIER

COMPOUND NAME

B	130

CONCENTRATION IN MICROGRAMS PER LITER (µg/L)

ND: Not detected
NS: Not Sampled
J: Indicates an estimated value.

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QUEENS WEST PARCEL 9
QUEENS, NEW YORK

BTEX & NAPTHALENE CONCENTRATIONS IN GROUNDWATER (2011)

DATE
MARCH 2013

SCALE
As shown

PROJECT No.
15.75420.0014

FIGURE
4

TABLES

TABLE 1
VAPOR MITIGATION SYSTEM BLOWER RUNTIME DATA
QUEENS WEST DEVELOPMENT - PARCEL 9

Date	Zone 1				Zone 2				Zone 3				Zone 4			
	On/Off	Runtime (hrs)	Runtime (days)[1]	Est. Downtime (days)[2]	On/Off	Runtime (hrs)	Runtime (days)[1]	Est. Downtime (days)[2]	On/Off	Runtime (hrs)	Runtime (days)[1]	Est. Downtime (days)[2]	On/Off	Runtime (hrs)	Runtime (days)[1]	Est. Downtime (days)[2]
12/28/2011	On	33,639	1401.6	--	On	35,638	1484.9	--	On	34,055	1418.9	--	On	34,788	1449.5	--
1/31/2012	On	34,460	1435.8	0.0	On	36,459	1519.1	0.0	On	34,874	1453.1	0.0	On	35,607	1483.6	0.0
2/29/2012	On	35,156	1464.8	0.0	On	37,160	1548.3	0.0	On	35,568	1482.0	0.0	On	36,310	1512.9	0.0
3/23/2012	On	35,700	1487.5	0.0	On	37,700	1570.8	0.0	On	36,116	1504.8	0.0	On	36,856	1535.7	0.0
4/27/2012	On	36,554	1523.1	0.0	On	38,551	1606.3	0.0	On	36,944	1539.3	0.0	On	37,477	1561.5	0.0
5/31/2012	On	37,482	1561.8	0.0	On	39,361	1640.0	0.0	On	37,774	1573.9	0.0	On	38,515	1604.8	0.0
6/27/2012	On	38,014	1583.9	0.0	On	40,015	1667.3	0.0	On	38,430	1601.3	0.0	On	39,162	1631.8	0.0
7/26/2012	On	38,711	1613.0	0.0	On	40,701	1695.9	0.0	On	39,128	1630.3	0.0	On	39,878	1661.6	0.0
8/29/2012	On	39,522	1646.8	0.0	On	41,521	1730.0	0.0	On	39,396	1641.5	22.4	On	40,669	1694.5	0.0
9/20/2012	On	40,058	1669.1	0.0	On	42,054	1752.3	0.0	On	39,931	1663.8	0.0	On	41,205	1716.9	0.0
10/11/2012	On	40,552	1689.7	0.0	On	42,252	1760.5	0.0	On	40,426	1684.4	0.0	On	41,707	1737.8	0.0
11/14/2012	On	41,365	1723.5	0.0	On	43,365	1806.9	0.0	On	41,239	1718.3	0.0	On	42,512	1771.3	0.0
12/20/2012	On	42,230	1759.6	0.0	On	44,229	1842.9	0.0	On	42,103	1754.3	0.0	On	43,378	1807.4	0.0

Notes:

[1] Runtime (days) = Runtime (hours)/24

[2] Estimated Downtime = # Calendar Days - Runtime (days)

*Total Zone 3 runtime calculated by adding reading at new meter to final reading pulled from broken meter (7415.4).

TABLE 2
VAPOR MITIGATION SYSTEM VACUUM AND FLOW RATE READINGS
QUEENS WEST DEVELOPMENT - PARCEL 9

	Zone 1			Zone 2			Zone 3				Zone 4			
	Vacuum at Filter		Flow	Vacuum at Filter		Flow	Vacuum at Filter		Flow		Vacuum at Filter		Flow	
Date	Pre ("H_2O)	Post ("H_2O)	(CFM)	Pre ("H_2O)	Post ("H_2O)	(CFM)	Pre ("H_2O)	Post ("H_2O)	Riser (CFM)	Total(CFM)	Pre ("H_2O)	Post ("H_2O)	Riser (CFM)	Total(CFM)
1/31/2012	7.0	7.0	326	10.0	10.0	296	14.0	14.0	415	205	5.0	5.0	397	243
2/29/2012	7.0	7.5	324	10.0	10.5	300	14.5	14.5	440	210	5.0	5.0	400	234
3/23/2012	7.0	7.5	322	10.0	10.0	300	12.5	13.0	345	246	5.0	5.0	394	247
4/27/2012	7.0	7.0	323	10.0	10.0	290	13.5	14.0	400	200	4.5	5.0	417	251
5/31/2012	7.0	7.5	322	10.0	10.5	286	14.0	14.0	374	185	4.5	4.5	413	250
6/27/2012	7.0	7.5	321	10.0	10.0	289	14.0	14.0	354	174	5.0	5.0	420	246
7/26/2012	7.0	7.5	320	10.0	10.0	290	14.0	14.5	354	175	4.5	5.0	419	244
8/29/2012	7.0	7.5	320	10.0	10.0	290	13.5	14.0	395	186	4.0	5.0	430	249
9/20/2012	7.0	7.0	320	10.0	10.0	293	14.0	14.0	409	197	4.0	4.5	340	251
10/11/2012	7.0	7.0	322	10.0	10.0	300	13.5	14.0	420	204	4.0	4.5	426	247
11/14/2012	7.0	7.0	355	10.0	10.0	293	13.5	14.0	360	205	5.0	5.0	420	248
12/20/2012	7.0	7.0	330	10.0	10.0	301	14.0	14.5	430	226	4.0	4.5	430	250

Notes:
Pre - Reading taken before air filter.
Post - Reading taken after air filter.
Riser - Flow reading taken before dilution valve.
Total - flow reading taken after dilution valve.

TABLE 3
SOIL VAPOR ANALYTICAL RESULTS-VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID Lab Sample ID Date Sampled Dilution Units=ug/m^3	NYSDEC SGC	NYSDEC AGC	Zone 1-Effluent D2020-01 3/29/2012 1	Zone 1-Effluent D3234-01DL 6/27/2012 10	Zone 1-Effluent D4540-01DL 10/11/2012 10	Zone 1-Effluent D5285-01 12/20/2012 1	Zone 2-Effluent D2020-02 3/29/2012 1	Zone 2-Effluent D3234-02 6/27/2012 10	Zone 2-Effluent D4540-02 10/11/2012 1	Zone 2-Effluent D5285-02 12/20/2012 1
1,1,1-Trichloroethane	68,000	1,000	0.22 U	1.64 U	1.64 U	0.16 U	0.22 U	0.16 U	0.16 U	0.16 U
1,2,4-Trimethylbenzene	NS	290	0.49 U	4.92 U	4.92 U	0.49 U	0.49 U	0.49 U	1.92	0.64
1,2-Dichloroethene (cis)	NS	63	0.24 U	2.38 U	2.38 U	0.4 U	0.24 U	0.24 U	0.24 U	0.4 U
1,2-Dichloroethene (trans)	NS	63	0.24 U	2.38 U	2.38 U	0.4 U	0.24 U	0.24 U	0.24 U	0.4 U
1,2-Dichloropropane	NS	4	0.28 U	2.77 U	2.77 U	0.46 U	0.28 U	0.28 U	0.28 U	0.46 U
1,2-Dichlorotetrafluoroethane (Freon 114)	NS	17,000	0.28 U	2.8 U	2.8 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,3,5-Trimethylbenzene	NS	290	0.44 U	4.42 U	4.42 U	0.49 U	0.44 U	0.44 U	0.49 J	0.49 U
1,4-Dichlorobenzene	NS	0.09	0.36 U	3.61 U	3.61 U	0.6 U	0.36 U	0.36 U	0.36 U	0.6 U
3-Chloropropene (allyl chloride)	600	1	0.16 U	1.57 U	1.57 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
4-Ethyltoluene (p-Ethyltoluene)	NS	NS	0.39 U	3.93 U	3.93 U	0.49 U	0.39 U	0.39 U	0.59	0.49 U
Acetone	180,000	28,000	20.4	40.6 D	56.3 D	34	26.1	21.7	18	11.2
Benzene	1,300	0.13	**3.83**	**5.43** D	**4.15** D	**5.11**	**1.85**	**2.68**	**2.43**	**2.75**
Bromoform	NS	0.91	0.52 U	5.17 U	5.17 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
Carbon disulfide	6,200	700	0.16 U	1.56 U	1.56 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	1,900	0.170	**0.5** J	1.89 U	1.89 U	0.19 U	**0.44** J	**0.38**	**0.38**	**0.44**
Chlorobenzene	NS	110	0.41 U	4.14 U	4.14 U	0.46 U	0.41 U	0.41 U	0.41 U	0.46 U
Chloroethane (ethyl chloride)	NS	10,000	0.18 U	1.85 U	1.85 U	0.26 U	0.18 U	0.18 U	0.18 U	0.26 U
Chloroform	150	0.043	0.1 U	0.98 U	0.98 U	0.1 U	0.1 U	**0.73**	0.1 U	0.1 U
Chloromethane (Methyl chloride)	22,000	90	0.7 J	1.24 U	1.24 U	0.7	0.83 J	1.32	0.7	0.6
Dichlorodifluoromethane	NS	12,000	1.93 JQ	1.98 U	1.98 U	1.73	1.98 JQ	2.08	1.78	1.58
Ethylbenzene	54,000	1,000	0.35 U	3.47 U	3.47 U	0.43 U	0.35 U	0.48	0.35 U	0.43 U
Methyl ethyl ketone	13,000	5,000	5.31	8.26 D	13 D	9.14	2.62	3.24	2.83	2.6
Methylene Chloride	14,000	2.1	1.04 J	**15.6** D	1.74 U	**5.91**	1.18 J	1.95	0.87	**4.17**
n-Heptane	210,000	3,900	0.49 J	2.46 U	2.46 U	0.41 U	0.25 U	0.25 U	0.25 U	0.41 U
n-Hexane	NS	700	0.14 U	1.41 U	1.41 U	2.43	0.14 U	0.14 U	0.14 U	1.76
Styrene	17,000	1,000	0.3 U	2.98 U	2.98 U	0.43 U	0.3 U	0.55	0.3 U	0.43 U
Tertiary butyl alcohol (TBA)	NS	720	28.2	29.1 D	22.7 D	16.1	1.06 J	1.12	0.7	0.61
Tetrachloroethene (PCE)	1,000	1	0.68 J	2.03 U	2.03 U	0.68	**1.7** J	**3.66**	**1.83**	**1.63**
Tetrahydrofuran	30,000	350	0.24 U	2.36 U	2.36 U	0.29 U	0.24 U	0.53	0.24 U	0.29 U
Toluene	37,000	5,000	7.16	1.88 U	1.88 U	1.92	2.6	1.77	1.28	1.92
Trichloroethene (TCE)	14,000	0.5	0.21 U	1.61 U	1.61 U	0.16 U	0.21 U	0.16 U	0.16 U	0.16 U
Trichlorofluoromethane (Freon 11)	9,000	5,000	1.4 J	2.25 U	2.25 U	1.24	1.35 J	1.52	1.24	1.18
Xylene (m&p)	4,300	100	0.96 J	4.78 U	4.78 U	0.96	0.56 J	1.52	0.65 J	0.91
Xylene (o)	4,300	100	0.3 U	3.04 U	3.04 U	0.43 U	0.3 U	0.52	0.3 U	0.43 U

Notes:

AGC - Annual guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, October 18, 2010

SGC - Short term guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, October 18, 2010

NS - No standard.

U - Analyzed for but not detected.

ug/m^3 - microgram per cubic meter.

Bold - exceeds AGC and/or SGC

TABLE 3
SOIL VAPOR ANALYTICAL RESULTS-VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID Lab Sample ID Date Sampled Dilution Units=ug/m^3	NYSDEC SGC	NYSDEC AGC	Zone 3-Effluent D2020-03DL 3/29/2012 10	Zone 3-Effluent D3234-03DL 6/27/2012 10	Zone 3-Effluent D4540-03DL 10/11/2012 10	Zone 3-Effluent D5285-03DL 12/20/2012 10	Zone 4-Pre Carbon D2020-04 3/29/2012 1	Zone 4-Pre Carbon D3234-04 6/27/2012 1	Zone 4-Pre Carbon D4540-04 10/11/2012 1	Zone 4-Pre Carbon D5285-04 12/20/2012 1
1,1,1-Trichloroethane	68,000	1,000	2.18 U	1.64 U	1.64 U	1.64 U	0.22 U	0.27	0.27	0.16 U
1,2,4-Trimethylbenzene	NS	290	4.92 U	4.92 U	4.92 U	4.92 U	0.49 U	0.49 U	0.49 U	0.49 U
1,2-Dichloroethene (cis)	NS	63	2.38 U	2.38 U	2.38 U	3.96 U	0.59 J	0.99	0.87	0.4 U
1,2-Dichloroethene (trans)	NS	63	2.38 U	2.38 U	2.38 U	3.96 U	0.24 U	0.24 U	0.24 U	0.4 U
1,2-Dichloropropane	NS	4	2.77 U	2.77 U	2.77 U	4.62 U	0.28 U	0.28 U	0.28 U	0.46 U
1,2-Dichlorotetrafluoroethane (Freon 114)	NS	17,000	2.8 U	2.8 U	2.8 U	2.8 U	0.28 U	0.28 U	0.28 U	0.28 U
1,3,5-Trimethylbenzene	NS	290	4.42 U	4.42 U	4.42 U	4.92 U	0.44 U	0.44 U	0.44 U	0.49 U
1,4-Dichlorobenzene	NS	0.09	3.61 U	3.61 U	3.61 U	6.01 U	0.36 U	0.36 U	0.36 U	0.6 U
3-Chloropropene (allyl chloride)	600	1	1.57 U	1.57 U	1.57 U	1.57 U	0.16 U	0.16 U	0.16 U	0.16 U
4-Ethyltoluene (p-Ethyltoluene)	NS	NS	3.93 U	3.93 U	3.93 U	4.92 U	0.39 U	0.39 U	0.39 U	0.49 U
Acetone	180,000	28,000	49.9 D	42.5 D	39.4 D	44.4 D	13.5	3.18	1.81	24.9
Benzene	1,300	0.13	1.28 U	1.28 U	1.28 U	1.28 U	0.13 U	0.13 U	0.13 U	**1.66**
Bromoform	NS	0.91	5.17 U	5.17 U	5.17 U	5.17 U	0.52 U	0.52 U	0.52 U	0.52 U
Carbon disulfide	6,200	700	1.56 U	1.56 U	1.56 U	1.56 U	1.12 J	1.18	1.56	1.12
Carbon tetrachloride	1,900	0.170	2.52 U	1.89 U	1.89 U	1.89 U	**0.44** J	**0.44**	**0.38**	**0.44**
Chlorobenzene	NS	110	4.14 U	4.14 U	4.14 U	4.61 U	0.41 U	0.41 U	0.41 U	0.46 U
Chloroethane (ethyl chloride)	NS	10,000	1.85 U	1.85 U	1.85 U	2.64 U	0.66 J	0.18 U	0.18 U	0.32
Chloroform	150	0.043	0.98 U	0.98 U	0.98 U	0.98 U	**4.88**	**8.5**	**6.54**	**3.76**
Chloromethane (Methyl chloride)	22,000	90	1.24 U	1.24 U	1.24 U	2.07 U	3.72	3.57	2.81	2.27
Dichlorodifluoromethane	NS	12,000	1.98 UQ	1.98 U	1.98 U	1.98 U	2.08 JQ	2.03	1.93	1.38
Ethylbenzene	54,000	1,000	3.47 U	3.47 U	3.47 U	4.34 U	0.35 U	0.35 U	0.35 U	0.43 U
Methyl ethyl ketone	13,000	5,000	2.95 U	14.4 D	14.2 D	2.95 U	1.09 J	0.62	0.32	0.29 U
Methylene Chloride	14,000	2.1	1.74 U	1.74 U	1.74 U	1.74 U	1.42 J	0.87	0.94	**3.06**
n-Heptane	210,000	3,900	2.46 U	2.46 U	2.46 U	4.1 U	0.25 U	0.25 U	0.25 U	0.9
n-Hexane	NS	700	1.41 U	1.41 U	1.41 U	1.41 U	0.14 U	0.14 U	0.14 U	1.66
Styrene	17,000	1,000	2.98 U	2.98 U	2.98 U	4.26 U	0.3 U	0.3 U	0.3 U	0.43 U
Tertiary butyl alcohol (TBA)	NS	720	3.03 U	3.03 U	3.03 U	3.03 U	0.61 J	0.36	0.3 U	0.3 U
Tetrachloroethene (PCE)	1,000	1	2.03 U	**8.14** D	2.03 U	2.03 U	**27.8**	**49**	**47.9**	**12.2**
Tetrahydrofuran	30,000	350	2.36 U	2.36 U	2.36 U	2.95 U	0.24 U	0.32	0.24 U	0.29 U
Toluene	37,000	5,000	1.88 U	1.88 U	1.88 U	1.88 U	5.28	0.79	0.53	12.8
Trichloroethene (TCE)	14,000	0.5	2.15 U	1.61 U	1.61 U	1.61 U	**2.1** J	**2.96**	**2.42**	**0.97**
Trichlorofluoromethane (Freon 11)	9,000	5,000	2.25 U	2.25 U	2.25 U	2.25 U	1.46 J	1.97	1.69	1.29
Xylene (m&p)	4,300	100	4.78 U	4.78 U	4.78 U	8.69 U	0.52 J	0.56 J	0.48 U	1.56
Xylene (o)	4,300	100	3.04 U	3.04 U	3.04 U	4.34 U	0.3 U	0.3 U	0.3 U	0.43 U

Notes:

AGC - Annual guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, October 18,

SGC - Short term guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, October

NS - No standard.

U - Analyzed for but not detected.

ug/m^3 - microgram per cubic meter.

Bold - exceeds AGC and/or SGC

TABLE 3
SOIL VAPOR ANALYTICAL RESULTS-VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID	NYSDEC	NYSDEC	Zone 4-Post Carbon	Zone 4-Post Carbon	Zone 4-Post Carbon	Zone 4-Post Carbon	Ambient Upwind	Ambient Upwind	Ambient Upwind	Ambient Upwind
Lab Sample ID	SGC	AGC	D2020-05	D3234-05	D4540-05	D5285-05	D2020-06	D3234-06	D4540-06RE	D5285-06
Date Sampled			3/29/2012	6/27/2012	10/11/2012	12/20/2012	3/29/2012	6/27/2012	10/11/2012	12/20/2012
Dilution			1	1	1	1	1	1	1	1
Units=ug/m^3										
1,1,1-Trichloroethane	68,000	1,000	0.22 U	0.16 U	0.33	0.16 U	0.22 U	0.16 U	0.16 U	0.16 U
1,2,4-Trimethylbenzene	NS	290	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.59	0.49 U
1,2-Dichloroethene (cis)	NS	63	0.24 U	0.99	0.59	0.44	0.24 U	0.24 U	0.24 U	0.4 U
1,2-Dichloroethene (trans)	NS	63	0.24 U	0.24 U	0.24 U	0.4 U	0.24 U	0.24 U	0.24 U	0.4 U
1,2-Dichloropropane	NS	4	0.28 U	0.28 U	0.28 U	0.46 U	0.28 U	0.28 U	0.28 U	0.46 U
1,2-Dichlorotetrafluoroethane (Freon 114)	NS	17,000	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,3,5-Trimethylbenzene	NS	290	0.44 U	0.44 U	0.44 U	0.49 U	0.44 U	0.44 U	0.44 U	0.49 U
1,4-Dichlorobenzene	NS	0.09	0.36 U	0.36 U	0.36 U	0.6 U	0.36 U	0.36 U	0.36 U	0.6 U
3-Chloropropene (allyl chloride)	600	1	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
4-Ethyltoluene (p-Ethyltoluene)	NS	NS	0.39 U	0.39 U	0.39 U	0.49 U	0.39 U	0.39 U	0.39 U	0.49 U
Acetone	180,000	28,000	3.8	8.17	17.4	5.46	5.7	14.4	10	8.08
Benzene	1,300	0.13	0.38 J	**2.59**	**2.2**	**1.69**	**0.29** J	0.13 U	**0.32** J	**0.86**
Bromoform	NS	0.91	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
Carbon disulfide	6,200	700	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Carbon tetrachloride	1,900	0.170	**0.38** J	**0.25** J	**0.38**	0.19 U	**0.44** J	**0.44**	**0.31**	0.19 U
Chlorobenzene	NS	110	0.41 U	0.41 U	0.41 U	0.46 U	0.41 U	0.41 U	0.41 U	0.46 U
Chloroethane (ethyl chloride)	NS	10,000	0.18 U	0.18 U	0.18 U	0.26 U	0.18 U	0.18 U	0.18 U	0.26 U
Chloroform	150	0.043	0.1 U	**8.99**	**6.2**	**4.64**	0.1 U	0.1 U	0.1 U	0.1 U
Chloromethane (Methyl chloride)	22,000	90	0.66 J	1.86	1.05	0.21 U	0.68 J	0.7	0.58	0.62
Dichlorodifluoromethane	NS	12,000	2.32 JQ	1.98	1.63	1.53	2.18 JQ	1.88	1.34	1.68
Ethylbenzene	54,000	1,000	0.35 U	0.35 U	0.35 U	0.43 U	0.35 U	0.35 U	0.35 U	0.43 U
Methyl ethyl ketone	13,000	5,000	0.44 J	2.36	1.83	1.45	0.29 U	0.53	1.83	1.09
Methylene Chloride	14,000	2.1	1.29 J	1.08	**2.81**	**6.25**	1.32 J	1.67	0.9	**9.73**
n-Heptane	210,000	3,900	0.25 U	0.25 U	0.25 U	0.41 U	0.25 U	0.25 U	0.25 U	0.41
n-Hexane	NS	700	0.14 U	0.14 U	0.14 U	1.41	0.14 U	0.14 U	0.14 U	3.07
Styrene	17,000	1,000	0.3 U	0.3 U	0.3 U	0.43 U	0.3 U	0.3 U	0.3 U	0.51
Tertiary butyl alcohol (TBA)	NS	720	0.3 U	0.76	0.61	0.3 U	0.3 U	0.3 U	0.88	0.3 U
Tetrachloroethene (PCE)	1,000	1	**1.08** J	**3.8**	**2.71**	**2.03**	0.34 J	0.2 J	0.2 U	**1.08**
Tetrahydrofuran	30,000	350	0.24 U	0.24 U	0.24 U	0.29 U	0.24 U	0.24 U	0.24 U	0.29 U
Toluene	37,000	5,000	2.6	0.79	3.2	0.98	2.03	0.6	0.57	4.52
Trichloroethene (TCE)	14,000	0.5	0.21 U	0.16 U	0.27	0.16 U	0.21 U	0.16 U	0.16 U	0.16 U
Trichlorofluoromethane (Freon 11)	9,000	5,000	1.12 J	2.19	1.57	1.24	1.24 J	1.35	1.01	1.12
Xylene (m&p)	4,300	100	0.48 U	0.74 J	0.65 J	0.87 U	0.48 U	0.48 U	0.48 U	1.22
Xylene (o)	4,300	100	0.3 U	0.3 U	0.3 U	0.43 U	0.3 U	0.3 U	0.3 U	0.43 U

Notes:

AGC - Annual guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, October 18,

SGC - Short term guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, October

NS - No standard.

U - Analyzed for but not detected.

ug/m^3 - microgram per cubic meter.

Bold - exceeds AGC and/or SGC

TABLE 3
SOIL VAPOR ANALYTICAL RESULTS-VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID Lab Sample ID Date Sampled Dilution Units=ug/m^3	NYSDEC SGC	NYSDEC AGC	Ambient Downwind D2020-07 3/29/2012 1	Ambient Downwind D3234-07 6/27/2012 1	Ambient Downwind D4540-07DL 10/11/2012 10	Ambient Downwind D5285-07 12/20/2012 1
1,1,1-Trichloroethane	68,000	1,000	0.22 U	0.16 U	1.64 U	0.16 U
1,2,4-Trimethylbenzene	NS	290	0.49 U	0.49 U	4.92 U	0.49 U
1,2-Dichloroethene (cis)	NS	63	0.24 U	0.24 U	2.38 U	0.4 U
1,2-Dichloroethene (trans)	NS	63	0.24 U	0.24 U	2.38 U	0.4 U
1,2-Dichloropropane	NS	4	0.28 U	0.28 U	2.77 U	0.46 U
1,2-Dichlorotetrafluoroethane (Freon 114)	NS	17,000	0.28 U	0.28 U	2.8 U	0.28 U
1,3,5-Trimethylbenzene	NS	290	0.44 U	0.44 U	4.42 U	0.49 U
1,4-Dichlorobenzene	NS	0.09	0.36 U	0.36 U	3.61 U	0.6 U
3-Chloropropene (allyl chloride)	600	1	0.16 U	0.16 U	1.57 U	0.16 U
4-Ethyltoluene (p-Ethyltoluene)	NS	NS	0.39 U	0.39 U	3.93 U	0.49 U
Acetone	180,000	28,000	9.98	7.03	53.9 D	7.13
Benzene	1,300	0.13	**0.35** J	0.13 U	1.28 U	**0.83**
Bromoform	NS	0.91	0.52 U	0.52 U	5.17 U	0.52 U
Carbon disulfide	6,200	700	0.16 U	0.16 U	1.56 U	0.16 U
Carbon tetrachloride	1,900	0.170	**0.44** J	**0.5**	1.89 U	**0.5**
Chlorobenzene	NS	110	0.41 U	0.41 U	4.14 U	0.46 U
Chloroethane (ethyl chloride)	NS	10,000	0.18 U	0.18 U	1.85 U	0.26 U
Chloroform	150	0.043	0.1 U	0.1 U	0.98 U	0.1 U
Chloromethane (Methyl chloride)	22,000	90	0.62 J	0.64	1.24 U	0.64
Dichlorodifluoromethane	NS	12,000	2.13 JQ	1.98	1.98 U	1.68
Ethylbenzene	54,000	1,000	0.35 U	0.35 U	3.47 U	0.43 U
Methyl ethyl ketone	13,000	5,000	0.53 J	0.5	2.95 U	1.03
Methylene Chloride	14,000	2.1	1.88	1.6	**12.8** D	**7.99**
n-Heptane	210,000	3,900	0.25 U	0.25 U	2.46 U	0.41
n-Hexane	NS	700	0.14 U	0.14 U	1.41 U	2.5
Styrene	17,000	1,000	0.3 U	0.3 U	2.98 U	0.43 U
Tertiary butyl alcohol (TBA)	NS	720	0.3 U	0.3 U	3.03 U	0.3 U
Tetrachloroethene (PCE)	1,000	1	**1.56** J	0.2 U	2.03 U	**1.08**
Tetrahydrofuran	30,000	350	0.24 U	0.24 U	2.36 U	0.29 U
Toluene	37,000	5,000	4.15	0.57	10.6 D	4.52
Trichloroethene (TCE)	14,000	0.5	0.21 U	0.16 U	1.61 U	0.16 U
Trichlorofluoromethane (Freon 11)	9,000	5,000	1.24 J	1.4	2.25 U	1.12
Xylene (m&p)	4,300	100	0.48 U	0.48 U	4.78 U	1.09
Xylene (o)	4,300	100	0.3 U	0.3 U	3.04 U	0.43 U

Notes:

AGC - Annual guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, October 18,

SGC - Short term guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, October

NS - No standard.

U - Analyzed for but not detected.

ug/m^3 - microgram per cubic meter.

Bold - exceeds AGC and/or SGC

TABLE 4
WATER LEVEL MEASUREMENTS and PRODUCT THICKNESS
QUEENS WEST DEVELOPMENT - PARCEL 9

Well	Total Well Depth (feet)	Top of Casing Elev. (feet)	March 2012				June 2012				October 2012				December 2012			
			DTP	DTW	Product Thickness	ELEV	DTP	DTW	Product Thickness	ELEV	DTP	DTW	Product Thickness	ELEV	DTP	DTW	Product Thickness	ELEV
MW-2	**32.3**	**8.93**	ND	10.52	0.00	-1.59	ND	9.83	0.00	-0.90	ND	9.66	0.00	-0.73	ND	8.68	0.00	0.25
MW-8	**29.4**	**10.30**	ND	10.90	0.00	-0.60	ND	10.18	0.00	0.12	ND	10.79	0.00	-0.49	ND	10.22	0.00	0.08
MW-11R	**20.3**	**10.52**	ND	11.33	0.00	-0.81	ND	10.14	0.00	0.38	ND	10.83	0.00	-0.31	ND	10.65	0.00	-0.13
MW-12R	**17.9**	**10.46**	ND	10.93	0.00	-0.47	ND	8.12	0.00	2.34	ND	9.60	0.00	0.86	ND	9.98	0.00	0.48
MW-14	**18.3**	**8.30**	9.99	10.00	0.01	-1.70	ND	7.86	0.00	0.44	ND	8.47	0.00	-0.17	ND	8.04	0.00	0.26
MW-15	**18.1**	**7.24**	ND	8.35	0.00	-1.11	ND	7.02	0.00	0.22	ND	8.17	0.00	-0.93	ND	6.95	0.00	0.29
MW-16	**14.2**	**7.22**	ND	9.08	0.00	-1.86	ND	7.48	0.00	-0.26	ND	8.48	0.00	-1.26	ND	7.84	0.00	-0.62
MW-17	**11.65**	**7.96**	ND	9.91	0.00	-1.95	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG

Notes:

NG - Not Gauged
ND - Not detected
DTP - Depth to product in feet
DTW - Depth to water in feet
ELEV - Water table elevation in feet above the Queens Borough Datum, which is 2.725 feet above the mean sea level referenced to the National Geodetic Vertical Datum (NGVD) of 1929.

Table 5
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID	NYSDEC	MW2	MW-2 (DUP)	MW-2	MW-2	MW-2	MW8	MW-8	MW-8	MW-8	MW8 (DUP)	MW11R	MW-11R	MW-11R	MW-11R
Lab Sample ID	Class GA	D2017-01DL	D2017-09DL	D3235-01DL	D4541-01DL	D5286-01	D2017-02DL	D3235-02DL	D4541-02DL	D5286-02DL	D5286-11DL	D2017-03	D3235-03	D4541-03	D5286-03
Date Sampled	AWQV	3/29/2012	3/29/2012	6/27/2012	10/11/2012	12/20/2012	3/29/2012	6/27/2012	10/11/2012	12/20/2012	12/20/2012	3/29/2012	6/27/2012	10/11/2012	12/20/2012
Dilution		5	10	5	5	1	20	100	100	25	50	1	1	1	1
units=ug/L															
1,1,1-Trichloroethane	**5**	2.5 U	5 U	2 U	1.2 U	0.4 U	10 U	40 U	0.5 U	10 U	20 U	0.5 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	**5**	2.5 U	5 U	1.6 U	0.97 U	0.31 U	10 U	31 U	0.39 U	7.8 U	16 U	0.5 U	0.31 U	0.31 U	0.31 U
1,1,2-Trichloroethane	**1**	2.5 U	5 U	1.9 U	1.2 U	0.38 U	10 U	38 U	0.48 U	9.5 U	19 U	0.5 U	0.38 U	0.38 U	0.38 U
1,1-Dichloroethane	**5**	2.5 U	5 U	1.8 U	1.1 U	0.36 U	10 U	36 U	0.45 U	9 U	18 U	0.5 U	0.36 U	0.36 U	0.36 U
1,1-Dichloroethene	**5**	2.5 U	5 U	2.4 U	1.5 U	0.47 U	10 U	47 U	0.59 U	12 U	24 U	0.5 U	0.47 U	0.47 U	0.47 U
1,2-Dichloroethane	**0.6**	2.5 U	5 U	2.4 U	1.5 U	0.48 U	10 U	48 U	0.6 U	12 U	24 U	0.5 U	0.48 U	0.48 U	0.48 U
1,2-Dichloropropane	**1**	2.5 U	5 U	2.3 U	1.4 U	0.46 U	10 U	46 U	0.57 U	12 U	23 U	0.5 U	0.46 U	0.46 U	0.46 U
2-Hexanone	**50**	12.5 U	25 U	9.7 U	6.1 U	1.9 U	50 U	190 U	2.4 U	48 U	97 U	2.5 U	1.9 U	1.9 U	1.9 U
Acetone	**50**	12.5 U	25 U	2.5 U	1.6 U	0.5 U	50 U	50 U	0.62 U	**230 D**	25 U	2.5 U	0.5 U	0.5 U	0.5 U
Benzene	**1**	**290 D**	**310 D**	**350 D**	**250 D**	**120**	10 U	32 U	0.4 U	8 U	16 U	0.5 U	0.32 U	0.32 U	0.32 U
Bromodichloromethane	**50**	2.5 U	5 U	1.8 U	0.62 U	0.36 U	10 U	36 U	0.25 U	9 U	18 U	0.5 U	0.36 U	0.2 U	0.36 U
Bromoform	**50**	2.5 U	5 U	2.4 U	1.5 U	0.47 U	10 U	47 U	0.59 U	12 U	24 U	0.5 U	0.47 U	0.47 U	0.47 U
Bromomethane	**5**	2.5 U	5 U	1 U	0.62 U	0.2 U	10 U	20 U	0.25 U	5 U	10 U	0.5 U	0.2 U	0.2 U	0.2 U
Carbon disulfide	**60**	2.5 UQ	5 U	1 U	1.8 JD	0.2 U	10 UQ	20 U	0.25 U	5 U	10 U	0.5 U	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	**5**	2.5 U	5 U	1 U	0.62 U	0.2 U	10 U	20 U	0.25 U	5 U	10 U	0.5 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	**5**	2.5 U	5 U	2.4 U	1.5 U	0.49 U	10 U	49 U	0.61 U	12 U	24 U	0.5 U	0.49 U	0.49 U	0.49 U
Chloroethane	**5**	2.5 U	5 U	1 U	0.62 U	0.2 U	10 U	20 U	0.25 U	5 U	10 U	0.5 U	0.2 U	0.2 U	0.2 U
Chloroform	**7**	2.5 U	5 U	1.7 U	1.1 U	0.34 U	10 U	34 U	0.42 U	8.5 U	17 U	0.5 U	0.34 U	0.34 U	0.34 U
Chloromethane	**5**	2.5 U	5 U	1 U	0.62 U	0.2 U	10 U	20 U	0.25 U	5 U	10 U	0.5 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	**5**	2.5 U	5 U	1.8 U	1.1 U	0.35 U	10 U	35 U	0.44 U	8.8 U	18 U	0.5 U	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	**0.4**	2.5 U	5 U	1.6 U	0.97 U	0.31 U	10 U	31 U	0.39 U	7.8 U	16 U	0.5 U	0.31 U	0.31 U	0.31 U
Dibromochloromethane	**50**	2.5 U	5 U	1 U	0.62 U	0.2 U	10 U	20 U	0.25 U	5 U	10 U	0.5 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	**5**	**260 D**	**290 D**	**320 D**	**220 D**	**28.3**	**20 JD**	20 U	2.5 D	**14 JD**	**74 D**	0.5 U	0.2 U	0.2 U	0.2 U
Methylene Chloride	**5**	2.5 U	5 U	2 U	1.3 U	0.41 U	10 U	41 U	0.51 U	10 U	20 U	0.5 U	0.41 U	0.41 U	0.41 U
Styrene	**5**	2.5 U	5 U	1.8 U	1.1 U	0.36 U	10 U	36 U	0.45 U	9 U	18 U	0.5 U	0.36 U	0.36 U	0.36 U
Tetrachloroethene	**5**	2.5 U	5 U	1.4 U	0.84 U	0.27 U	10 U	27 U	0.34 U	6.8 U	14 U	0.5 U	0.27 U	0.27 U	0.27 U
Toluene	**5**	4.1 JD	5 U	1.8 U	1.8 JD	0.37 U	10 U	37 U	0.46 U	9.2 U	18 U	0.5 U	0.37 U	0.37 U	0.37 U
trans-1,2-Dichloroethene	**5**	2.5 U	5 U	2 U	1.3 U	0.41 U	10 U	41 U	0.51 U	10 U	20 U	0.5 U	0.41 U	0.41 U	0.41 U
Trichloroethene	**5**	2.5 U	5 U	1.4 U	0.88 U	0.28 U	10 U	28 U	0.35 U	7 U	14 U	0.5 U	0.28 U	0.28 U	0.28 U
Vinyl chloride	**2**	2.5 U	5 U	1.7 U	1.1 U	0.34 U	10 U	34 U	0.42 U	8.5 U	17 U	0.5 U	0.34 U	0.34 U	0.34 U
Xylenes, Total	**5**	**23 D**	**24.3 JD**	**21.2 J**	**8.8 JD**	3.7 J	**41 JD**	138 U	2.7 JD	**42 JD**	**116 JD**	1.5 U	1.38 U	1.38 U	1.38 U

Notes:

AWQVs - Ambient Water Quality Standards and Guidance Values listed in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1

U - Analyzed for but not detected.

J - Indicates an estimated value.

B - Analyte was detected in assocated blank, as well as in the sample.

D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.

ug/L - micrograms per liter.

Bold - exceeds TOGS

FB - Field Blank

TB - Trip Blank

Table 5
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID Lab Sample ID Date Sampled Dilution units=ug/L	NYSDEC Class GA AWQV	MW-12R D2017-04 3/29/2012 1	MW-12R D3235-04 6/27/2012 1	MW-12R D4541-06 10/11/2012 1	MW-12R (DUP) D4541-11 10/11/2012 1	MW-12R D5286-04 12/20/2012 1	MW14 D3235-07 6/27/2012 1	MW-14 D4541-07 10/11/2012 1	MW-14 D5286-05 12/20/2012 1	MW15 D2017-05 3/29/2012 1	MW-15 D3235-08 6/27/2012 1	MW-15 (DUP) D3235-11 6/27/2012 1	MW-15 D4541-08 10/11/2012 1	MW-15 D5286-06 12/20/2012 1	MW16 D2017-06 3/29/2012 1
1,1,1-Trichloroethane	**5**	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U
1,1,2,2-Tetrachloroethane	**5**	0.5 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.5 U	0.31 U	0.31 U	0.31 U	0.31 U	0.5 U
1,1,2-Trichloroethane	**1**	0.5 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.5 U	0.38 U	0.38 U	0.38 U	0.38 U	0.5 U
1,1-Dichloroethane	**5**	0.5 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.5 U	0.36 U	0.36 U	0.36 U	0.36 U	0.5 U
1,1-Dichloroethene	**5**	0.5 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.5 U	0.47 U	0.47 U	0.47 U	0.47 U	0.5 U
1,2-Dichloroethane	**0.6**	0.5 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.5 U	0.48 U	0.48 U	0.48 U	0.48 U	0.5 U
1,2-Dichloropropane	**1**	0.5 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.5 U	0.46 U	0.46 U	0.46 U	0.46 U	0.5 U
2-Hexanone	**50**	2.5 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2.5 U	1.9 U	1.9 U	1.9 U	1.9 U	2.5 U
Acetone	**50**	7.6	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	5.8	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.5 U
Benzene	**1**	**2.2**	0.32 U	0.32 U	0.32 U	0.32 U	**3.2**	**1.6**	**2.9**	0.8 J	**100**	**110**	0.32 U	0.32 U	0.5 U
Bromodichloromethane	**50**	0.5 U	0.36 U	0.2 U	0.2 U	0.36 U	0.36 U	0.2 U	0.36 U	0.5 U	0.36 U	0.36 U	0.2 U	0.36 U	0.5 U
Bromoform	**50**	0.5 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.5 U	0.47 U	0.47 U	0.47 U	0.47 U	0.5 U
Bromomethane	**5**	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5 U
Carbon disulfide	**60**	0.5 UQ	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5 UQ	0.2 U	0.2 U	1.8	0.2 U	0.5 U
Carbon tetrachloride	**5**	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5 U
Chlorobenzene	**5**	0.5 U	0.49 U	0.49 U	0.49 U	0.68 J	0.49 U	0.49 U	0.56 J	0.5 U	0.49 U	0.49 U	0.49 U	0.93 J	0.5 U
Chloroethane	**5**	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5 U
Chloroform	**7**	0.5 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.5 U	0.34 U	0.34 U	0.34 U	0.34 U	0.5 U
Chloromethane	**5**	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.53 J	0.2 U	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5 U
cis-1,2-Dichloroethene	**5**	0.5 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.5 U	0.35 U	0.35 U	0.35 U	0.35 U	0.5 U
cis-1,3-Dichloropropene	**0.4**	0.5 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.5 U	0.31 U	0.31 U	0.31 U	0.31 U	0.5 U
Dibromochloromethane	**50**	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.5 U
Ethylbenzene	**5**	0.5 U	0.2 U	0.2 U	0.2 U	0.2 U	0.67 J	0.56 J	1.3	0.5 U	**5.2**	**5.2**	0.2 U	0.2 U	0.5 U
Methylene Chloride	**5**	0.5 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.5 U	0.41 U	0.41 U	0.41 U	0.41 U	0.5 U
Styrene	**5**	0.5 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.5 U	0.36 U	0.36 U	0.36 U	0.36 U	0.5 U
Tetrachloroethene	**5**	0.5 U	0.27 U	0.77 J	0.9 J	0.27 U	0.27 U	0.27 U	0.27 U	0.5 U	0.27 U	0.27 U	0.27 U	0.27 U	0.5 U
Toluene	**5**	0.5 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.44 J	0.5 U	3.5	3.8	0.37 U	0.37 U	0.5 U
trans-1,2-Dichloroethene	**5**	0.5 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.5 U	0.41 U	0.41 U	0.41 U	0.41 U	0.5 U
Trichloroethene	**5**	0.5 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.5 U	0.28 U	0.28 U	0.28 U	0.28 U	0.5 U
Vinyl chloride	**2**	0.5 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.5 U	0.34 U	0.34 U	0.34 U	0.34 U	0.5 U
Xylenes, Total	**5**	1.5 U	1.38 U	1.38 U	1.38 U	1.38 U	1.9 U	2.25 U	2.35 U	1.5 U	**7.1**	**7.4**	1.38 U	1.38 U	1.5 U

Notes:

AWQVs - Ambient Water Quality Standards and Guidance Values listed in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1

U - Analyzed for but not detected.

J - Indicates an estimated value.

B - Analyte was detected in assocated blank, as we

D - The reported value is from a secondary analysis

ug/L - micrograms per liter.

Bold - exceeds TOGS

FB - Field Blank

TB - Trip Blank

Table 5
GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID Lab Sample ID Date Sampled Dilution units=ug/L	NYSDEC Class GA AWQV	MW-16 D3235-09 6/27/2012 1	MW-16 D4541-09 10/11/2012 1	MW-16 D5286-09 12/20/2012 1	MW17 D2017-07 3/29/2012 1	FB D2017-08 3/29/2012 1	FB D3235-10 6/27/2012 1	FB D4541-10 10/11/2012 1	FB D5286-10 12/20/2012 1	TB D2017-10 3/29/2012 1	TB D3235-12 6/27/2012 1	TB D4541-12 10/11/2012 1	TB D5286-12 12/20/2012 1
1,1,1-Trichloroethane	**5**	0.4 U	0.4 U	0.4 U	0.5 U	0.5 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U	0.4 U
1,1,2,2-Tetrachloroethane	**5**	0.31 U	0.31 U	0.31 U	0.5 U	0.5 U	0.31 U	0.31 U	0.31 U	0.5 U	0.31 U	0.31 U	0.31 U
1,1,2-Trichloroethane	**1**	0.38 U	0.38 U	0.38 U	0.5 U	0.5 U	0.38 U	0.38 U	0.38 U	0.5 U	0.38 U	0.38 U	0.38 U
1,1-Dichloroethane	**5**	0.36 U	0.36 U	0.36 U	0.5 U	0.5 U	0.36 U	0.36 U	0.36 U	0.5 U	0.36 U	0.36 U	0.36 U
1,1-Dichloroethene	**5**	0.47 U	0.47 U	0.47 U	0.5 U	0.5 U	0.47 U	0.47 U	0.47 U	0.5 U	0.47 U	0.47 U	0.47 U
1,2-Dichloroethane	**0.6**	0.48 U	0.48 U	0.48 U	0.5 U	0.5 U	0.48 U	0.48 U	0.48 U	0.5 U	0.48 U	0.48 U	0.48 U
1,2-Dichloropropane	**1**	0.46 U	0.46 U	0.46 U	0.5 U	0.5 U	0.46 U	0.46 U	0.46 U	0.5 U	0.46 U	0.46 U	0.46 U
2-Hexanone	**50**	1.9 U	1.9 U	1.9 U	2.5 U	2.5 U	1.9 U	1.9 U	1.9 U	2.5 U	1.9 U	1.9 U	1.9 U
Acetone	**50**	0.5 U	0.5 U	0.5 U	2.5 U	2.5 U	0.5 U	0.5 U	0.5 U	2.5 U	0.5 U	0.5 U	0.5 U
Benzene	**1**	0.32 U	0.32 U	0.32 U	0.5 U	0.5 U	0.32 U	0.32 U	0.32 U	0.5 U	0.32 U	0.32 U	0.32 U
Bromodichloromethane	**50**	0.36 U	0.2 U	0.36 U	0.5 U	0.5 U	0.36 U	0.2 U	0.36 U	0.5 U	0.36 U	0.2 U	0.36 U
Bromoform	**50**	0.47 U	0.47 U	0.47 U	0.5 U	0.5 U	0.47 U	0.47 U	0.47 U	0.5 U	0.47 U	0.47 U	0.47 U
Bromomethane	**5**	0.2 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U
Carbon disulfide	**60**	0.2 U	0.2 U	0.2 U	1.7 Q	0.5 UQ	0.2 U	0.2 U	0.2 U	0.5 UQ	0.2 U	0.2 U	0.2 U
Carbon tetrachloride	**5**	0.2 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	**5**	0.49 U	0.49 U	0.49 U	0.5 U	0.5 U	0.49 U	0.49 U	0.49 U	0.5 U	0.49 U	0.49 U	0.49 U
Chloroethane	**5**	0.2 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U
Chloroform	**7**	0.34 U	0.34 U	0.34 U	0.5 U	0.5 U	0.34 U	0.34 U	0.34 U	0.5 U	0.34 U	0.34 U	0.34 U
Chloromethane	**5**	0.2 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	**5**	0.35 U	0.35 U	0.35 U	0.5 U	0.5 U	0.35 U	0.35 U	0.35 U	0.5 U	0.35 U	0.35 U	0.35 U
cis-1,3-Dichloropropene	**0.4**	0.31 U	0.31 U	0.31 U	0.5 U	0.5 U	0.31 U	0.31 U	0.31 U	0.5 U	0.31 U	0.31 U	0.31 U
Dibromochloromethane	**50**	0.2 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.5 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	**5**	0.2 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	0.7 J	0.2 U	0.2 U	0.2 U
Methylene Chloride	**5**	0.41 U	0.41 U	0.41 U	0.5 U	0.5 U	0.41 U	0.41 U	0.41 U	0.5 U	0.41 U	0.41 U	0.41 U
Styrene	**5**	0.36 U	0.36 U	0.36 U	0.5 U	0.5 U	0.36 U	0.36 U	0.36 U	0.5 U	0.36 U	0.36 U	0.36 U
Tetrachloroethene	**5**	0.27 U	0.27 U	0.27 U	0.5 U	0.5 U	0.27 U	0.27 U	0.27 U	0.5 U	0.27 U	0.27 U	0.27 U
Toluene	**5**	0.37 U	0.37 U	0.37 U	0.5 U	0.5 U	0.37 U	0.37 U	0.37 U	0.5 U	0.37 U	0.37 U	0.37 U
trans-1,2-Dichloroethene	**5**	0.41 U	0.41 U	0.41 U	0.5 U	0.5 U	0.41 U	0.41 U	0.41 U	0.5 U	0.41 U	0.41 U	0.41 U
Trichloroethene	**5**	0.28 U	0.28 U	0.28 U	0.5 U	0.5 U	0.28 U	0.28 U	0.28 U	0.5 U	0.28 U	0.28 U	0.28 U
Vinyl chloride	**2**	0.34 U	0.34 U	0.34 U	0.5 U	0.5 U	0.34 U	0.34 U	0.34 U	0.5 U	0.34 U	0.34 U	0.34 U
Xylenes, Total	**5**	1.38 U	1.38 U	1.38 U	1.5 U	1.5 U	1.38 U	1.38 U	1.38 U	1.5 U	1.38 U	1.38 U	1.38 U

Notes:

AWQVs - Ambient Water Quality Standards and Guidance Values listed in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1

U - Analyzed for but not detected.

J - Indicates an estimated value.

B - Analyte was detected in assocated blank, as we

D - The reported value is from a secondary analysis

ug/L - micrograms per liter.

Bold - exceeds TOGS

FB - Field Blank

TB - Trip Blank

Table 6
GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID Lab Sample ID Date Sampled Dilution Units=ug/L	NYSDEC Class GA AWQV	MW2 D2017-01DL 3/29/2012 5	MW-2 (DUP) D2017-09DL 3/29/2012 5	MW-2 D3235-01DL 6/27/2012 2	MW-2 D4541-01DL 10/11/2012 5	MW-2 D5286-01 12/20/2012 2	MW8 D2017-02DL 3/29/2012 20	MW-8 D3235-02DL 6/27/2012 5	MW-8 D4541-02DL 10/11/2012 200	MW-8 D5286-02DL 12/20/2012 100	MW8 (DUP) D5286-11DL 12/20/2012 100	MW11R D2017-03 3/29/2012 1
1,2,4-Trichlorobenzene	**5**	6.5 UD	6.5 UD	0.28 UD	0.73 UD	0.29 UD	26 UD	0.71 UD	29 UD	14.6 UD	14 UD	1.3 U
1,2-Dichlorobenzene	**3**	6.5 UD	6.5 UD	0.51 UD	1.3 UD	0.51 UD	26 UD	1.26 UD	51 UD	26 UD	25 UD	1.3 U
1,3-Dichlorobenzene	**3**	6.5 UD	6.5 UD	0.24 UD	0.62 UD	0.24 UD	26 UD	0.61 UD	24 UD	12.5 UD	12 UD	1.3 U
1,4-Dichlorobenzene	**3**	6.5 UD	6.5 UD	0.36 UD	0.94 UD	0.37 UD	26 UD	0.91 UD	37 UD	18.8 UD	18 UD	1.3 U
2,2'-oxybis[1-chloropropane]	**5**	6.5 UD	6.5 UD	0.71 UD	1.82 UD	0.71 UD	26 UD	1.77 UD	71.4 UD	36.5 UD	35 UD	1.3 U
2,4,5-Trichlorophenol	**NS**	6.5 UD	6.5 UD	4.6 UD	12 UD	4.6 UD	26 UD	11 UD	460 UD	240 UD	230 UD	1.3 U
2,4,6-Trichlorophenol	**NS**	6.5 UD	6.5 UD	4.3 UD	11 UD	4.3 UD	26 UD	11 UD	430 UD	220 UD	210 UD	1.3 U
2,4-Dichlorophenol	**5**	6.5 UD	6.5 UD	6.5 UD	17 UD	6.6 UD	26 UD	16 UD	660 UD	330 UD	320 UD	1.3 U
2,4-Dimethylphenol	**50**	6.5 UD	6.5 UD	1.4 UD	3.6 UD	1.4 UD	26 UD	3.5 UD	140 UD	72.9 UD	70 UD	1.3 U
2,4-Dinitrophenol	**10**	65 UD	65 UD	3.8 UD	9.8 UD	3.8 UD	260 UD	9.5 UD	380 UD	200 UD	190 UD	13 U
2,4-Dinitrotoluene	**5**	6.5 UD	6.5 UD	4.3 UD	11 UD	4.3 UD	26 UD	11 UD	430 UD	220 UD	210 UD	1.3 U
2,6-Dinitrotoluene	**5**	6.5 UD	6.5 UD	0.55 UD	1.4 UD	0.55 UD	26 UD	1.4 UD	55 UD	28.1 UD	27 UD	1.3 U
2-Chloronaphthalene	**10**	6.5 UD	6.5 UD	0.3 UD	0.78 UD	0.31 UD	26 UD	0.76 UD	31 UD	15.6 UD	15 UD	1.3 U
2-Chlorophenol	**NS**	6.5 UD	6.5 UD	0.38 UD	0.99 UD	0.39 UD	26 UD	0.96 UD	39 UD	19.8 UD	19 UD	1.3 U
2-Methylnaphthalene	**NS**	6.5 UD	6.5 UD	0.38 UD	0.99 UD	0.39 UD	29 JD	18 D	39 UD	19.8 UD	19 UD	1.3 U
2-Methylphenol	**NS**	6.5 UD	6.5 UD	3.7 UD	9.4 UD	3.7 UD	26 UD	9.1 UD	370 UD	190 UD	180 UD	1.3 U
2-Nitroaniline	**5**	6.5 UD	6.5 UD	8.6 UD	22 UD	8.7 UD	26 UD	21 UD	870 UD	440 UD	420 UD	1.3 U
2-Nitrophenol	**NS**	6.5 UD	6.5 UD	8.9 UD	23 UD	9 UD	26 UD	22 UD	900 UD	460 UD	440 UD	1.3 U
3,3'-Dichlorobenzidine	**5**	6.5 UD	6.5 UD	7.2 UD	19 UD	7.3 UD	26 UD	18 UD	730 UD	370 UD	360 UD	1.3 U
3-Nitroaniline	**5**	25.5 UD	25.5 UD	4.1 UD	11 UD	4.1 UD	105 UD	10 UD	410 UD	210 UD	200 UD	5 U
4,6-Dinitro-2-methylphenol	**NS**	25.5 UD	25.5 UD	3.8 UD	9.7 UD	3.8 UD	105 UD	9.4 UD	380 UD	190 UD	190 UD	5 U
4-Bromophenyl phenyl ether	**NS**	6.5 UD	6.5 UD	0.85 UD	2.2 UD	0.86 UD	26 UD	2.1 UD	86 UD	43.8 UD	42 UD	1.3 U
4-Chloro-3-methylphenol	**NS**	6.5 UD	6.5 UD	3.5 UD	9 UD	3.5 UD	26 UD	8.7 UD	350 UD	180 UD	170 UD	1.3 U
4-Chloroaniline	**5**	13 UDQ	13 UD	5.3 UD	14 UD	5.4 UD	26 UD	13 UD	540 UD	280 UD	260 UD	1.3 UQ
4-Chlorophenyl phenyl ether	**NS**	6.5 UD	6.5 UD	0.55 UD	1.4 UD	0.55 UD	26 UD	1.4 UD	55 UD	28.1 UD	27 UD	1.3 U
4-Nitroaniline	**5**	13 UD	13 UD	5 UD	13 UD	5.1 UD	26 UD	13 UD	510 UD	260 UD	250 UD	1.3 U
4-Nitrophenol	**NS**	6.5 UD	6.5 UD	7.8 UD	20 UD	7.9 UD	26 UD	20 UD	790 UD	400 UD	390 UD	1.3 U
Acenaphthene	**20**	**210 D**	**200 D**	**61 D**	**110 D**	**120 D**	**55 D**	**40 D**	**370 JD**	**470 D**	**420 D**	1.3 U
Acenaphthylene	**NS**	6.5 UD	6.5 UD	0.32 UD	0.83 UD	0.33 UD	26 UD	0.81 UD	33 UD	16.7 UD	16 UD	1.3 U
Anthracene	**50**	6.5 UD	6.5 UD	0.61 UD	1.6 UD	0.61 UD	26 UD	1.5 UD	61 UD	31.3 UD	30 UD	1.3 U
Benzo[a]anthracene	**0.002**	6.5 UD	6.5 UD	0.24 UD	0.62 UD	0.24 UD	26 UD	0.61 UD	24 UD	12.5 UD	12 UD	1.3 U
Benzo[a]pyrene	**NS**	6.5 UD	6.5 UD	0.34 UD	0.89 UD	0.35 UD	26 UD	0.86 UD	35 UD	17.7 UD	17 UD	1.3 U
Benzo[b]fluoranthene	**0.002**	6.5 UD	6.5 UD	0.34 UD	0.89 UD	0.35 UD	26 UD	0.86 UD	35 UD	17.7 UD	17 UD	1.3 U
Benzo[g,h,i]perylene	**NS**	6.5 UD	6.5 UD	0.26 UD	0.68 UD	0.27 UD	26 UD	0.66 UD	27 UD	13.5 UD	13 UD	1.3 U
Benzo[k]fluoranthene	**0.002**	6.5 UD	6.5 UD	0.57 UD	1.5 UD	0.57 UD	26 UD	1.4 UD	57 UD	29.2 UD	28 UD	1.3 U
Bis(2-chloroethoxy)methane	**5**	6.5 UD	6.5 UD	2.2 UD	5.8 UD	2.3 UD	26 UD	5.6 UD	230 UD	120 UD	110 UD	1.3 U
Bis(2-chloroethyl)ether	**1**	6.5 UD	6.5 UD	0.71 UD	1.8 UD	0.71 UD	26 UD	1.8 UD	71 UD	36.5 UD	35 UD	1.3 U
Bis(2-ethylhexyl) phthalate	**5**	6.5 UD	6.5 UD	0.59 UD	1.5 UD	0.59 UD	26 UD	1.5 UD	59 UD	30.2 UD	29 UD	1.3 U
Butyl benzyl phthalate	**50**	6.5 UD	6.5 UD	0.44 UD	1.1 UD	0.45 UD	26 UD	1.1 UD	45 UD	22.9 UD	22 UD	1.3 U
Chrysene	**0.002**	6.5 UD	6.5 UD	0.48 UD	1.2 UD	0.49 UD	26 UD	1.2 UD	49 UD	25 UD	24 UD	1.3 U
Dibenz(a,h)anthracene	**NS**	6.5 UD	6.5 UD	0.57 UD	1.5 UD	0.57 UD	26 UD	1.4 UD	57 UD	29.2 UD	28 UD	1.3 U
Dibenzofuran	**NS**	100 D	97 D	28 D	62 D	66.8 D	26 UD	24 JD	430 UD	320 JD	280 JD	1.3 U
Diethyl phthalate	**50**	6.5 UD	6.5 UD	0.2 UD	0.52 UD	0.2 UD	26 UD	0.51 UD	20 UD	10.4 UD	10 UD	3.5
Dimethyl phthalate	**50**	6.5 UD	6.5 UD	5.2 D	6.5 JD	3.8 JD	26 UD	0.86 UD	35 UD	17.7 UD	17 UD	1.3 U
Di-n-butyl phthalate	**50**	6.5 UD	6.5 UD	1.2 UD	3.1 UD	1.2 UD	26 UD	3 UD	120 UD	61.5 UD	59 UD	1.3 U
Di-n-octyl phthalate	**50**	6.5 UD	6.5 UD	0.63 UD	1.6 UD	0.63 UD	26 UD	1.6 UD	63 UD	32.3 UD	31 UD	1.3 U
Fluoranthene	**50**	6.5 UD	6.5 UD	1.7 UD	4.4 UD	1.7 UD	26 UD	4.2 UD	170 UD	87.5 UD	84 UD	1.3 U
Fluorene	**50**	47 D	45 D	17 D	38 D	28.3 D	26 UD	12 JD	31 UD	**150 JD**	**140 JD**	1.3 U
Hexachlorobenzene	**0.04**	6.5 UD	6.5 UD	0.44 UD	1.1 UD	0.45 UD	26 UD	1.1 UD	45 UD	22.9 UD	22 UD	1.3 U
Hexachlorobutadiene	**0.5**	6.5 UD	6.5 UD	0.34 UD	0.89 UD	0.35 UD	26 UD	0.86 UD	35 UD	17.7 UD	17 UD	1.3 U
Hexachlorocyclopentadiene	**5**	25.5 UD	25.5 UD	3 UD	7.8 UD	3.1 UD	105 UD	7.6 UD	310 UD	160 UD	150 UD	5 U
Hexachloroethane	**5**	6.5 UD	6.5 UD	0.51 UD	1.3 UD	0.51 UD	26 UD	1.3 UD	51 UD	26 UD	25 UD	1.3 U
Indeno[1,2,3-cd]pyrene	**0.002**	6.5 UD	6.5 UD	1.3 UD	3.4 UD	1.3 UD	26 UD	3.3 UD	130 UD	68.8 UD	66 UD	1.3 U
Isophorone	**50**	6.5 UD	6.5 UD	0.83 UD	2.1 UD	0.84 UD	26 UD	2.1 UD	84 UD	42.7 UD	41 UD	1.3 U
Naphthalene	**10**	**48 D**	**46 D**	**53 D**	**53 D**	**4.8 JD**	**1100 D**	**210 D**	**3300 D**	**4300 D**	**4600 D**	1.3 U
Nitrobenzene	**0.4**	6.5 UD	6.5 UD	1.3 UD	3.4 UD	1.3 UD	26 UD	3.3 UD	130 UD	67.7 UD	65 UD	1.3 U
N-Nitrosodi-n-propylamine	**NS**	6.5 UD	6.5 UD	0.44 UD	1.1 UD	0.45 UD	26 UD	1.1 UD	45 UD	22.9 UD	22 UD	1.3 U
N-Nitrosodiphenylamine	**50**	6.5 UD	6.5 UD	1.6 UD	4.2 UD	1.6 UD	26 UD	4 UD	160 UD	83.3 UD	80 UD	1.3 U
Pentachlorophenol	**NS**	25.5 UD	25.5 UD	5.4 UD	14 UD	5.5 UD	105 UD	14 UD	550 UD	280 UD	270 UD	5 U
Phenanthrene	**50**	34 D	34 D	7.5 D	20 D	18.7 D	26 UD	0.56 UD	22 UD	11.5 UD	11 UD	1.3 U
Phenol	**NS**	6.5 UD	6.5 UD	4.9 JD	2.4 UD	0.94 UD	26 UD	2.3 UD	94 UD	47.9 UD	46 UD	1.3 U
Pyrene	**50**	6.5 UD	6.5 UD	0.26 UD	0.68 UD	0.27 UD	26 UD	0.66 UD	27 UD	13.5 UD	13 UD	1.3 U

Notes:
AWQVs - Ambient Water Quality Standards and Guidance Values listed in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1
NS - No Standard
U - Analyzed for but not detected.
J - Indicates an estimated value.
B - Analyte was detected in assocated blank, as well as in
D - The reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
ug/L - micrograms per liter.
Bold - exceeds TOGS
FB - Field Blank

Table 6
GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID Lab Sample ID Date Sampled Dilution Units=ug/L	NYSDEC Class GA AWQV	MW-11R D3235-03 6/27/2012 1	MW-11R D4541-03 10/11/2012 1	MW-11R D5286-03 12/20/2012 1	MW-12R D2017-04 3/29/2012 1	MW-12R D3235-04 6/27/2012 1	MW-12R D4541-06 10/11/2012 1	MW-12R (DUP) D4541-11 10/11/2012 1	MW-12R D5286-04 12/20/2012 1	MW14 D3235-07 6/27/2012 1	MW-14 D4541-07 10/11/2012 1
1,2,4-Trichlorobenzene	**5**	0.14 U	0.14 U	0.14 U	1.35 U	0.14 U	0.14 U	0.15 U	0.14 U	0.14 U	0.15 U
1,2-Dichlorobenzene	**3**	0.25 U	0.26 U	0.25 U	1.35 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,3-Dichlorobenzene	**3**	0.12 U	0.12 U	0.12 U	1.35 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,4-Dichlorobenzene	**3**	0.18 U	0.19 U	0.18 U	1.35 U	0.19 U	0.18 U	0.19 U	0.19 U	0.19 U	0.19 U
2,2'-oxybis[1-chloropropane]	**5**	0.35 U	0.36 U	0.35 U	1.35 U	0.36 U	0.36 U	0.37 U	0.36 U	0.36 U	0.37 U
2,4,5-Trichlorophenol	**NS**	2.3 U	2.3 U	2.3 U	1.35 U	2.3 U	2.3 U	2.4 U	2.3 U	2.3 U	2.4 U
2,4,6-Trichlorophenol	**NS**	2.1 U	2.2 U	2.1 U	1.35 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2,4-Dichlorophenol	**5**	3.2 U	3.3 U	3.2 U	1.35 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2,4-Dimethylphenol	**50**	0.7 U	0.72 U	0.7 U	1.35 U	0.72 U	0.71 U	0.73 U	0.72 U	0.72 U	0.73 U
2,4-Dinitrophenol	**10**	1.9 U	1.9 U	1.9 U	13.5 U	1.9 U	1.9 U	2 U	1.9 U	1.9 U	2 U
2,4-Dinitrotoluene	**5**	2.1 U	2.2 U	2.1 U	1.35 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2,6-Dinitrotoluene	**5**	0.27 U	0.28 U	0.27 U	1.35 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
2-Chloronaphthalene	**10**	0.15 U	0.15 U	0.15 U	1.35 U	0.15 U	0.15 U	0.16 U	0.15 U	0.15 U	0.16 U
2-Chlorophenol	**NS**	0.19 U	0.2 U	0.19 U	1.35 U	0.2 U	0.19 U	0.2 U	0.2 U	0.2 U	0.2 U
2-Methylnaphthalene	**NS**	0.19 U	0.2 U	0.19 U	1.35 U	0.2 U	0.19 U	0.2 U	0.2 U	0.2 U	3
2-Methylphenol	**NS**	1.8 U	1.9 U	1.8 U	1.35 U	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.9 U
2-Nitroaniline	**5**	4.2 U	4.4 U	4.2 U	1.35 U	4.4 U	4.3 U	4.4 U	4.4 U	4.4 U	4.4 U
2-Nitrophenol	**NS**	4.4 U	4.5 U	4.4 U	1.35 U	4.5 U	4.5 U	4.6 U	4.5 U	4.5 U	4.6 U
3,3'-Dichlorobenzidine	**5**	3.6 U	3.7 U	3.6 U	1.35 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
3-Nitroaniline	**5**	2 U	2.1 U	2 U	5.5 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
4,6-Dinitro-2-methylphenol	**NS**	1.9 U	1.9 U	1.9 U	5.5 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
4-Bromophenyl phenyl ether	**NS**	0.42 U	0.43 U	0.42 U	1.35 U	0.43 U	0.43 U	0.44 U	0.43 U	0.43 U	0.44 U
4-Chloro-3-methylphenol	**NS**	1.7 U	1.8 U	1.7 U	1.35 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
4-Chloroaniline	**5**	2.6 U	2.7 U	2.6 U	1.35 UQ	2.7 U	2.7 U	2.8 U	2.7 U	2.7 U	2.8 U
4-Chlorophenyl phenyl ether	**NS**	0.27 U	0.28 U	0.27 U	1.35 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
4-Nitroaniline	**5**	2.5 U	2.6 U	2.5 U	1.35 U	2.6 U	2.5 U	2.6 U	2.6 U	2.6 U	2.6 U
4-Nitrophenol	**NS**	3.9 U	4 U	3.9 U	1.35 U	4 U	3.9 U	4 U	4 U	4 U	4 U
Acenaphthene	**20**	0.17 U	0.18 U	0.17 U	1.35 U	0.18 U	0.17 U	0.18 U	0.18 U	12	18
Acenaphthylene	**NS**	0.16 U	0.16 U	0.16 U	1.35 U	0.16 U	0.16 U	0.17 U	0.16 U	0.16 U	0.17 U
Anthracene	**50**	0.3 U	0.31 U	0.3 U	1.35 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Benzo[a]anthracene	**0.002**	0.12 U	0.12 U	0.12 U	1.35 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Benzo[a]pyrene	**NS**	0.17 U	0.18 U	0.17 U	1.35 U	0.18 U	0.17 U	0.18 U	1 J	0.18 U	0.18 U
Benzo[b]fluoranthene	**0.002**	0.17 U	0.18 U	0.17 U	1.35 U	0.18 U	0.17 U	0.18 U	1.3 J	0.18 U	0.18 U
Benzo[g,h,i]perylene	**NS**	0.13 U	0.13 U	0.13 U	1.35 U	0.13 U	0.13 U	0.14 U	0.13 U	0.13 U	0.14 U
Benzo[k]fluoranthene	**0.002**	0.28 U	0.29 U	0.28 U	1.35 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
Bis(2-chloroethoxy)methane	**5**	1.1 U	1.1 U	1.1 U	1.35 U	1.1 U	1.1 U	1.2 U	1.1 U	1.1 U	1.2 U
Bis(2-chloroethyl)ether	**1**	0.35 U	0.36 U	0.35 U	1.35 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
Bis(2-ethylhexyl) phthalate	**5**	0.29 U	0.3 U	0.29 U	1.35 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.6 J
Butyl benzyl phthalate	**50**	0.22 U	0.23 U	0.22 U	1.35 U	0.23 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U
Chrysene	**0.002**	0.24 U	0.25 U	0.24 U	1.35 U	0.25 U	0.24 U	0.25 U	0.25 U	0.25 U	0.25 U
Dibenz(a,h)anthracene	**NS**	0.28 U	0.29 U	0.28 U	1.35 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
Dibenzofuran	**NS**	2.1 U	2.2 U	2.1 U	1.35 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
Diethyl phthalate	**50**	0.1 U	0.1 U	0.1 U	3.7	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dimethyl phthalate	**50**	0.17 U	0.18 U	0.17 U	1.35 U	0.18 U	0.17 U	0.18 U	0.18 U	0.18 U	2.3 J
Di-n-butyl phthalate	**50**	0.59 U	0.61 U	0.59 U	1.35 U	0.61 U	0.6 U	0.61 U	0.61 U	0.61 U	0.61 U
Di-n-octyl phthalate	**50**	0.31 U	0.32 U	0.31 U	1.35 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Fluoranthene	**50**	0.84 U	0.87 U	0.84 U	1.35 U	0.87 U	0.86 U	0.87 U	1.9 J	1.5 J	1.4 J
Fluorene	**50**	0.15 U	0.15 U	0.15 U	1.35 U	0.15 U	0.15 U	0.16 U	0.15 U	3.4	4.6
Hexachlorobenzene	**0.04**	0.22 U	0.23 U	0.22 U	1.35 U	0.23 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U
Hexachlorobutadiene	**0.5**	0.17 U	0.18 U	0.17 U	1.35 U	0.18 U	0.17 U	0.18 U	0.18 U	0.18 U	0.18 U
Hexachlorocyclopentadiene	**5**	1.5 U	1.5 U	1.5 UQ	5.5 U	1.5 U	1.5 U	1.6 U	1.5 UQ	1.5 U	1.6 U
Hexachloroethane	**5**	0.25 U	0.26 U	0.25 U	1.35 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
Indeno[1,2,3-cd]pyrene	**0.002**	0.66 U	0.68 U	0.66 U	1.35 U	0.68 U	0.67 U	0.69 U	0.68 U	0.68 U	0.69 U
Isophorone	**50**	0.41 U	0.42 U	0.41 U	1.35 U	0.42 U	0.42 U	0.43 U	0.42 U	0.42 U	0.43 U
Naphthalene	**10**	0.19 U	0.2 U	0.19 U	1.8 J	0.2 U	0.19 U	0.2 U	0.2 U	0.2 U	0.2 U
Nitrobenzene	**0.4**	0.65 U	0.67 U	0.65 U	1.35 U	0.67 U	0.66 U	0.68 U	0.67 U	0.67 U	0.68 U
N-Nitrosodi-n-propylamine	**NS**	0.22 U	0.23 U	0.22 U	1.35 U	0.23 U	0.22 U	0.23 U	0.23 U	0.23 U	0.23 U
N-Nitrosodiphenylamine	**50**	0.8 U	0.82 U	0.8 U	1.35 U	0.82 U	0.82 U	0.83 U	0.82 U	0.82 U	0.83 U
Pentachlorophenol	**NS**	2.7 U	2.8 U	2.7 U	5.5 U	2.8 U	2.7 U	2.8 U	2.8 U	2.8 U	2.8 U
Phenanthrene	**50**	0.11 U	0.11 U	0.11 U	1.35 U	0.11 U	0.11 U	0.11 U	1.2 J	0.11 U	1.6 J
Phenol	**NS**	0.46 U	0.47 U	0.46 U	1.35 U	0.47 U	0.47 U	0.48 U	0.47 U	0.47 U	0.48 U
Pyrene	**50**	0.13 U	0.13 U	0.13 U	1.35 U	0.13 U	0.13 U	0.14 U	1.7 J	1.7 J	1.7 J

Notes:
AWQVs - Ambient Water Quality Standards and Guidance V
NS - No Standard
U - Analyzed for but not detected.
J - Indicates an estimated value.
B - Analyte was detected in assocated blank, as well as in
D - The reported value is from a secondary analysis with a d
ug/L - micrograms per liter.
Bold - exceeds TOGS
FB - Field Blank

Table 6
GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID	NYSDEC	MW-14	MW15	MW-15	MW-15 (DUP)	MW-15	MW-15	MW16	MW-16	MW-16	MW-16
Lab Sample ID	Class GA	D5286-05	D2017-05	D3235-08	D3235-11	D4541-08	D5286-06	D2017-06	D3235-09	D4541-09	D5286-09
Date Sampled	AWQV	12/20/2012	3/29/2012	6/27/2012	6/27/2012	10/11/2012	12/20/2012	3/29/2012	6/27/2012	10/11/2012	12/20/2012
Dilution		1	1	1	1	1	1	1	1	1	1
Units=ug/L											
1,2,4-Trichlorobenzene	**5**	0.14 U	1.3 U	0.15 U	0.15 U	0.14 U	0.14 U	1.35 U	0.15 U	0.14 U	0.15 U
1,2-Dichlorobenzene	**3**	0.26 U	1.3 U	0.26 U	0.27 U	0.26 U	0.25 U	1.35 U	0.26 U	0.26 U	0.26 U
1,3-Dichlorobenzene	**3**	0.12 U	1.3 U	0.13 U	0.13 U	0.12 U	0.12 U	1.35 U	0.12 U	0.12 U	0.13 U
1,4-Dichlorobenzene	**3**	0.18 U	1.3 U	0.19 U	0.19 U	0.18 U	0.18 U	1.35 U	0.19 U	0.19 U	0.19 U
2,2'-oxybis[1-chloropropane]	**5**	0.36 U	1.3 U	0.37 U	0.37 U	0.36 U	0.35 U	1.35 U	0.37 U	0.36 U	0.36 U
2,4,5-Trichlorophenol	**NS**	2.3 U	1.3 U	2.4 U	2.4 U	2.3 U	2.3 U	1.35 U	2.4 U	2.3 U	2.4 U
2,4,6-Trichlorophenol	**NS**	2.2 U	1.3 U	2.2 U	2.3 U	2.2 U	2.1 U	1.35 U	2.2 U	2.2 U	2.2 U
2,4-Dichlorophenol	**5**	3.3 U	1.3 U	3.4 U	3.4 U	3.3 U	3.2 U	1.35 U	3.3 U	3.3 U	3.3 U
2,4-Dimethylphenol	**50**	0.71 U	1.3 U	1.2 J	1.3 J	0.71 U	0.71 U	1.35 U	0.73 U	0.72 U	0.73 U
2,4-Dinitrophenol	**10**	1.9 U	13 U	2 U	2 U	1.9 U	1.9 U	13.5 U	2 U	1.9 U	2 U
2,4-Dinitrotoluene	**5**	2.2 U	1.3 U	2.2 U	2.2 U	2.2 U	2.1 U	1.35 U	2.2 U	2.2 U	2.2 U
2,6-Dinitrotoluene	**5**	0.28 U	1.3 U	0.28 U	0.29 U	0.28 U	0.27 U	1.35 U	0.28 U	0.28 U	0.28 U
2-Chloronaphthalene	**10**	0.15 U	1.3 U	0.16 U	0.16 U	0.15 U	0.15 U	1.35 U	0.16 U	0.15 U	0.16 U
2-Chlorophenol	**NS**	0.19 U	1.3 U	0.2 U	0.2 U	0.19 U	0.19 U	1.35 U	0.2 U	0.2 U	0.2 U
2-Methylnaphthalene	**NS**	5	1.3 U	0.2 U	0.2 U	0.19 U	0.19 U	1.35 U	0.2 U	0.2 U	0.2 U
2-Methylphenol	**NS**	1.8 U	1.3 U	1.9 U	1.9 U	1.8 U	1.8 U	1.35 U	1.9 U	1.9 U	1.9 U
2-Nitroaniline	**5**	4.3 U	1.3 U	4.5 U	4.5 U	4.3 U	4.3 U	1.35 U	4.4 U	4.4 U	4.4 U
2-Nitrophenol	**NS**	4.5 U	1.3 U	4.6 U	4.7 U	4.5 U	4.4 U	1.35 U	4.6 U	4.5 U	4.6 U
3,3'-Dichlorobenzidine	**5**	3.7 U	1.3 U	3.8 U	3.8 U	3.7 U	3.6 U	1.35 U	3.7 U	3.7 U	3.7 U
3-Nitroaniline	**5**	2.1 U	5.5 U	2.1 U	2.1 U	2.1 U	2 U	5.5 U	2.1 U	2.1 U	2.1 U
4,6-Dinitro-2-methylphenol	**NS**	1.9 U	5.5 U	2 U	2 U	1.9 U	1.9 U	5.5 U	1.9 U	1.9 U	1.9 U
4-Bromophenyl phenyl ether	**NS**	0.43 U	1.3 U	0.44 U	0.45 U	0.43 U	0.42 U	1.35 U	0.44 U	0.43 U	0.44 U
4-Chloro-3-methylphenol	**NS**	1.8 U	1.3 U	1.8 U	1.8 U	1.8 U	1.7 U	1.35 U	1.8 U	1.8 U	1.8 U
4-Chloroaniline	**5**	2.7 U	1.3 UQ	2.8 U	2.8 U	2.7 U	2.7 U	1.35 UQ	2.8 U	2.7 U	2.8 U
4-Chlorophenyl phenyl ether	**NS**	0.28 U	1.3 U	0.28 U	0.29 U	0.28 U	0.27 U	1.35 U	0.28 U	0.28 U	0.28 U
4-Nitroaniline	**5**	2.5 U	2.6 U	2.6 U	2.6 U	2.5 U	2.5 U	1.35 U	2.6 U	2.6 U	2.6 U
4-Nitrophenol	**NS**	3.9 U	1.3 U	4.1 U	4.1 U	3.9 U	3.9 U	1.35 U	4 U	4 U	4 U
Acenaphthene	**20**	22.7	34	35	37	0.17 U	0.17 U	1.35 U	0.18 U	0.18 U	0.18 U
Acenaphthylene	**NS**	0.16 U	1.3 U	0.17 U	0.17 U	0.16 U	0.16 U	1.35 U	0.17 U	0.16 U	0.17 U
Anthracene	**50**	1.5 J	1.3 U	0.32 U	0.32 U	0.31 U	0.3 U	1.35 U	0.31 U	0.31 U	0.31 U
Benzo[a]anthracene	**0.002**	0.12 U	1.3 U	0.13 U	0.13 U	0.12 U	0.12 U	1.35 U	0.12 U	0.12 U	0.13 U
Benzo[a]pyrene	**NS**	0.17 U	1.3 U	0.18 U	0.18 U	0.17 U	0.17 U	1.35 U	0.18 U	0.18 U	0.18 U
Benzo[b]fluoranthene	**0.002**	0.17 U	1.3 U	0.18 U	0.18 U	0.17 U	0.17 U	1.35 U	0.18 U	0.18 U	0.18 U
Benzo[g,h,i]perylene	**NS**	0.13 U	1.3 U	0.14 U	0.14 U	0.13 U	0.13 U	1.35 U	0.14 U	0.13 U	0.14 U
Benzo[k]fluoranthene	**0.002**	0.29 U	1.3 U	0.29 U	0.3 U	0.29 U	0.28 U	1.35 U	0.29 U	0.29 U	0.29 U
Bis(2-chloroethoxy)methane	**5**	1.1 U	1.3 U	1.2 U	1.2 U	1.1 U	1.1 U	1.35 U	1.2 U	1.1 U	1.2 U
Bis(2-chloroethyl)ether	**1**	0.36 U	1.3 U	0.37 U	0.37 U	0.36 U	0.35 U	1.35 U	0.36 U	0.36 U	0.36 U
Bis(2-ethylhexyl) phthalate	**5**	0.3 U	1.3 U	0.31 U	0.31 U	2.1 J	0.29 U	1.35 U	0.3 U	0.3 U	0.3 U
Butyl benzyl phthalate	**50**	0.22 U	1.3 U	0.23 U	0.23 U	0.22 U	0.22 U	1.35 U	0.23 U	0.23 U	0.23 U
Chrysene	**0.002**	0.24 U	1.3 U	0.25 U	0.26 U	0.24 U	0.24 U	1.35 U	0.25 U	0.25 U	0.25 U
Dibenz(a,h)anthracene	**NS**	0.29 U	1.3 U	0.29 U	0.3 U	0.29 U	0.28 U	1.35 U	0.29 U	0.29 U	0.29 U
Dibenzofuran	**NS**	2.2 U	11	8 J	8.6 J	2.2 U	2.1 U	1.35 U	2.2 U	2.2 U	2.2 U
Diethyl phthalate	**50**	0.1 U	4.5	0.11 U	0.11 U	1.7 J	0.1 U	1.35 U	0.1 U	0.1 U	0.1 U
Dimethyl phthalate	**50**	0.17 U	1.3 U	0.18 U	0.18 U	2.9	1.1 J	1.35 U	0.18 U	0.18 U	1.7 J
Di-n-butyl phthalate	**50**	0.6 U	1.3 U	0.62 U	0.63 U	0.6 U	0.6 U	1.35 U	0.61 U	0.61 U	0.61 U
Di-n-octyl phthalate	**50**	0.32 U	1.3 U	0.33 U	0.33 U	0.32 U	0.31 U	1.35 U	0.32 U	0.32 U	0.32 U
Fluoranthene	**50**	2.2 J	1.3 U	0.88 U	0.89 U	0.86 U	0.85 U	1.35 U	0.87 U	0.87 U	0.88 U
Fluorene	**50**	6.4	1.3 U	0.16 U	0.16 U	0.15 U	0.15 U	1.35 U	0.16 U	0.15 U	0.16 U
Hexachlorobenzene	**0.04**	0.22 U	1.3 U	0.23 U	0.23 U	0.22 U	0.22 U	1.35 U	0.23 U	0.23 U	0.23 U
Hexachlorobutadiene	**0.5**	0.17 U	1.3 U	0.18 U	0.18 U	0.17 U	0.17 U	1.35 U	0.18 U	0.18 U	0.18 U
Hexachlorocyclopentadiene	**5**	1.5 UQ	5.5 U	1.6 U	1.6 U	1.5 U	1.5 UQ	5.5 U	1.6 U	1.5 U	1.6 UQ
Hexachloroethane	**5**	0.26 U	1.3 U	0.26 U	0.27 U	0.26 U	0.25 U	1.35 U	0.26 U	0.26 U	0.26 U
Indeno[1,2,3-cd]pyrene	**0.002**	0.67 U	1.3 U	0.69 U	0.7 U	0.67 U	0.67 U	1.35 U	0.69 U	0.68 U	0.69 U
Isophorone	**50**	0.42 U	1.3 U	0.43 U	0.44 U	0.42 U	0.41 U	1.35 U	0.43 U	0.42 U	0.43 U
Naphthalene	**10**	0.19 U	1.3 U	0.2 U	0.2 U	0.19 U	0.19 U	1.35 U	0.2 U	0.2 U	0.2 U
Nitrobenzene	**0.4**	0.66 U	1.3 U	0.68 U	0.69 U	0.66 U	0.66 U	1.35 U	0.68 U	0.67 U	0.68 U
N-Nitrosodi-n-propylamine	**NS**	0.22 U	1.3 U	0.23 U	0.23 U	0.22 U	0.22 U	1.35 U	0.23 U	0.23 U	0.23 U
N-Nitrosodiphenylamine	**50**	0.82 U	1.3 U	0.84 U	0.85 U	0.82 U	0.81 U	1.35 U	0.83 U	0.82 U	0.83 U
Pentachlorophenol	**NS**	2.7 U	5.5 U	2.8 U	2.9 U	2.7 U	2.7 U	5.5 U	2.8 U	2.8 U	2.8 U
Phenanthrene	**50**	3.5	1.3 U	0.12 U	0.12 U	0.11 U	0.11 U	1.35 U	0.11 U	0.11 U	0.11 U
Phenol	**NS**	0.47 U	1.3 U	0.48 U	0.49 U	0.47 U	0.46 U	1.35 U	0.48 U	0.47 U	0.48 U
Pyrene	**50**	2.1 J	1.3 U	0.14 U	0.14 U	0.13 U	0.13 U	1.35 U	0.14 U	0.13 U	0.14 U

Notes:
AWQVs - Ambient Water Quality Standards and Guidance V
NS - No Standard
U - Analyzed for but not detected.
J - Indicates an estimated value.
B - Analyte was detected in assocated blank, as well as in
D - The reported value is from a secondary analysis with a d
ug/L - micrograms per liter.
Bold - exceeds TOGS
FB - Field Blank

Table 6
GROUNDWATER ANALYTICAL RESULTS - SEMI-VOLATILE ORGANIC COMPOUNDS
QUEENS WEST DEVELOPMENT - PARCEL 9

Client ID Lab Sample ID Date Sampled Dilution Units=ug/L	NYSDEC Class GA AWQV	MW17 D2017-07 3/29/2012 1	FB D2017-08 3/29/2012 1	FB D3235-10 6/27/2012 1	FB D4541-10 10/11/2012 1	FB D5286-10 12/20/2012 1
1,2,4-Trichlorobenzene	5	1.3 U	1.35 U	0.15 U	0.14 U	0.14 U
1,2-Dichlorobenzene	3	1.3 U	1.35 U	0.26 U	0.26 U	0.26 U
1,3-Dichlorobenzene	3	1.3 U	1.35 U	0.12 U	0.12 U	0.12 U
1,4-Dichlorobenzene	3	1.3 U	1.35 U	0.19 U	0.19 U	0.18 U
2,2'-oxybis[1-chloropropane]	5	1.3 U	1.35 U	0.37 U	0.36 U	0.36 U
2,4,5-Trichlorophenol	NS	1.3 U	1.35 U	2.4 U	2.3 U	2.3 U
2,4,6-Trichlorophenol	NS	1.3 U	1.35 U	2.2 U	2.2 U	2.2 U
2,4-Dichlorophenol	5	1.3 U	1.35 U	3.3 U	3.3 U	3.3 U
2,4-Dimethylphenol	50	1.3 U	1.35 U	0.73 U	0.72 U	0.71 U
2,4-Dinitrophenol	10	13 U	13.5 U	2 U	1.9 U	1.9 U
2,4-Dinitrotoluene	5	1.3 U	1.35 U	2.2 U	2.2 U	2.2 U
2,6-Dinitrotoluene	5	1.3 U	1.35 U	0.28 U	0.28 U	0.28 U
2-Chloronaphthalene	10	1.3 U	1.35 U	0.16 U	0.15 U	0.15 U
2-Chlorophenol	NS	1.3 U	1.35 U	0.2 U	0.2 U	0.19 U
2-Methylnaphthalene	NS	1.3 U	1.35 U	0.2 U	0.2 U	0.19 U
2-Methylphenol	NS	1.3 U	1.35 U	1.9 U	1.9 U	1.8 U
2-Nitroaniline	5	1.3 U	1.35 U	4.4 U	4.4 U	4.3 U
2-Nitrophenol	NS	1.3 U	1.35 U	4.6 U	4.5 U	4.5 U
3,3'-Dichlorobenzidine	5	1.3 U	1.35 U	3.7 U	3.7 U	3.7 U
3-Nitroaniline	5	5 U	5.5 U	2.1 U	2.1 U	2.1 U
4,6-Dinitro-2-methylphenol	NS	5 U	5.5 U	1.9 U	1.9 U	1.9 U
4-Bromophenyl phenyl ether	NS	1.3 U	1.35 U	0.44 U	0.43 U	0.43 U
4-Chloro-3-methylphenol	NS	1.3 U	1.35 U	1.8 U	1.8 U	1.8 U
4-Chloroaniline	5	1.3 UQ	1.35 UQ	2.8 U	2.7 U	2.7 U
4-Chlorophenyl phenyl ether	NS	1.3 U	1.35 U	0.28 U	0.28 U	0.28 U
4-Nitroaniline	5	2.6 U	2.7 U	2.6 U	2.6 U	2.5 U
4-Nitrophenol	NS	1.3 U	1.35 U	4 U	4 U	3.9 U
Acenaphthene	20	1.3 U	1.35 U	0.18 U	0.18 U	0.17 U
Acenaphthylene	NS	1.3 U	1.35 U	0.17 U	0.16 U	0.16 U
Anthracene	50	1.3 U	1.35 U	0.31 U	0.31 U	0.31 U
Benzo[a]anthracene	0.002	1.3 U	1.35 U	0.12 U	0.12 U	0.12 U
Benzo[a]pyrene	NS	1.3 U	1.35 U	0.18 U	0.18 U	0.17 U
Benzo[b]fluoranthene	0.002	1.3 U	1.35 U	0.18 U	0.18 U	0.17 U
Benzo[g,h,i]perylene	NS	1.3 U	1.35 U	0.14 U	0.13 U	0.13 U
Benzo[k]fluoranthene	0.002	1.3 U	1.35 U	0.29 U	0.29 U	0.29 U
Bis(2-chloroethoxy)methane	5	1.3 U	1.35 U	1.2 U	1.1 U	1.1 U
Bis(2-chloroethyl)ether	1	1.3 U	1.35 U	0.36 U	0.36 U	0.36 U
Bis(2-ethylhexyl) phthalate	5	1.3 U	1.35 U	0.3 U	0.3 U	0.3 U
Butyl benzyl phthalate	50	1.3 U	1.35 U	0.23 U	0.23 U	0.22 U
Chrysene	0.002	1.3 U	1.35 U	0.25 U	0.25 U	0.24 U
Dibenz(a,h)anthracene	NS	1.3 U	1.35 U	0.29 U	0.29 U	0.29 U
Dibenzofuran	NS	1.3 U	1.35 U	2.2 U	2.2 U	2.2 U
Diethyl phthalate	50	4.7	4.3	0.1 U	0.1 U	0.1 U
Dimethyl phthalate	50	1.3 U	1.35 U	0.18 U	0.18 U	0.17 U
Di-n-butyl phthalate	50	1.3 U	1.35 U	0.61 U	0.61 U	0.6 U
Di-n-octyl phthalate	50	1.3 U	1.35 U	0.32 U	0.32 U	0.32 U
Fluoranthene	50	1.3 U	1.35 U	0.87 U	0.87 U	0.86 U
Fluorene	50	1.3 U	1.35 U	0.16 U	0.15 U	0.15 U
Hexachlorobenzene	0.04	1.3 U	1.35 U	0.23 U	0.23 U	0.22 U
Hexachlorobutadiene	0.5	1.3 U	1.35 U	0.18 U	0.18 U	0.17 U
Hexachlorocyclopentadiene	5	5 U	5.5 U	1.6 U	1.5 U	1.5 UQ
Hexachloroethane	5	1.3 U	1.35 U	0.26 U	0.26 U	0.26 U
Indeno[1,2,3-cd]pyrene	0.002	1.3 U	1.35 U	0.69 U	0.68 U	0.67 U
Isophorone	50	1.3 U	1.35 U	0.43 U	0.42 U	0.42 U
Naphthalene	10	1.3 U	1.35 U	0.2 U	0.2 U	0.19 U
Nitrobenzene	0.4	1.3 U	1.35 U	0.68 U	0.67 U	0.66 U
N-Nitrosodi-n-propylamine	NS	1.3 U	1.35 U	0.23 U	0.23 U	0.22 U
N-Nitrosodiphenylamine	50	1.3 U	1.35 U	0.83 U	0.82 U	0.82 U
Pentachlorophenol	NS	5 U	5.5 U	2.8 U	2.8 U	2.7 U
Phenanthrene	50	1.3 U	1.35 U	0.11 U	0.11 U	0.11 U
Phenol	NS	1.3 U	1.35 U	0.48 U	0.47 U	0.47 U
Pyrene	50	1.3 U	1.35 U	0.14 U	0.13 U	0.13 U

Notes:
AWQVs - Ambient Water Quality Standards and Guidance v
NS - No Standard
U - Analyzed for but not detected.
J - Indicates an estimated value.
B - Analyte was detected in assocated blank, as well as in
D - The reported value is from a secondary analysis with a d
ug/L - micrograms per liter.
Bold - exceeds TOGS
FB - Field Blank

APPENDICES

Appendix A - Site Cover Inspection Log and Photographs

SITE CAP INSPECTION FORM
QUEENS WEST PARCEL 9
48th AVE. AND CENTER BLVD., LONG ISLAND CITY, NEW YORK

Inspector: John Mascioli

Date: December 20, 2012

1. Courtyard/landscaped areas:

Adequate top soil cover present?

Yes

Signs of erosion?

No

Recommended corrective action:

None

2. Outdoor paving/sidewalks:

Note any signs of cracking or other damage:

None

Note any areas where greater than 25% of surface is cracked/damaged:

None

Recommended corrective action:

None

3. Lower level garage slab:

Note any signs of cracking or other damage:

Surficial cracking (hairline) was noted
No significant visible cracking was observed

Note any areas where greater than 25% of surface is cracked/damaged:

None

Recommended corrective action:

None

Comments (attach photos/sketches to illustrate any damage noted):

Photographs attached



Photo 1: View of typical landscaping and paving in courtyard.



Photo 2: View of typical landscaping in courtyard



Photo 3: View of landscaping and paving in courtyard looking towards 47th Road.



Photo 4: View of typical landscaping and paving along 5th Street.



Photo 5: View of typical landscaping and paving along Center Boulevard.



Photo 6: View of typical landscaping and paving along 48th Street.



Photo 7: View of Zone 3 Equipment.



Photo 8: View of typical condition of concrete slab in parking garage at parking space 105.



Photo 9: View of Zone 4 Equipment.

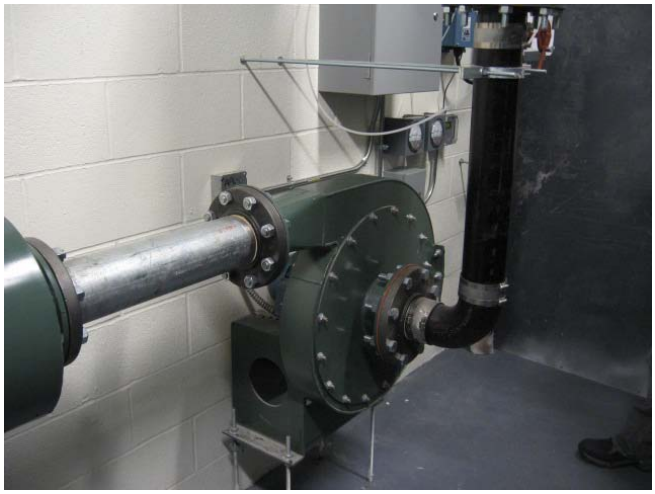


Photo 10: View of Zone 2 Equipment.



Photo 11: View of Zone 1 Equipment.

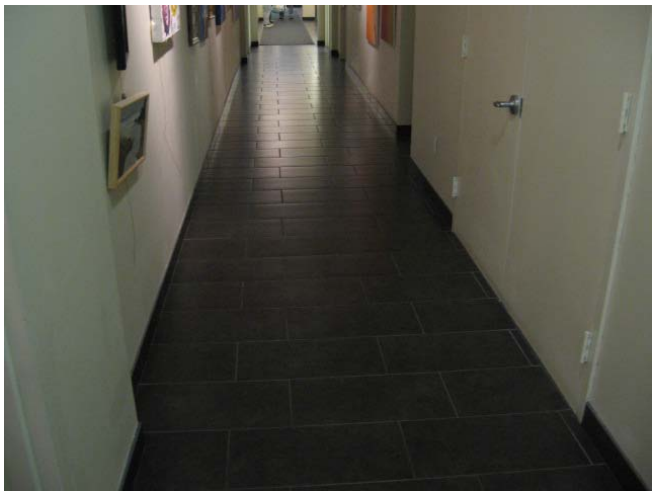


Photo 12: View of typical corridor with ceramic floor tiles.

Appendix B - Vapor Mitigation System Inspection Logs

Appendix C - Monitoring Well Sampling Logs

Appendix D - Vapor Sampling Analytical Results

Appendix E - Groundwater Sampling Analytical Results

Appendix F - Site-wide Inspection Log

SITE WIDE INSPECTION FORM
QUEENS WEST PARCEL 9
48th AVE. AND CENTER BLVD., LONG ISLAND CITY, NEW YORK

Inspector: John Mascioli

Date: December 20, 2012

1. Site Use Restrictions

No on-site vegetable gardens?

None

No groundwater withdrawal for potable/non-potable use?

None

Restricted residential maintained (single owner, or common ownership)?

Yes

2. Site Cap

Note the date that the annual site cap inspection was performed:

December 20, 2012

Repairs made as noted during inspection?

N/A

3. Soil Management

Note the date(s) of any soil disturbance activities conducted during the past year:

None

Proper soil management procedures implemented (cite appropriate close out reports)?

N/A

4. Groundwater Monitoring

Monitoring being conducted on a quarterly basis (note the dates of sampling conducted)?

3|29|12, 6|27|12, 10|11|12, 12|20|12

All on-site monitoring wells in working condition (note any repairs/replacement)?

Yes

5. Vapor Discharge Monitoring

Monitoring being conducted on a quarterly basis (note the dates of sampling conducted)?

3|29|12, 6|27|12, 10|11|12, 12|20|12

All vapor monitoring points in working condition (note any repairs/replacement)?

Yes

SITE WIDE INSPECTION FORM
QUEENS WEST PARCEL 9
48th AVE. AND CENTER BLVD., LONG ISLAND CITY, NEW YORK

6. Permits

Do vapor emissions meet NYSDEC regulatory standards?

Yes

7. Vapor mitigation system O&M

Are routine system check logs being completed by on-site representative?

Yes

Are Periodic Inspections being conducted as scheduled (note the dates of all inspections)?

Yes 1/31/12, 2/29/12, 3/23/12, 4/27/12, 5/31/12, 6/27/12, 7/26/12, 8/29/12, 9/20/12, 10/11/12, 11/14/12, 12/20/12

8. Recordkeeping

Check that the following records/reports are being maintained/completed (note report/log dates as appropriate):

1) Annual site cap inspection log

Yes, 12/20/12

2) Close-out report(s) for soil disburbance activities (including manifests for soil disposal)

N/A

3) Annual groundwater monitoring reports (including laboratory analytical data reports/groundwater contours)

Yes, included in 2012 PRR.

4) Annual vapor discharge monitoring reports

Yes, included in 2012 PRR

5) Routine System Check Log for vapor mitigation system

Yes

6) Periodic Inspection Log for vapor mitigation system

Yes

7) Annual vapor mitigation system O&M reports

Yes

9. Comments

(Note any deficiencies and recommendations for corrective actions.)

None

Appendix G - Institutional and Engineering Control Certification Form

Enclosure 2

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

Site Details — Box 1

Site No. C241049

Site Name Queens West (Hunter's Point) Parcel 9

Site Address: Center Blvd. and 47th Rd. and 48th Ave. Zip Code: 11101
City/Town: Long Island City
County: Queens
Site Acreage: 1.8

Reporting Period: ~~February 17~~, 2012 to ~~February 17, 2013~~
January 1 December 31, 2012

	YES	NO
1. Is the information above correct?	☐	●
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?	☐	●
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/ECs 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

Box 2A

	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	◆
9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	◆	☐

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C241049

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
19-1	Queens West Development Corporation	Ground Water Use Restriction Landuse Restriction Site Management Plan
19-19	Queens West Development Corporation	Ground Water Use Restriction Landuse Restriction Site Management Plan
19-5	Queens West Development Corporation	Ground Water Use Restriction Landuse Restriction Site Management Plan

Box 4

Description of Engineering Controls

Parcel	Engineering Control
19-1	Cover System Subsurface Barriers Vapor Mitigation
19-19	Cover System Subsurface Barriers Vapor Mitigation
19-5	Cover System Subsurface Barriers Vapor Mitigation

Engineering Control Details for Site No. C241049

Engineering Control Details for Site No. C241049

Parcel: 19-1

The Controlled Property may be used for restricted residential use as long as the following long-term engineering and institutional controls are employed:

a) All engineering controls (including the site cover and sub-slab vapor depressurization system and active venting system) must be operated and maintained as specified in the NYSDEC-approved Site Management Plan (SMP). No Engineering or Institutional Controls may be discontinued without a NYSDEC-approved amendment or extinguishment of the Environmental Easement;
b) Annual inspections of the Site, certifications of Institutional and Engineering Controls and Site usage of the controlled property, and Site Management Reporting to the Department must be conducted in accordance with the NYSDEC-approved SMP;
c) all future soil disturbance activities on the Site that will impact residual contaminated material, including, but not limited to, building construction or expansion, subgrade utility line construction or repair, must be conducted in accordance with the Soil Management provisions in the NYSDEC-approved SMP;
d) Operation Monitoring and Maintenance (OM&M) of the sub-slab depressurization system must be performed in a manner specified in the NYSDEC-approved SMP;
e) Groundwater and other environmental or public health monitoring required by the NYSDEC-approved SMP must be performed in a manner specified in that Plan;
f) Onsite environmental monitoring devices, including but not limited to, groundwater monitoring wells and soil vapor probes, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the NYSDEC-approved SMP;
g) The use of the groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose; and
h) Vegetable gardens are prohibited.

The Controlled Property may not be used for a higher level of use such as unrestricted residential without proper notification of NYSDEC of the change of, approval of that use by the NYSDEC, and an amendment of the SMP approved by NYSDEC.

Parcel: 19-19

The Controlled Property may be used for restricted residential use as long as the following long-term engineering and institutional controls are employed:

a) All engineering controls (including the site cover and sub-slab vapor depressurization system and active venting system) must be operated and maintained as specified in the NYSDEC-approved Site Management Plan (SMP). No Engineering or Institutional Controls may be discontinued without a NYSDEC-approved amendment or extinguishment of the Environmental Easement;
b) Annual inspections of the Site, certifications of Institutional and Engineering Controls and Site usage of the controlled property, and Site Management Reporting to the Department must be conducted in accordance with the NYSDEC-approved SMP;
c) all future soil disturbance activities on the Site that will impact residual contaminated material, including, but not limited to, building construction or expansion, subgrade utility line construction or repair, must be conducted in accordance with the Soil Management provisions in the NYSDEC-approved SMP;
d) Operation Monitoring and Maintenance (OM&M) of the sub-slab depressurization system must be performed in a manner specified in the NYSDEC-approved SMP;
e) Groundwater and other environmental or public health monitoring required by the NYSDEC-approved SMP must be performed in a manner specified in that Plan;
f) Onsite environmental monitoring devices, including but not limited to, groundwater monitoring wells and soil vapor probes, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the NYSDEC-approved SMP;
g) The use of the groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose; and
h) Vegetable gardens are prohibited.

The Controlled Property may not be used for a higher level of use such as unrestricted residential without proper notification of NYSDEC of the change of, approval of that use by the NYSDEC, and an amendment of the SMP approved by NYSDEC.

Engineering Control Details for Site No. C241049

Parcel: 19-5

The Controlled Property may be used for restricted residential use as long as the following long-term engineering and institutional controls are employed:

a) All engineering controls (including the site cover and sub-slab vapor depressurization system and active venting system) must be operated and maintained as specified in the NYSDEC-approved Site Management Plan (SMP). No Engineering or Institutional Controls may be discontinued without a NYSDEC-approved amendment or extinguishment of the Environmental Easement;
b) Annual inspections of the Site, certifications of Institutional and Engineering Controls and Site usage of the controlled property, and Site Management Reporting to the Department must be conducted in accordance with the NYSDEC-approved SMP;
c) all future soil disturbance activities on the Site that will impact residual contaminated material, including, but not limited to, building construction or expansion, subgrade utility line construction or repair, must be conducted in accordance with the Soil Management provisions in the NYSDEC-approved SMP;
d) Operation Monitoring and Maintenance (OM&M) of the sub-slab depressurization system must be performed in a manner specified in the NYSDEC-approved SMP;
e) Groundwater and other environmental or public health monitoring required by the NYSDEC-approved SMP must be performed in a manner specified in that Plan;
f) Onsite environmental monitoring devices, including but not limited to, groundwater monitoring wells and soil vapor probes, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the NYSDEC-approved SMP;
g) The use of the groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose; and
h) Vegetable gardens are prohibited.

The Controlled Property may not be used for a higher level of use such as unrestricted residential without proper notification of NYSDEC of the change of, approval of that use by the NYSDEC, and an amendment of the SMP approved by NYSDEC.

Box 5

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 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 compete.

YES	NO
■	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or 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. C241049

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 Martin Piazzola (print name) at 275 7th Avenue, 25th Fl, New York, NY 10001 (print business address)

am certifying as Avalon Riverview II, LLC, (Owner or Remedial Party)

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

Martin Piazzola

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

3/20/2013
Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional 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.

I Gilbert Gedeon (print name) at 104 E. 25th St New York, NY 10010 (print business address)

am certifying as a Qualified Environmental Professional for the Avalon Riverview II, LLC (Owner or Remedial Party)

STATE OF NEW YORK
GILBERT GEDEON
075399
LICENSED PROFESSIONAL ENGINEER

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

Stamp (Required for PE)

3/22/13
Date