Queens West Development
Parcel 9
QUEENS, NEW YORK

2009 Periodic Review Report and Annual Certification

NYSDEC BCP Number: C241049

ATC Project Number:

015.75420.0002

Prepared for:

AvalonBay Communities
275 Seventh Avenue, 25th Floor
New York, New York 10001

ATC ASSOCIATES INC.
104 East 25th Street, 10th Floor
New York, New York 10010

JANUARY 20, 2010

TABLE OF CONTENTS

1.0 INTRODUCTION 1
2.0 BACKGROUND 1
2.1 SITE DESCRIPTION 1
2.2 REMEDIAL INVESTIGATION FINDINGS 2
2.2.1 Geology, Hydrogeology and Subsurface Characteristics 2
2.2.2 Nature and Extent of Contamination 2
2.3 SITE REMEDIATION 3
2.3.1 Soil Excavation 3
2.3.2 Engineering Controls 3
2.3.3 Institutional Controls 4
3.0 SITE COVER OPERATION AND MAINTENANCE 6
3.1 SITE COVER INSPECTION 6
4.0 VAPOR MITIGATION SYSTEM OPERATION & MAINTENANCE 6
4.1 ROUTINE SYSTEM CHECKS 6
4.2 PERIODIC INSPECTIONS 6
5.0 MONITORING 7
5.1 DISCHARGE MONITORING 7
5.2 GROUNDWATER MONITORING 7
5.2.1 Monitoring Well Sampling 7
5.3 DISCUSSION 7
5.3.1 Vapor Discharge Monitoring Results 7
5.3.2 Groundwater Monitoring Results 8
6.0 CONCLUSIONS AND RECOMMENDATIONS 9
7.0 INSTITUTIONAL AND ENGINEERING CONTROL CERTIFICATION 10

FIGURES

Figure 1 - Site Location Map
Figure 2 - Queens West Development Parcels
Figure 3 - Site Plan and Engineering Controls
Figure 4 - BTEX and Naphthalene Concentrations in Groundwater

TABLES

Table 1 - Vapor Mitigation System Blower Runtimes
Table 2 - Vapor Mitigation System Operational Data
Table 3 - Vapor Discharge Sampling Analytical Results
Table 4 - Groundwater Fluid Level Measurements
Table 5 - Groundwater Sampling Analytical Results - Volatile Organic Compounds
Table 6 - Groundwater Sampling Analytical Results – Semi-volatile Organic Compounds

APPENDICES

Appendix A - Site Cover Inspection Log and Photographs
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
Appendix G - Institutional and Engineering Control Certification Form

1.0 INTRODUCTION

In March of 2009, AvalonBay Communities Inc., (AvalonBay), retained ATC Associates Inc. (ATC) to prepare the Periodic Review Report (PRR) for 2009 (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 2009 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

ATC conducted an inspection of the entire site cover on December 28, 2009 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 28, 2009 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 2009 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 runtime for Zone 1 was not recorded on a regular basis throughout the year due to the stockpiling of rubbish which blocked access to the control panel, which is mounted 10 feet above grade in the building loading dock and renovations of the loading dock. The renovations included raising the ground level, which should improve access to the Zone 1 control panel. Building personnel were instructed that the Zone 1 inspection log must be completed on a daily to weekly basis.

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. Minimal to no blower downtime (less than 1 day) was calculated for Zones 2 and 3 during this reporting period. Approximately 21.6 days of downtime was calculated for the Zone 1 blower. Most of this downtime occurred during the October-November 2009, when the blower was off during the renovation project in the loading dock. Approximately 27.9 days of downtime was calculated for the Zone 4 blower.

4.2 PERIODIC INSPECTIONS

Periodic system inspections were conducted by 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 15.0 inches of water ("H2O) and total flow readings ranged from 130 to 325 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 March 26, 2009, June 23, 2009, September 30, 2009 and December 15, 2009. The discharge sampling is described in more detail in Section 5.0.

5.0 MONITORING

5.1 DISCHARGE MONITORING

Vapor effluent samples were collected at each blower on March 26, 2009, June 23, 2009, September 30, 2009 and December 15, 2009 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 2009 reporting period, as summarized in the following table:

Sampling Dates	Wells Sampled
March 26 & 27, 2009	MW-2; MW-8; MW-11R; MW-12R; MW-15; MW-16; MW-17
June 22 & 23, 2009	MW-2; MW-8; MW-11R; MW-12R; MW-14: MW-15; MW-16; MW-17
September 29 & 30, 2009	MW-2; MW-8; MW-11R; MW-12R; MW-15; MW-16; MW-17
December 14 & 15, 2009	MW-2; MW-8; MW-11R; MW-12R; MW-14: MW-15; MW-16; MW-17

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, 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 2009 reporting period were consistent with the detected concentrations for the 2008 reporting period as summarized in the following table:

Compound	NYSDEC SGC	NYSDEC AGC	2008 Range	2009 Range	2008 Mean	2009 Mean
Benzene	1,300	0.13	ND - 9.6	ND - 12	1.42	3.12
Chloroform	150	0.043	ND - 5.9	ND - 18	5.67	3.41
Methylene Chloride	14,000	2.1	ND - 3.2	ND - 8	1.92	2.03
Tetrachloroethene (PCE)	1,000	1	ND - 88	ND - 68	10.74	10.44
Trichloroethene (TCE)	14,000	0.5	ND - 8.6	ND - 6.4	1.86	1.75

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.

Based on the AGC exceedances at Zone 4 for two consecutive quarters in 2008, AKRF concluded that treatment of the Zone 4 effluent was required to meet the NYSDEC discharge standards. Therefore, on December 24, 2008, two GAC adsorbers were installed in the Zone 4 blower discharge line to treat the extracted vapors. 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 2009 results are consistent with the 2008 results. Therefore, a modeling analysis was not preformed as part of the 2009 PRR.

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 and September 2009 sampling events, approximately 0.01 foot of product was measured in MW-14. Therefore, groundwater samples were not collected from MW-14 during the 1st and 3rd 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 1.96 feet to -1.36 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. In general, the lowest water table elevations were measured in MW-2, located southwest of the site, and the highest elevations were measured in MW-17 located east of the site, along 5th Avenue. 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 2009 sampling events. Figure 4 also shows BTEX and naphthalene concentrations detected in the post-remediation monitoring wells during the previous reporting period (in December 2008). Contaminant levels in groundwater within the containment wall (i.e., in wells MW-11R and MW-12R) continued to decrease during the 2009 reporting period, with all ethylbenzene, toluene, xylene, and naphthalene concentrations below their respective AWQVs. Benzene concentrations exceeded the Class GA AWQV of 1.0 microgram per liter (µg/l) in MW-12R in March (18 µg/l), June (2.7µg/l) September (6.9 µg/l), and December (5.5 µg/l). 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 536.8 µg/l and 11,000, respectively; and MW-2, located downgradient from the southwestern corner of the containment wall, exhibited maximum total BTEX and naphthalene concentrations of 1,618 µg/l and 310 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 located in the eastern portion of the site, upgradient of the containment wall (MW-14, MW-16, and MW-17), were 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 15 µg/l, which is about one order of magnitude lower than the benzene concentration detected in this well during the December 2007 sampling event (130 µg/l). The observed decrease in benzene levels in this well may have resulted from natural attenuation in conjunction with upgradient source removal and containment achieved by the Parcel 9 remediation.

6.0 CONCLUSIONS AND RECOMMENDATIONS

A site wide inspection was conducted on December 28, 2009, 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 Zones 2 and 3 throughout the 2009 reporting period. The operational efficiency of the Zone 1 and 4 blowers were approximately 94% and 92%, respectively for the 2009 calendar year.

- 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. The detected concentrations for the 2009 reporting period were consistent with the detected concentrations for the 2008 reporting period.

- All vacuum and flow rate measurements collected from the vapor mitigation system during the

2009 reporting period were within the operational ranges for the system blowers. Vacuum readings of 4 to 5 inches of water noted the Zone 4 blower following installation of the GAC adsorbers were at the lower end of the blower curve. Blower operation will be monitored during the 2010 reporting period, and potential system modifications will be evaluated to reduce losses caused by the GAC units and associated stress on the blower motor, if necessary. These modifications, if necessary, may include changing the GAC adsorber configuration from series to parallel and/or installing additional or larger adsorbers.

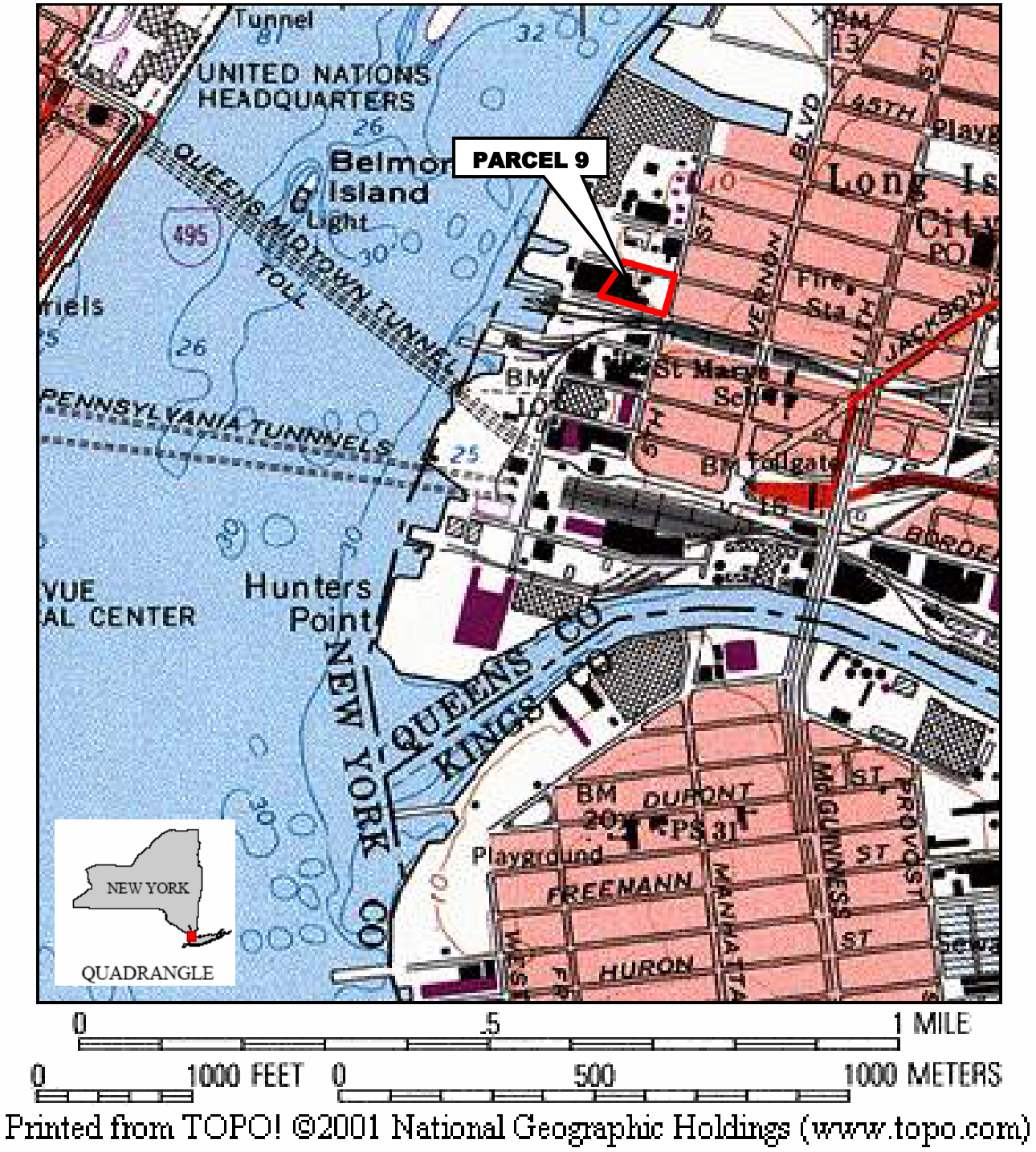
- During the 2009 reporting period, contaminant levels in groundwater within the containment wall for MW-11R continued to be non-detected as identified in the 2008 data. MW-12R contained concentrations of BTEX and naphthalene that are generally comparable to the 2008 data. Some detected concentrations from 2009 are higher than those concentrations detected during 2008, especially during the 1st quarter sampling period (March 2009). However, the remaining sampling events in 2009 identified decreasing concentrations consistent with the 2008 data, with all ethylbenzene, toluene, xylene, and naphthalene concentrations below their respective AWQVs, and benzene concentrations slightly exceeding the Class GA AWQV but one to two orders of magnitude lower than the October 2007 levels. 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.

- ATC recommends continuing the ongoing sampling and monitoring as identified in the 2006 SMP for the 2010 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



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

N

USGS TOPO, Brooklyn, NY Quad.

FIGURE 1 – SITE LOCATION MAP

Client:	Avalon Bay Communities
Site:	Queens West Parcel 9
ATC Project No.:	015.75420.0002
Year:	1995
Scale:	As shown

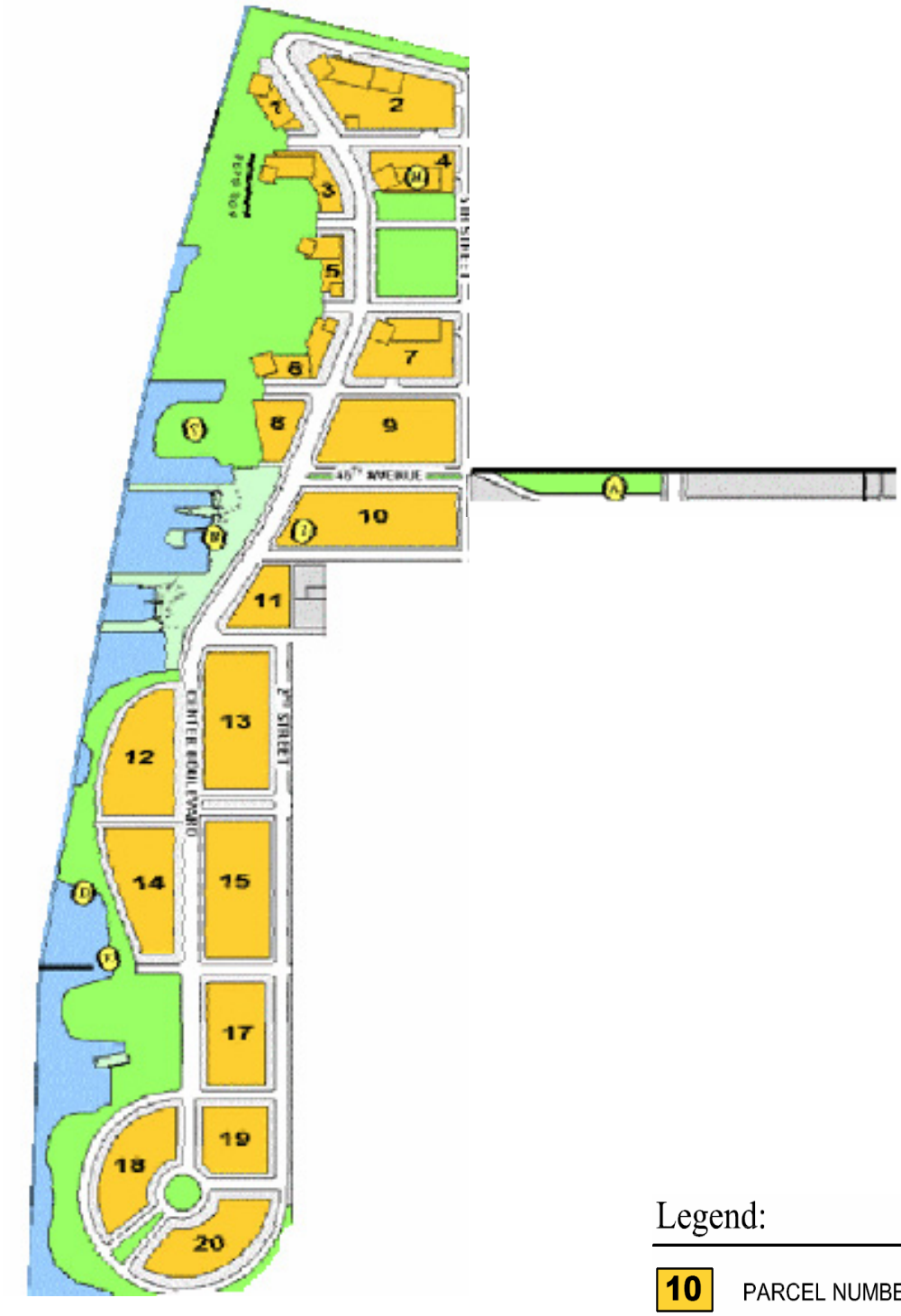
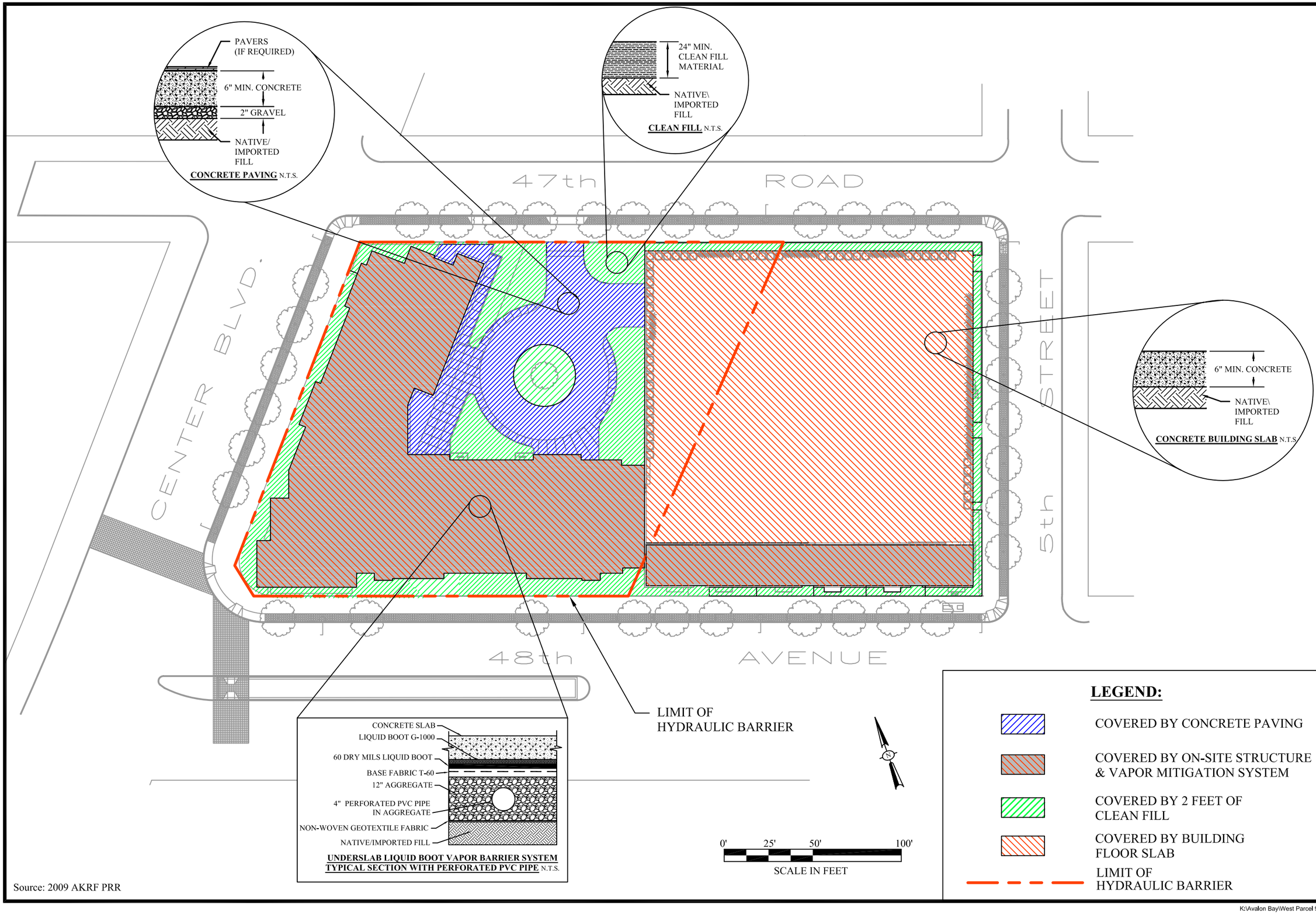


FIGURE 2 – QUEENS WEST DEVELOPMENT PARCELS

ATC ASSOCIATES INC.
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
ATC Project No.: 015.75420.0002



Source: 2009 AKRF PRR

ATC ASSOCIATES INC.
104 E. 25th Street, 10th Floor • New York, NY 10010-2917
(212) 353-8280 • FAX: (212) 979-8447

QUEENS WEST PARCEL 9
QUEENS, NEW YORK

SITE PLAN & ENGINEERING CONTROLS

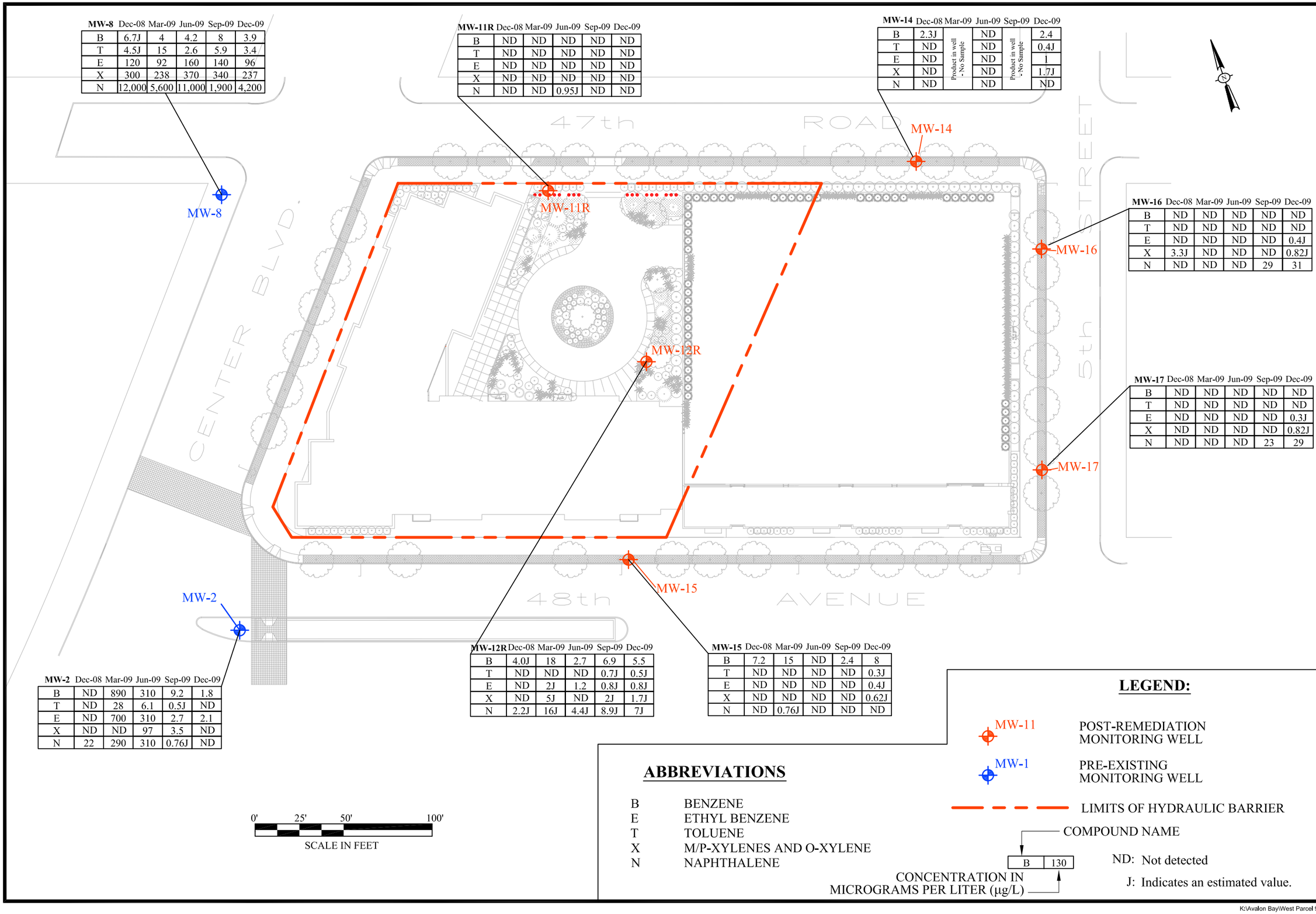
DATE
JAN. 2010

SCALE
As shown

PROJECT No.
15.75420.0002

FIGURE
3

K:\Avalon Bay\West Parcel 9\PRR 01.2010\Figures\Fig 3.dwg



MW-8

	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
B	6.7J	4	4.2	8	3.9
T	4.5J	15	2.6	5.9	3.4
E	120	92	160	140	96
X	300	238	370	340	237
N	12,000	5,600	11,000	1,900	4,200

MW-11R

	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
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	0.95J	ND	ND

MW-14

	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
B	2.3J	Product in well - No Sample	ND	Product in well - No Sample	2.4
T	ND		ND		0.4J
E	ND		ND		1
X	ND		ND		1.7J
N	ND		ND		ND

MW-16

	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
B	ND	ND	ND	ND	ND
T	ND	ND	ND	ND	ND
E	ND	ND	ND	ND	0.4J
X	3.3J	ND	ND	ND	0.82J
N	ND	ND	ND	29	31

MW-17

	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
B	ND	ND	ND	ND	ND
T	ND	ND	ND	ND	ND
E	ND	ND	ND	ND	0.3J
X	ND	ND	ND	ND	0.82J
N	ND	ND	ND	23	29

MW-12R

	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
B	4.0J	18	2.7	6.9	5.5
T	ND	ND	ND	0.7J	0.5J
E	ND	2J	1.2	0.8J	0.8J
X	ND	5J	ND	2J	1.7J
N	2.2J	16J	4.4J	8.9J	7J

MW-15

	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
B	7.2	15	ND	2.4	8
T	ND	ND	ND	ND	0.3J
E	ND	ND	ND	ND	0.4J
X	ND	ND	ND	ND	0.62J
N	ND	0.76J	ND	ND	ND

MW-2

	Dec-08	Mar-09	Jun-09	Sep-09	Dec-09
B	ND	890	310	9.2	1.8
T	ND	28	6.1	0.5J	ND
E	ND	700	310	2.7	2.1
X	ND	ND	97	3.5	ND
N	22	290	310	0.76J	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

J: Indicates an estimated value.

ATC ASSOCIATES INC.
104 E. 25th Street, 10th Floor • New York, NY 10010-2917
(212) 353-8280 • FAX: (212) 979-8447

QUEENS WEST PARCEL 9
QUEENS, NEW YORK

BTEX & NAPTHALENE CONCENTRATIONS IN GROUNDWATER (2009)

DATE
JAN. 2010

SCALE
As shown

PROJECT No.
15.75420.0002

FIGURE
4

K:\Avalon Bay\West Parcel 9\PRR 01.2010\Figures\Fig 4.dwg

TABLES

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

Date	Zone 1				Zone 2				Zone 3				Zone 4				Comments
	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]	
12/29/2008	On	8253	343.9	--	On	9380.9	390.9	--	On	7797.3	324.9	--	On	9205.1	383.5	--	
3/30/2009	On	10440.1	435.0	0.0	On	11566	481.9	0.0	On	9982.8	416.0	0.0	On	11387.6	474.5	0.1	
4/23/2009	On	11016.9	459.0	0.0	On	12143.1	506.0	0.0	On	10559.6	440.0	0.0	On	11964.4	498.5	0.0	
5/18/2009	On	11617.9	484.1	0.0	On	12744.1	531.0	0.0	On	11160.9	465.0	0.0	On	12565.8	523.6	0.0	
6/23/2009	On	12480.3	520.0	0.0	On	13606.3	566.9	0.0	On	12022.8	501.0	0.0	On	13328.6	555.4	4.2	
7/31/2009	On	13,371.4	557.1	0.7	On	14518.1	604.9	0.0	On	12935	539.0	0.0	OFF	13688.8	570.4	27.2	Zone 4 switched back on; no problems identified.
8/18/2009	On	NR	--	--	On	14949.2	622.9	0.0	On	13365.7	556.9	0.0	On	14099.7	587.5	28.1	Inaccessible due to rubbish/debris in way of gauges.
9/30/2009	On	14,831.1	618.0	0.9	On	15977.9	665.7	0.1	On	14394.8	599.8	0.1	On	15,129.0	630.4	28.2	
10/30/2009	On	15,556.6	648.2	0.7	On	16703.5	696.0	0.0	On	15120.1	630.0	0.0	On	15,854.2	660.6	28.0	
11/20/2009	On	15,978.6	665.8	4.1	On	17209.3	717.1	0.0	On	15626	651.1	0.0	On	16,359.9	681.7	27.9	
12/15/2009	On	16,162.6	673.4	21.4	On	17808.9	742.0	0.0	On	16225.5	676.1	0.0	On	16,958.9	706.6	27.9	
12/28/2009	On	16,471.6	686.3	21.6	On	18121	755.0	0.0	On	16537.4	689.1	0.0	On	17,271.5	719.6	27.9	

Notes:

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

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

NR - Not recorded (meter was inaccessible).

*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)
12/29/2008	7.5	7.5	300.0	10.0	10.5	272.0	13.5	14.5	219.0	183.0	4.0	5.0	347.0	133.0
3/30/2009	7.0	7.5	298.0	10.0	10.0	276.0	13.0	14.0	259.0	193.0	4.5	5.0	220.0	218.0
4/23/2009	7.0	7.5	300.0	10.0	10.0	274.0	13.5	14.0	245.0	186.0	5.0	5.5	241.0	222.0
5/18/2009	7.0	7.5	300.0	10.0	10.0	261.0	14.0	14.0	210.0	185.0	4.5	5.5	230.0	223.0
6/23/2009	7.0	7.5	300.0	10.0	10.0	295.0	14.0	14.5	92.0	140.0	4.0	4.0	210.0	232.0
7/31/2009	7.0	7.5	306.0	10.0	10.0	284.0	14.0	14.0	30.0	130.0	4.0	5.0	330.0	230.0
8/18/2009	7.0	7.5	NR	10.0	10.0	309.0	14.5	15.0	60.0	135.0	4.5	5.0	310.0	230.0
9/30/2009	7.0	7.0	325.0	10.0	10.0	310.0	14.0	14.5	170.0	160.0	4.5	5.0	210.0	226.0
10/30/2009	7.0	7.0	306.0	10.0	10.0	290.0	14.0	14.0	180.0	160.0	4.0	4.5	250.0	232.0
11/20/2009	7.0	7.0	307.0	10.0	10.0	322.0	14.0	14.5	210.0	174.0	4.0	4.5	261.0	230.0
12/15/2009	7.0	7.0	310.0	10.0	10.0	294.0	14.0	14.0	179.0	229.0	4.0	4.5	235.0	270.0
12/28/2009	7.0	7.5	322.0	10.0	10.0	323.0	14.0	14.0	239.0	182.0	4.0	4.5	268.0	232.0

Notes:
NR - Not Recorded.
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	NYSDEC	NYSDEC	Zone 1-Effluent		Zone 1-Effluent		Zone 1-Effluent		Zone 1-Effluent		Zone 2-Effluent		Zone 2-Effluent		Zone 2-Effluent		Zone 2-Effluent	
Lab Sample ID	SGC	AGC	790712		799329		809133		816018		790713		799330		809134		816019	
Date Sampled			3/26/2009		6/23/2009		9/30/2009		12/15/2009		3/26/2009		6/23/2009		9/30/2009		12/15/2009	
Dilution			1		1		1		1		1		1		1		1	
Units=ug/m^3																		
1,1,1-Trichloroethane	**68,000**	**1,000**	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
Toluene	**37,000**	**5,000**	3.5		4.1		3.1		3.2		7.5		14		4.9		3.8	
1,2,4-Trimethylbenzene	**NS**	**290**	0.98		0.98	U	0.98	U	0.98	U	1.5		0.98	U	1.1		0.98	
1,2-Dichloroethene (cis)	**NS**	**63**	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U
1,2-Dichloroethene (total)	**NS**	**63**	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U
1,2-Dichloroethene (trans)	**NS**	**63**	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U
1,2-Dichloropropane	**NS**	**4**	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U
1,2-Dichlorotetrafluoroethane (Freon 114)	**NS**	**17,000**	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U
1,3,5-Trimethylbenzene	**NS**	**290**	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U
1,4-Dichlorobenzene	**NS**	**0.09**	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
3-Chloropropene (allyl chloride)	**600**	**1**	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
4-Ethyltoluene (p-Ethyltoluene)	**NS**	**NS**	0.98	U	0.98	U	0.98	U	0.98	U	1.4		0.98	U	0.98	U	0.98	U
Acetone	**180,000**	**28,000**	26		16		19		17		18		50		69		40	
Benzene	**1,300**	**0.13**	**8**		**5.1**		**8.3**		**6.7**		**12**		**3.8**		**6.4**		**11**	
Bromoform	**NS**	**0.91**	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U
Carbon disulfide	**6,200**	**700**	2.2		4.4		1.6	U	1.6	U	2.7		1.6	U	1.6	U	1.6	U
Carbon tetrachloride	**1,900**	**0.067**	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U
Chlorobenzene	**NS**	**110**	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	1.7		0.92	U	0.92	U
Chloroethane (ethyl chloride)	**NS**	**10,000**	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U
Chloroform	**150**	**0.043**	0.98	U	0.98	U	**1.6**		0.98	U	0.98	U	**1.1**		0.98	U	**2**	
Chloromethane (Methyl chloride)	**22,000**	**90**	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dichlorodifluoromethane	**NS**	**12,000**	3.5		3.1		3.4		2.7		3.6		3.1		3.4		2.5	
Ethylbenzene	**54,000**	**1,000**	0.87		0.87	U	0.87	U	0.87	U	2.3		3.9		1		0.96	
Isopropanol	**98,000**	**7,000**	12	U	12	U	12	U	12	U	12	U	18		12	U	12	U
Methyl Butyl Ketone	**4,000**	**48**	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Methyl ethyl ketone	**13,000**	**5,000**	3.2		2.1		3.5		3.2		2.7		5		3.8		3.5	
Methylene Chloride	**14,000**	**2.1**	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
n-Heptane	**210,000**	**3,900**	0.82	U	0.82	U	0.82		1.1		0.82	U	5.7		0.82	U	0.9	
n-Hexane	**NS**	**700**	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U
Styrene	**17,000**	**1,000**	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	1.7		0.85	U
Tertiary butyl alcohol (TBA)	**NS**	**720**	15	U	15	U	15		15	U	15	U	15	U	15	U	15	U
Tetrachloroethene (PCE)	**1,000**	**1**	**2.2**		**1.7**		**1.6**		1.4	U	**5.2**		**3.5**		**4.3**		**5.1**	
Tetrahydrofuran	**30,000**	**350**	15	U	15	U	15	U	15	U	15	U	15	U	15	U	15	U
Trichloroethene (TCE)	**14,000**	**0.5**	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
Trichlorofluoromethane (Freon 11)	**68,000**	**1,000**	1.9		2.4		2.5		2.2		1.9		2.4		2		1.7	
Xylene (m&p)	**4,300**	**100**	2.3		2.4		2.3		2.5		9.6		6.1		4.3		4	
Xylene (m,p)	**4,300**	**100**	2.3		2.3		2.3		2.5		6.9		4.8		3.3		3	
Xylene (o)	**4,300**	**100**	0.87	U	0.87	U	0.87	U	0.87	U	2.3		1		1.1		1	

Notes:

AGC - Annual guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, December 22, 2003

SGC - Short term guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, December 22, 2003

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 790714 3/26/2009 1		Zone 3-Effluent 799331 6/23/2009 2.5		Zone 3-Effluent 809135 9/30/2009 1		Zone 3-Effluent 816020 12/15/2009 1		Zone 4-Pre Carbon 790715 3/26/2009 1		Zone 4-Pre Carbon 799334 6/23/2009 1		Zone 4-Pre Carbon 809136 9/30/2009 1		Zone 4-Pre Carbon 816014 12/15/2009 1	
1,1,1-Trichloroethane	68,000	1,000	1.1	U	2.7	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
Toluene	37,000	5,000	3.3		3.2		2.7		3.7		4.1		7.9		3.7		3.6	
1,2,4-Trimethylbenzene	NS	290	0.98	U	2.5	U	0.98	U	0.98	U	1.7		1.9		1.1		0.98	U
1,2-Dichloroethene (cis)	NS	63	0.79	U	2	U	0.79	U	0.79	U	1.6		1.2		2.1		3	
1,2-Dichloroethene (total)	NS	63	0.79	U	2	U	0.79	U	0.79	U	1.6		1.2		2.1		3	
1,2-Dichloroethene (trans)	NS	63	0.79	U	2	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U
1,2-Dichloropropane	NS	4	0.92	U	2.3	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U
1,2-Dichlorotetrafluoroethane (Freon 114)	NS	17,000	1.4	U	3.5	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U
1,3,5-Trimethylbenzene	NS	290	0.98	U	2.5	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U
1,4-Dichlorobenzene	NS	0.09	1.2	U	3	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
3-Chloropropene (allyl chloride)	600	1	1.6	U	4.1	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
4-Ethyltoluene (p-Ethyltoluene)	NS	NS	0.98	U	2.5	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U
Acetone	180,000	28,000	12	U	180		43		43		12	U	13		12	U	12	U
Benzene	1,300	0.13	**0.64**		1.6	U	**3.8**		**4.8**		0.64	U	0.64	U	0.64	U	**0.7**	
Bromoform	NS	0.91	2.1	U	5.2	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U
Carbon disulfide	6,200	700	1.6	U	4	U	1.6	U	1.6	U	1.6	U	5		4.7		4.7	
Carbon tetrachloride	1,900	0.067	1.3	U	3.1	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U
Chlorobenzene	NS	110	0.92	U	2.3	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U
Chloroethane (ethyl chloride)	NS	10,000	1.3	U	3.4	U	1.3	U	1.3	U	3.2		7.1		3.2		1.7	
Chloroform	150	0.043	0.98	U	2.4	U	**2**		**1**		**7.3**		**15**		**11**		**6.3**	
Chloromethane (Methyl chloride)	22,000	90	1	U	2.7	U	1.1		1.1		2.3		3.1		14		8.9	
Dichlorodifluoromethane	NS	12,000	3.6		6.4	U	3.2		2.7		3.8		4.1		3.2		2.6	
Ethylbenzene	54,000	1,000	1		2.2	U	0.87	U	2.7		0.96		2.6		0.87	U	0.87	U
Isopropanol	98,000	7,000	12	U	32	U	12	U	14		12	U	12	U	12	U	12	U
Methyl Butyl Ketone	4,000	48	2	U	5.3	U	2	U	2.5		2	U	2	U	2	U	2	U
Methyl ethyl ketone	13,000	5,000	2.2		3.8	U	11		13		2		4.1		2.6		2.1	
Methylene Chloride	14,000	2.1	1.7	U	4.5	U	1.7	U	1.7	U	1.8		1.7	U	1.7	U	1.7	U
n-Heptane	210,000	3,900	0.82	U	2	U	0.82	U	0.82		0.82	U	0.82	U	0.82	U	0.82	U
n-Hexane	NS	700	1.8	U	4.6	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U
Styrene	17,000	1,000	0.85	U	2.1	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Tertiary butyl alcohol (TBA)	NS	720	15	U	39	U	15	U	15	U	15	U	15	U	15	U	15	U
Tetrachloroethene (PCE)	1,000	1	**4.4**		**12**		**12**		**8.8**		**35**		**68**		**53**		**46**	
Tetrahydrofuran	30,000	350	15	U	38	U	15	U	15	U	15	U	15	U	15	U	15	U
Trichloroethene (TCE)	14,000	0.5	1.1	U	2.7	U	**1.1**		1.1	U	**3.7**		**6.4**		**5.9**		**4.9**	
Trichlorofluoromethane (Freon 11)	68,000	1,000	2.1		3.4		3.4		2.2		2.2		11		2.9		1.9	
Xylene (m&p)	4,300	100	2.7		2.2	U	3.4		12		4.2		13		3.4		0.87	U
Xylene (m,p)	4,300	100	2.6		5.6	U	2.5		9.6		3		8.7		2.6		2.2	U
Xylene (o)	4,300	100	0.87	U	2.2	U	0.96		2.1		1.2		4.1		0.87		0.87	U

Notes:

AGC - Annual guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, December 22, 2003

SGC - Short term guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, December 22, 20(

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 4-Post Carbon 790716 3/26/2009 1		Zone 4-Post Carbon 799335 6/23/2009 1		Zone 4-Post Carbon 809137 9/30/2009 1		Zone 4-Post Carbon 816015 12/15/2009 1		Ambient Upwind 790717 3/26/2009 1		Ambient Upwind 799332 6/23/2009 1		Ambient Upwind 809138 9/30/2009 1		Ambient Upwind 816016 12/15/2009 1	
1,1,1-Trichloroethane	**68,000**	**1,000**	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
Toluene	**37,000**	**5,000**	1.4		2.1		1.2		1.4		6.4		4.1		0.75	U	4.1	
1,2,4-Trimethylbenzene	**NS**	**290**	0.98	U	1.5		0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U
1,2-Dichloroethene (cis)	**NS**	**63**	0.79	U	1.6		3.3		1.9		0.79	U	0.79	U	0.79	U	0.79	U
1,2-Dichloroethene (total)	**NS**	**63**	0.79	U	1.6		3.3		1.9		0.79	U	0.79	U	0.79	U	0.79	U
1,2-Dichloroethene (trans)	**NS**	**63**	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U	0.79	U
1,2-Dichloropropane	**NS**	**4**	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U
1,2-Dichlorotetrafluoroethane (Freon 114)	**NS**	**17,000**	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U	1.4	U
1,3,5-Trimethylbenzene	**NS**	**290**	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U
1,4-Dichlorobenzene	**NS**	**0.09**	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
3-Chloropropene (allyl chloride)	**600**	**1**	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
4-Ethyltoluene (p-Ethyltoluene)	**NS**	**NS**	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U	0.98	U
Acetone	**180,000**	**28,000**	12	U	12	U	12	U	12	U	12	U	17		12	U	13	
Benzene	**1,300**	**0.13**	0.64	U	**1.1**		0.64	U	**2.1**		**1.3**		0.64	U	0.64	U	**1.5**	
Bromoform	**NS**	**0.91**	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U	2.1	U
Carbon disulfide	**6,200**	**700**	1.6	U	3.1		1.6	U	1.6	U	1.6	U	1.6	U	1.6	U	1.6	U
Carbon tetrachloride	**1,900**	**0.067**	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U
Chlorobenzene	**NS**	**110**	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U	0.92	U
Chloroethane (ethyl chloride)	**NS**	**10,000**	2.9		1.7		2.9		1.5		1.3	U	1.3	U	1.3	U	1.3	U
Chloroform	**150**	**0.043**	0.98	U	**4.9**		**18**		**8.3**		0.98	U	0.98	U	0.98	U	0.98	U
Chloromethane (Methyl chloride)	**22,000**	**90**	1.4		1.3		1	U	1	U	1.7		1.3		1.3		1.3	
Dichlorodifluoromethane	**NS**	**12,000**	3.9		2.6		3.3		2.8		3.9		3		3.5		2.8	
Ethylbenzene	**54,000**	**1,000**	0.87	U	1.9		0.87	U	0.87	U	0.87	U	0.87	U	0.87	U	0.87	U
Isopropanol	**98,000**	**7,000**	12	U	12	U	12	U	12	U	12	U	12	U	12	U	12	U
Methyl Butyl Ketone	**4,000**	**48**	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Methyl ethyl ketone	**13,000**	**5,000**	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.7		1.6		1.7	
Methylene Chloride	**14,000**	**2.1**	**8**		1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	
n-Heptane	**210,000**	**3,900**	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.82	U	0.94	
n-Hexane	**NS**	**700**	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U
Styrene	**17,000**	**1,000**	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U	0.85	U
Tertiary butyl alcohol (TBA)	**NS**	**720**	15	U	15	U	15	U	15	U	15	U	15	U	15	U	15	U
Tetrachloroethene (PCE)	**1,000**	**1**	**2.5**		**3.3**		**5.3**		**5**		1.4	U	**2**		1.4	U	**1.5**	
Tetrahydrofuran	**30,000**	**350**	15	U	15	U	15	U	15	U	15	U	15	U	15	U	15	U
Trichloroethene (TCE)	**14,000**	**0.5**	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U	1.1	U
Trichlorofluoromethane (Freon 11)	**68,000**	**1,000**	2.1		2.1		2.8		2		1.7		1.5		1.5		1.5	
Xylene (m&p)	**4,300**	**100**	0.87	U	6.5		0.87	U	0.87	U	2.3		0.87	U	0.87	U	0.87	U
Xylene (m,p)	**4,300**	**100**	2.2	U	4.8		2.2	U	2.2	U	2.3		2.2	U	2.2	U	2.2	U
Xylene (o)	**4,300**	**100**	0.87	U	1.4		0.87	U	0.87	U	0.87	U	0.87	U	0.87	U	0.87	U

Notes:

AGC - Annual guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, December 22, 2003

SGC - Short term guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, December 22, 20(

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 790718 3/26/2009 1		Ambient Downwind 799333 6/23/2009 1		Ambient Downwind 809139 9/30/2009 1		Ambient Downwind 816017 12/15/2009 1	
1,1,1-Trichloroethane	68,000	1,000	1.1	U	1.1	U	1.1	U	1.1	U
Toluene	37,000	5,000	6.8		3.2		1.4		4.5	
1,2,4-Trimethylbenzene	NS	290	0.98	U	0.98	U	0.98	U	0.98	U
1,2-Dichloroethene (cis)	NS	63	0.79	U	0.79	U	0.79	U	0.79	U
1,2-Dichloroethene (total)	NS	63	0.79	U	0.79	U	0.79	U	0.79	U
1,2-Dichloroethene (trans)	NS	63	0.79	U	0.79	U	0.79	U	0.79	U
1,2-Dichloropropane	NS	4	0.92	U	0.92	U	0.92	U	0.92	U
1,2-Dichlorotetrafluoroethane (Freon 114)	NS	17,000	1.4	U	1.4	U	1.4	U	1.4	U
1,3,5-Trimethylbenzene	NS	290	0.98	U	0.98	U	0.98	U	0.98	U
1,4-Dichlorobenzene	NS	0.09	1.2	U	1.2	U	1.2	U	1.2	U
3-Chloropropene (allyl chloride)	600	1	1.6	U	1.6	U	1.6	U	1.6	U
4-Ethyltoluene (p-Ethyltoluene)	NS	NS	0.98	U	0.98	U	0.98	U	0.98	U
Acetone	180,000	28,000	12	U	20		12	U	12	U
Benzene	1,300	0.13	**1.3**		0.64	U	0.64	U	**1.5**	
Bromoform	NS	0.91	2.1	U	2.1	U	2.1	U	2.1	U
Carbon disulfide	6,200	700	1.6	U	1.6	U	1.6	U	1.6	U
Carbon tetrachloride	1,900	0.067	1.3	U	1.3	U	1.3	U	1.3	U
Chlorobenzene	NS	110	0.92	U	0.92	U	0.92	U	0.92	U
Chloroethane (ethyl chloride)	NS	10,000	1.3	U	1.3	U	1.3	U	1.3	U
Chloroform	150	0.043	0.98	U	0.98	U	0.98	U	0.98	U
Chloromethane (Methyl chloride)	22,000	90	1.7		1.3		1.4		1.2	
Dichlorodifluoromethane	NS	12,000	3.8		2.9		3.7		2.7	
Ethylbenzene	54,000	1,000	0.87	U	0.87	U	0.87	U	0.87	U
Isopropanol	98,000	7,000	12	U	12	U	12	U	12	U
Methyl Butyl Ketone	4,000	48	2	U	2	U	2	U	2	U
Methyl ethyl ketone	13,000	5,000	1.5	U	2		1.5	U	2.4	
Methylene Chloride	14,000	2.1	1.7	U	1.7	U	1.7	U	1.7	U
n-Heptane	210,000	3,900	0.82	U	0.82	U	0.82	U	0.98	
n-Hexane	NS	700	1.8	U	1.8	U	1.8	U	1.8	U
Styrene	17,000	1,000	0.85	U	0.85	U	0.85	U	0.85	U
Tertiary butyl alcohol (TBA)	NS	720	15	U	15	U	15	U	15	U
Tetrachloroethene (PCE)	1,000	1	1.4	U	1.4	U	1.4	U	**1.4**	
Tetrahydrofuran	30,000	350	15	U	15	U	15	U	15	U
Trichloroethene (TCE)	14,000	0.5	1.1	U	1.1	U	1.1	U	1.1	U
Trichlorofluoromethane (Freon 11)	68,000	1,000	1.8		1.5		1.6		1.5	
Xylene (m&p)	4,300	100	0.87	U	0.87	U	0.87	U	0.87	U
Xylene (m,p)	4,300	100	2.2	U	2.2	U	2.2	U	2.2	U
Xylene (o)	4,300	100	0.87	U	0.87	U	0.87	U	0.87	U

Notes:

AGC - Annual guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, December 22, 2003

SGC - Short term guideline concentration, NYSDEC DAR-1 AGC/SCG Tables, December 22, 200

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 2009				June 2009				September 2009				December 2009			
			DTP	DTW	Product Thickness	ELEV	DTP	DTW	Product Thickness	ELEV	DTP	DTW	Product Thickness	ELEV	DTP	DTW	Product Thickness	ELEV
MW-2	**32.4**	**8.93**	ND	10.29	0.00	-1.36	ND	8.82	0.00	0.11	ND	9.21	0.00	-0.28	ND	9.21	0.00	-0.28
MW-8	**29.7**	**10.30**	ND	11.48	0.00	-1.18	ND	10.03	0.00	0.27	ND	10.83	0.00	-0.53	ND	10.35	0.00	-0.05
MW-11R	**20.35**	**10.52**	ND	11.63	0.00	-1.11	ND	10.59	0.00	-0.07	ND	10.89	0.00	-0.37	ND	11.01	0.00	-0.49
MW-12R	**17.97**	**10.46**	ND	11.15	0.00	-0.69	ND	9.35	0.00	1.11	ND	10.35	0.00	0.11	ND	9.90	0.00	0.56
MW-14	**18.89**	**8.30**	8.79	8.80	**0.01**	-0.50	ND	7.50	0.00	0.80	8.13	8.14	**0.01**	0.16	ND	7.81	0.00	0.49
MW-15	**18.32**	**7.24**	ND	8.46	0.00	-1.22	ND	6.58	0.00	0.66	ND	7.80	0.00	-0.56	ND	7.50	0.00	-0.26
MW-16	**15.38**	**7.22**	ND	8.36	0.00	-1.14	ND	6.99	0.00	0.23	ND	7.08	0.00	0.14	ND	7.24	0.00	-0.02
MW-17	**11.75**	**7.96**	ND	6.42	0.00	1.54	ND	6.40	0.00	1.56	ND	6.00	0.00	1.96	ND	7.15	0.00	0.81

Notes:

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 Lab Sample ID Date Sampled Dilution units=ug/L	NYSDEC Class GA AWQV	MW-2 A2070-07 3/27/2009 1	MW-2 A3259-02 6/22/2009 1	MW-2 A4500-07 9/29/2009 1	MW-2 A5558-02 12/14/2009 1	MW-8 A2070-05 3/27/2009 1	MW8 (DUP) A2070-10 3/27/2009 1	MW-8 A3259-07 6/22/2009 1	MW-8 A4500-06 9/29/2009 1	MW-8 A5558-08 12/15/2009 1	MW-8 (DUP) A5558-11 12/15/2009 1
1,1,1-Trichloroethane	5	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	0.3 U
1,1,2,2-Tetrachloroethane	5	0.46 U	0.46 U	1 U	0.46 U	0.46 U	0.46 U	0.46 U	1 U	0.46 U	0.46 U
1,1,2-Trichloroethane	1	0.57 U	0.57 U	1 U	0.57 U	0.57 U	0.57 U	0.57 U	1 U	0.57 U	0.57 U
1,1-Dichloroethane	5	0.24 U	0.24 U	1 U	0.24 U	0.24 U	0.24 U	0.24 U	1 U	0.24 U	0.24 U
1,1-Dichloroethene	5	0.39 U	0.39 U	1 U	0.39 U	0.39 U	0.39 U	0.39 U	1 U	0.39 U	0.39 U
1,2-Dichloroethane	0.6	0.18 U	0.32 U	1 U	0.18 U	0.18 U	0.18 U	0.32 U	1 U	0.18 U	0.18 U
1,2-Dichloropropane	1	0.21 U	0.21 U	1 U	0.21 U	0.21 U	0.21 U	0.21 U	1 U	0.21 U	0.21 U
2-Hexanone	50	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U
Acetone	50	1.6 U	1.6 U	5 U	1.6 U	1.6 U	1.6 U	4.5 J	5 U	1.6 U	1.6 U
Benzene	1	**890**	**310**	**9.2**	**1.8**	**4** J	**2.7** J	**4.2**	**8**	**3.9**	**3.7**
Bromodichloromethane	50	0.47 U	0.47 U	1 U	0.47 U	0.47 U	0.47 U	0.47 U	1 U	0.47 U	0.47 U
Bromoform	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	0.36 U	0.36 U	1 U	0.36 U	0.36 U	0.36 U	0.36 U	1 U	0.36 U	0.36 U
Carbon disulfide	60	0.35 U	0.35 U	1 U	0.35 U	0.35 U	0.35 U	0.35 U	1 U	0.35 U	0.35 U
Carbon tetrachloride	5	0.57 U	0.57 U	1 U	0.57 U	0.57 U	0.57 U	0.57 U	1 U	0.57 U	0.57 U
Chlorobenzene	5	0.26 U	0.26 U	1 U	0.26 U	0.26 U	0.26 U	0.26 U	1 U	0.26 U	0.26 U
Chloroethane	5	0.21 U	0.21 U	1 U	0.21 U	0.21 U	0.21 U	0.21 U	1 U	0.21 U	0.21 U
Chloroform	7	0.19 U	0.19 U	1 U	0.19 U	0.19 U	0.19 U	0.19 U	1 U	0.19 U	0.19 U
Chloromethane	5	0.33 U	0.33 U	1 U	0.33 U	0.33 U	0.33 U	0.33 U	1 U	0.33 U	0.33 U
cis-1,2-Dichloroethene	5	0.53 U	0.53 U	1 U	0.53 U	0.53 U	0.53 U	0.53 U	1 U	0.53 U	0.53 U
cis-1,3-Dichloropropene	0.4	0.42 U	0.42 U	1 U	0.42 U	0.42 U	0.42 U	0.42 U	1 U	0.42 U	0.42 U
Dibromochloromethane	50	0.53 U	0.53 U	1 U	0.53 U	0.53 U	0.53 U	0.53 U	1 U	0.53 U	0.53 U
Ethylbenzene	5	**700**	**310**	**2.7**	**2.1**	**92**	**120**	**160**	**140**	**96**	**89**
Methylene Chloride	5	0.67 U	0.67 U	1 U	0.67 U	0.67 U	0.67 U	0.67 U	1 U	0.67 U	0.67 U
Styrene	5	0.23 U	0.23 U	1 U	0.23 U	0.23 U	0.23 U	0.23 U	1 U	0.23 U	0.23 U
Tetrachloroethene	5	0.86 U	0.86 U	1 U	0.86 U	0.86 U	0.86 U	0.86 U	1 U	0.86 U	0.86 U
Toluene	5	**28**	**6.1**	**0.5** J	**0.17** U	**15**	**4.1** J	**2.6**	**5.9**	**3.4**	**3.2**
trans-1,2-Dichloroethene	5	0.39 U	0.39 U	1 U	0.39 U	0.39 U	0.39 U	0.39 U	1 U	0.39 U	0.39 U
Trichloroethene	5	0.36 U	0.36 U	1 U	0.36 U	0.36 U	0.36 U	0.36 U	1 U	0.36 U	0.36 U
Vinyl chloride	2	0.35 U	0.35 U	1 U	0.35 U	0.35 U	0.35 U	0.35 U	1 U	0.35 U	0.35 U
Xylenes, Total	5	**292**	**97**	**3.5**	**0.57** U	**238**	**298**	**370**	**340**	**237**	**219**

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.

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-11R A2070-06 3/27/2009 1	MW-11R A3259-06 6/22/2009 1	MW-11R A4500-05 9/29/2009 1	MW-11R A5558-04 12/14/2009 1	MW-12R A2070-02 3/26/2009 1	MW-12R A3259-05 6/22/2009 1	MW-12R(DUP) A3259-08 6/22/2009 1	MW-12R A4500-02 9/29/2009 1	MW-12R A5558-03 12/14/2009 1	MW-14 A3267-03 6/23/2009 1	MW-14 A5558-07 12/14/2009 1
1,1,1-Trichloroethane	5	0.3 U	0.3 U	1 U	0.3 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U	1.4	0.3 U
1,1,2,2-Tetrachloroethane	5	0.46 U	0.46 U	1 U	0.46 U	0.46 U	0.46 U	0.46 U	1 U	0.46 U	0.23 U	0.46 U
1,1,2-Trichloroethane	1	0.57 U	0.57 U	1 U	0.57 U	0.57 U	0.57 U	0.57 U	1 U	0.57 U	0.42 U	0.57 U
1,1-Dichloroethane	5	0.24 U	0.24 U	1 U	0.24 U	0.24 U	0.24 U	0.24 U	1 U	0.24 U	0.22 U	0.24 U
1,1-Dichloroethene	5	0.39 U	0.39 U	1 U	0.39 U	0.39 U	0.39 U	0.39 U	1 U	0.39 U	0.32 U	0.39 U
1,2-Dichloroethane	0.6	0.18 U	0.32 U	1 U	0.18 U	0.18 U	0.32 U	0.32 U	1 U	0.18 U	3.1	0.18 U
1,2-Dichloropropane	1	0.21 U	0.21 U	1 U	0.21 U	0.21 U	0.21 U	0.21 U	1 U	0.21 U	2.3	0.21 U
2-Hexanone	50	1.3 U	1.3 U	5 U	1.3 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	0.53 U	1.3 U
Acetone	50	1.6 U	1.6 U	5 U	1.6 U	1.6 U	1.6 U	1.6 U	5 U	1.6 U	0.41 U	1.6 U
Benzene	1	**0.26** U	**0.26** U	**1** U	**0.26** U	**18**	**2.7**	**2.7**	**6.9**	**5.5**	**0.35** U	**2.4**
Bromodichloromethane	50	0.47 U	0.47 U	1 U	0.47 U	0.47 U	0.47 U	0.47 U	1 U	0.47 U	0.37 U	0.47 U
Bromoform	50	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.57 U	1 U
Bromomethane	5	0.36 U	0.36 U	1 U	0.36 U	0.36 U	0.36 U	0.36 U	1 U	0.36 U	1.3 U	0.36 U
Carbon disulfide	60	0.35 U	0.35 U	1 U	0.35 U	0.35 U	0.35 U	0.35 U	1 U	0.35 U	5.7	0.35 U
Carbon tetrachloride	5	0.57 U	0.57 U	1 U	0.57 U	0.57 U	0.57 U	0.57 U	1 U	0.57 U	0.19 U	0.57 U
Chlorobenzene	5	0.26 U	0.26 U	1 U	0.26 U	0.26 U	0.26 U	0.26 U	1 U	0.26 U	3	0.26 U
Chloroethane	5	0.21 U	0.21 U	1 U	0.21 U	0.21 U	0.21 U	0.21 U	1 U	0.21 U	0.3 U	0.21 U
Chloroform	7	0.19 U	0.19 U	1 U	0.19 U	0.19 U	0.19 U	0.19 U	1 U	0.19 U	0.36 U	0.19 U
Chloromethane	5	0.33 U	0.33 U	1 U	0.33 U	0.33 U	0.33 U	0.33 U	1 U	0.33 U	0.33 U	0.33 U
cis-1,2-Dichloroethene	5	0.53 U	0.53 U	1 U	0.53 U	0.53 U	0.53 U	0.53 U	1 U	0.53 U	0.21 U	0.53 U
cis-1,3-Dichloropropene	0.4	0.42 U	0.42 U	1 U	0.42 U	0.42 U	0.42 U	0.42 U	1 U	0.42 U	0.35 U	0.42 U
Dibromochloromethane	50	0.53 U	0.53 U	1 U	0.53 U	0.53 U	0.53 U	0.53 U	1 U	0.53 U	0.35 U	0.53 U
Ethylbenzene	5	**0.26** U	**0.26** U	**1** U	**0.26** U	**2** J	**1.2**	**1.2**	**0.8** J	**0.8** J	**0.47** U	**1**
Methylene Chloride	5	0.67 U	0.67 U	1 U	0.67 U	0.67 U	0.67 U	0.67 U	1 U	0.67 U	0.21 U	0.67 U
Styrene	5	0.23 U	0.23 U	1 U	0.23 U	0.23 U	0.23 U	0.23 U	1 U	0.23 U	0.57 U	0.23 U
Tetrachloroethene	5	0.86 U	0.86 U	1 U	0.86 U	0.86 U	0.86 U	0.86 U	1 U	0.86 U	0.41 U	0.86 U
Toluene	5	**0.17** U	**0.17** U	**1** U	**0.17** U	**0.17** U	**0.17** U	**0.17** U	**0.7** J	**0.5** J	**0.46** U	**0.4** J
trans-1,2-Dichloroethene	5	0.39 U	0.39 U	1 U	0.39 U	0.39 U	0.39 U	0.39 U	1 U	0.39 U	0.22 U	0.39 U
Trichloroethene	5	0.36 U	0.36 U	1 U	0.36 U	0.36 U	0.36 U	0.36 U	1 U	0.36 U	0.19 U	0.36 U
Vinyl chloride	2	0.35 U	0.35 U	1 U	0.35 U	0.35 U	0.35 U	0.35 U	1 U	0.35 U	25	0.35 U
Xylenes, Total	5	**0.57** U	**0.57** U	**3** U	**0.57** U	**5** J	**0.57** U	**0.57** U	**2** J	**1.7** J	**1.99** U	**1.7** J

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 sa

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-15 A2070-01 3/26/2009 1	MW-15 A3259-01 6/22/2009 1	MW-15 A4500-01 9/29/2009 1	MW-15 (DUP) A4500-08 9/29/2009 1	MW-15 A5558-01 12/14/2009 1	MW-16 A2070-08 3/27/2009 1	MW-16 A3267-01 6/23/2009 1	MW16 A4517-02 9/30/2009 1	MW-16 A5558-09 12/15/2009 1
1,1,1-Trichloroethane	5	0.3 U	0.3 U	1 U	1 U	0.3 U	0.3 U	0.26 U	1 U	0.3 U
1,1,2,2-Tetrachloroethane	5	0.46 U	0.46 U	1 U	1 U	0.46 U	0.46 U	0.23 U	1 U	0.46 U
1,1,2-Trichloroethane	1	0.57 U	0.57 U	1 U	1 U	0.57 U	0.57 U	0.42 U	1 U	0.57 U
1,1-Dichloroethane	5	0.24 U	0.24 U	1 U	1 U	0.24 U	0.24 U	0.22 U	1 U	0.24 U
1,1-Dichloroethene	5	0.39 U	0.39 U	1 U	1 U	0.39 U	0.39 U	0.32 U	1 U	0.39 U
1,2-Dichloroethane	0.6	0.18 U	0.32 U	1 U	1 U	0.18 U	0.18 U	0.36 U	1 U	0.18 U
1,2-Dichloropropane	1	0.21 U	0.21 U	1 U	1 U	0.21 U	0.21 U	0.28 U	1 U	0.21 U
2-Hexanone	50	1.3 U	1.3 U	5 U	5 U	1.3 U	1.3 U	0.53 U	5 U	1.3 U
Acetone	50	1.6 U	1.6 U	5 U	5 U	1.6 U	1.6 U	0.41 U	5 U	1.6 U
Benzene	1	**15**	**0.26** U	**2.4**	**3.3**	**8**	**0.26** U	**0.35** U	**1** U	**0.26** U
Bromodichloromethane	50	0.47 U	0.47 U	1 U	1 U	0.47 U	0.47 U	0.37 U	1 U	0.47 U
Bromoform	50	1 U	1 U	1 U	1 U	1 U	1 U	0.57 U	1 U	1 U
Bromomethane	5	0.36 U	0.36 U	1 U	1 U	0.36 U	0.36 U	1.3 U	1 U	0.36 U
Carbon disulfide	60	0.35 U	0.35 U	1 U	1 U	0.35 U	0.35 U	1.6 U	1 U	0.35 U
Carbon tetrachloride	5	0.57 U	0.57 U	1 U	1 U	0.57 U	0.57 U	0.19 U	1 U	0.57 U
Chlorobenzene	5	0.26 U	0.26 U	1 U	1 U	0.26 U	0.26 U	0.26 U	1 U	0.26 U
Chloroethane	5	0.21 U	0.21 U	1 U	1 U	0.21 U	0.21 U	0.3 U	1 U	0.21 U
Chloroform	7	0.19 U	0.19 U	1 U	1 U	0.19 U	0.19 U	0.36 U	1 U	0.19 U
Chloromethane	5	0.33 U	0.33 U	1 U	1 U	0.33 U	0.33 U	0.33 U	1 U	0.33 U
cis-1,2-Dichloroethene	5	0.53 U	0.53 U	1 U	1 U	0.53 U	0.53 U	0.21 U	1 U	0.53 U
cis-1,3-Dichloropropene	0.4	0.42 U	0.42 U	1 U	1 U	0.42 U	0.42 U	0.35 U	1 U	0.42 U
Dibromochloromethane	50	0.53 U	0.53 U	1 U	1 U	0.53 U	0.53 U	0.35 U	1 U	0.53 U
Ethylbenzene	5	**0.26** U	**0.26** U	**1** U	**1** U	**0.4** J	**0.26** U	**0.47** U	**1** U	**0.4** J
Methylene Chloride	5	0.67 U	0.67 U	1 U	1 U	0.67 U	0.67 U	0.21 U	1 U	0.67 U
Styrene	5	0.23 U	0.23 U	1 U	1 U	0.23 U	0.23 U	0.57 U	1 U	0.23 U
Tetrachloroethene	5	0.86 U	0.86 U	1 U	1 U	0.86 U	0.86 U	0.41 U	1 U	0.86 U
Toluene	5	**0.17** U	**0.17** U	**1** U	**1** U	**0.3** J	**0.17** U	**0.46** U	**1** U	**0.17** U
trans-1,2-Dichloroethene	5	0.39 U	0.39 U	1 U	1 U	2.2	0.39 U	0.22 U	1 U	0.39 U
Trichloroethene	5	0.36 U	0.36 U	1 U	1 U	0.36 U	0.36 U	0.19 U	1 U	0.36 U
Vinyl chloride	2	0.35 U	0.35 U	1 U	1 U	0.35 U	0.35 U	0.11 U	1 U	0.35 U
Xylenes, Total	5	**0.57** U	**0.57** U	**3** U	**3** U	**0.62** J	**0.57** U	**1.99** U	**3** U	**0.82** J

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 sa

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-17 A2070-09 3/27/2009 1	MW-17 A3267-02 6/23/2009 1	MW17 A4517-01 9/30/2009 1	MW-17 A5558-10 12/15/2009 1	FB A2070-11 3/27/2009 1	FB A3259-09 6/22/2009 1	FB A4500-09 9/29/2009 1	FB A5558-12 12/15/2009 1
1,1,1-Trichloroethane	5	0.3 U	0.26 U	1 U	0.3 U	0.3 U	0.3 U	1 U	0.3 U
1,1,2,2-Tetrachloroethane	5	0.46 U	0.23 U	1 U	0.46 U	0.46 U	0.46 U	1 U	0.46 U
1,1,2-Trichloroethane	1	0.57 U	0.42 U	1 U	0.57 U	0.57 U	0.57 U	1 U	0.57 U
1,1-Dichloroethane	5	0.24 U	0.22 U	1 U	0.24 U	0.24 U	0.24 U	1 U	0.24 U
1,1-Dichloroethene	5	0.39 U	0.32 U	1 U	0.39 U	0.39 U	0.39 U	1 U	0.39 U
1,2-Dichloroethane	0.6	0.18 U	0.36 U	1 U	0.18 U	0.18 U	0.32 U	1 U	0.18 U
1,2-Dichloropropane	1	0.21 U	0.28 U	1 U	0.21 U	0.21 U	0.21 U	1 U	0.21 U
2-Hexanone	50	1.3 U	0.53 U	5 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U
Acetone	50	1.6 U	0.41 U	5 U	1.6 U	1.6 U	1.6 U	5 U	1.6 U
Benzene	1	**0.26** U	**0.35** U	**1** U	**0.26** U	**0.26** U	**0.26** U	**1** U	**0.26** U
Bromodichloromethane	50	0.47 U	0.37 U	1 U	0.47 U	0.47 U	0.47 U	1 U	0.47 U
Bromoform	50	1 U	0.57 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	5	0.36 U	1.3 U	1 U	0.36 U	0.36 U	0.36 U	1 U	0.36 U
Carbon disulfide	60	0.35 U	1.6 U	1 U	0.35 U	0.35 U	0.35 U	1 U	0.35 U
Carbon tetrachloride	5	0.57 U	0.19 U	1 U	0.57 U	0.57 U	0.57 U	1 U	0.57 U
Chlorobenzene	5	0.26 U	0.26 U	1 U	0.26 U	0.26 U	0.26 U	1 U	0.26 U
Chloroethane	5	0.21 U	0.3 U	1 U	0.21 U	0.21 U	0.21 U	1 U	0.21 U
Chloroform	7	0.19 U	0.36 U	1 U	0.19 U	0.19 U	0.19 U	1 U	0.19 U
Chloromethane	5	0.33 U	0.33 U	1 U	0.33 U	0.33 U	0.33 U	1 U	0.33 U
cis-1,2-Dichloroethene	5	0.53 U	0.21 U	1 U	0.53 U	0.53 U	0.53 U	1 U	0.53 U
cis-1,3-Dichloropropene	0.4	0.42 U	0.35 U	1 U	0.42 U	0.42 U	0.42 U	1 U	0.42 U
Dibromochloromethane	50	0.53 U	0.35 U	1 U	0.53 U	0.53 U	0.53 U	1 U	0.53 U
Ethylbenzene	5	**0.26** U	**0.47** U	**1** U	**0.3** J	**0.26** U	**0.26** U	**1** U	**0.26** U
Methylene Chloride	5	0.67 U	0.21 U	1 U	0.67 U	0.67 U	0.67 U	1.8	0.67 U
Styrene	5	0.23 U	0.57 U	1 U	0.23 U	0.23 U	0.23 U	1 U	0.23 U
Tetrachloroethene	5	0.86 U	0.41 U	1 U	0.86 U	0.86 U	0.86 U	1 U	0.86 U
Toluene	5	**0.17** U	**0.46** U	**1** U	**0.17** U	**0.17** U	**0.17** U	**1** U	**0.17** U
trans-1,2-Dichloroethene	5	0.39 U	0.22 U	1 U	0.39 U	0.39 U	0.39 U	1 U	0.39 U
Trichloroethene	5	0.36 U	0.19 U	1 U	0.36 U	0.36 U	0.36 U	1 U	0.36 U
Vinyl chloride	2	0.35 U	0.11 U	1 U	0.35 U	0.35 U	0.35 U	1 U	0.35 U
Xylenes, Total	5	**0.57** U	**1.99** U	**3** U	**0.82** J	**0.57** U	**0.57** U	**3** U	**0.57** 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 sa

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	TB A2070-12 3/27/2009 1	TB A3259-10 6/22/2009 1	TB A3267-04 6/23/2009 1	TB A4500-10 9/29/2009 1	TB A4517-03 9/30/2009 1	TB A5558-13 12/15/2009 1
1,1,1-Trichloroethane	5	0.3 U	0.3 U	0.26 U	1 U	1 U	0.3 U
1,1,2,2-Tetrachloroethane	5	0.46 U	0.46 U	0.23 U	1 U	1 U	0.46 U
1,1,2-Trichloroethane	1	0.57 U	0.57 U	0.42 U	1 U	1 U	0.57 U
1,1-Dichloroethane	5	0.24 U	0.24 U	0.22 U	1 U	1 U	0.24 U
1,1-Dichloroethene	5	0.39 U	0.39 U	0.32 U	1 U	1 U	0.39 U
1,2-Dichloroethane	0.6	0.18 U	0.32 U	0.36 U	1 U	1 U	0.18 U
1,2-Dichloropropane	1	0.21 U	0.21 U	0.28 U	1 U	1 U	0.21 U
2-Hexanone	50	1.3 U	1.3 U	0.53 U	5 U	5 U	1.3 U
Acetone	50	1.6 U	1.6 U	0.41 U	5 U	5 U	1.6 U
Benzene	1	**0.26** U	**0.26** U	**0.35** U	**1** U	**1** U	**0.26** U
Bromodichloromethane	50	0.47 U	0.47 U	0.37 U	1 U	1 U	0.47 U
Bromoform	50	1 U	1 U	0.57 U	1 U	1 U	1 U
Bromomethane	5	0.36 U	0.36 U	1.3 U	1 U	1 U	0.36 U
Carbon disulfide	60	0.35 U	0.35 U	1.6 U	1 U	1 U	0.35 U
Carbon tetrachloride	5	0.57 U	0.57 U	0.19 U	1 U	1 U	0.57 U
Chlorobenzene	5	0.26 U	0.26 U	0.26 U	1 U	1 U	0.26 U
Chloroethane	5	0.21 U	0.21 U	0.3 U	1 U	1 U	0.21 U
Chloroform	7	0.19 U	0.19 U	0.36 U	1 U	1 U	0.19 U
Chloromethane	5	0.33 U	0.33 U	0.33 U	1 U	1 U	0.33 U
cis-1,2-Dichloroethene	5	0.53 U	0.53 U	0.21 U	1 U	1 U	0.53 U
cis-1,3-Dichloropropene	0.4	0.42 U	0.42 U	0.35 U	1 U	1 U	0.42 U
Dibromochloromethane	50	0.53 U	0.53 U	0.35 U	1 U	1 U	0.53 U
Ethylbenzene	5	**0.26** U	**0.26** U	**0.47** U	**1** U	**1** U	**0.26** U
Methylene Chloride	5	0.67 U	0.67 U	0.21 U	4.2	2.2	0.67 U
Styrene	5	0.23 U	0.23 U	0.57 U	1 U	1 U	0.23 U
Tetrachloroethene	5	0.86 U	0.86 U	0.41 U	1 U	1 U	0.86 U
Toluene	5	**0.17** U	**0.17** U	**0.46** U	**1** U	**1** U	**0.17** U
trans-1,2-Dichloroethene	5	0.39 U	0.39 U	0.22 U	1 U	1 U	0.39 U
Trichloroethene	5	0.36 U	0.36 U	0.19 U	1 U	1 U	0.36 U
Vinyl chloride	2	0.35 U	0.35 U	0.11 U	1 U	1 U	0.35 U
Xylenes, Total	5	**0.57** U	**0.57** U	**1.99** U	**3** U	**3** U	**0.57** 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 sa

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	MW-2 A2070-07 3/27/2009 5	MW-2 A3259-02 6/22/2009 5	MW-2 A4500-07 9/29/2009 1	MW-2 A5558-02 12/14/2009 1
1,2,4-Trichlorobenzene	5	0.38 U	0.38 U	1 U	0.38 U
1,2-Dichlorobenzene	3	0.19 U	0.19 U	1 U	0.19 U
1,3-Dichlorobenzene	3	0.37 U	0.37 U	1 U	0.37 U
1,4-Dichlorobenzene	3	0.22 U	0.22 U	1 U	0.22 U
2,2'-oxybis[1-chloropropane]	5	1.75 U	1.79 U	10 U	0.38 U
2,4,5-Trichlorophenol	NS	11 U	12 U	10 U	2.4 U
2,4,6-Trichlorophenol	NS	11 U	11 U	10 U	2.3 U
2,4-Dichlorophenol	5	16 U	16 U	10 U	3.5 U
2,4-Dimethylphenol	50	3.5 U	3.6 U	10 U	0.75 U
2,4-Dinitrophenol	10	9.4 U	9.6 U	10 U	2 U
2,4-Dinitrotoluene	5	11 U	11 U	10 U	2.3 U
2,6-Dinitrotoluene	5	1.4 U	1.4 U	10 U	0.29 U
2-Chloronaphthalene	10	0.75 U	0.77 U	10 U	0.16 U
2-Chlorophenol	NS	0.95 U	0.97 U	10 U	0.2 U
2-Methylnaphthalene	NS	240	0.97 U	10 U	0.2 U
2-Methylphenol	NS	9 J	9.2 U	10 U	1.9 U
2-Nitroaniline	5	21 U	22 U	10 U	4.6 U
2-Nitrophenol	NS	22 U	22 U	10 U	4.7 U
3,3'-Dichlorobenzidine	5	18 U	18 U	10 U	3.8 U
3-Nitroaniline	5	10 U	10 U	10 U	2.2 U
4,6-Dinitro-2-methylphenol	NS	9.4 U	9.5 U	10 U	2 U
4-Bromophenyl phenyl ether	NS	2.1 U	2.1 U	10 U	0.45 U
4-Chloro-3-methylphenol	NS	8.6 U	8.8 U	10 U	1.8 U
4-Chloroaniline	5	13 U	13 U	10 U	2.8 U
4-Chlorophenyl phenyl ether	NS	1.4 U	1.4 U	10 U	0.29 U
4-Nitroaniline	5	12 U	13 U	10 U	2.7 U
4-Nitrophenol	NS	19 U	20 U	5.2 J	4.2 U
Acenaphthene	20	**350**	**130**	**4.4** J	**0.8** J
Acenaphthylene	NS	0.8 U	0.82 U	0.35 J	0.17 U
Anthracene	50	1.5 U	1.5 U	10 U	0.32 U
Benzo[a]anthracene	0.002	0.6 U	0.61 U	10 U	0.13 U
Benzo[a]pyrene	ND	0.85 U	0.87 U	10 U	0.18 U
Benzo[b]fluoranthene	0.002	0.85 U	0.87 U	10 U	0.18 U
Benzo[g,h,i]perylene	NS	0.65 U	0.66 U	10 U	0.14 U
Benzo[k]fluoranthene	0.002	1.4 U	1.4 U	10 U	0.3 U
Bis(2-chloroethoxy)methane	5	5.6 U	5.7 U	10 U	1.2 U
Bis(2-chloroethyl)ether	1	1.8 U	1.8 U	10 U	0.38 U
Bis(2-ethylhexyl) phthalate	5	1.4 U	1.5 U	10 U	0.31 U
Butyl benzyl phthalate	50	1.1 U	1.1 U	10 U	0.24 U
Chrysene	0.002	1.2 U	1.2 U	10 U	0.26 U
Dibenz(a,h)anthracene	NS	1.4 U	1.4 U	10 U	0.3 U
Dibenzofuran	NS	180	71	10 U	2.3 U
Diethyl phthalate	50	0.5 U	0.51 U	10 U	0.11 U
Dimethyl phthalate	50	0.85 U	0.87 U	10 U	0.18 U
Di-n-butyl phthalate	50	3 U	3 U	10 U	0.63 U
Di-n-octyl phthalate	50	1.6 U	1.6 U	10 U	0.33 U
Fluoranthene	50	4.2 U	4.3 U	10 U	0.9 U
Fluorene	50	**120**	47 J	1.1 J	0.16 U
Hexachlorobenzene	0.04	1.1 U	1.1 U	10 U	0.24 U
Hexachlorobutadiene	0.5	0.85 U	0.87 U	10 U	0.18 U
Hexachlorocyclopentadiene	5	7.5 U	7.7 U	10 U	1.6 U
Hexachloroethane	5	1.2 U	1.3 U	10 U	0.27 U
Indeno[1,2,3-cd]pyrene	0.002	3.3 U	3.4 U	10 U	0.71 U
Isophorone	50	2 U	2.1 U	10 U	0.44 U
Naphthalene	10	**290**	**310**	**0.76** J	**0.2** U
Nitrobenzene	0.4	3.2 U	3.3 U	10 U	0.7 U
N-Nitrosodi-n-propylamine	NS	1.1 U	1.1 U	10 U	0.24 U
N-Nitrosodiphenylamine	50	4 U	4.1 U	10 U	0.86 U
Pentachlorophenol	NS	13 U	14 U	10 U	2.9 U
Phenanthrene	50	**77**	31 J	10 U	0.12 U
Phenol	NS	2.3 U	2.3 U	10 U	0.49 U
Pyrene	50	0.65 U	0.66 U	10 U	0.14 U

Notes:
AWQVs - Ambient Water Quality Standards and Guidance Values listed in NYSDEC Technical and Operational Guidance S
U - Analyzed for but not detected.
J - Indicates an estimated value.
B - Analyte was detected in assocated blank, as well as
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-8 A2070-05 3/27/2009 10	MW-8 (DUP) A2070-10 3/27/2009 10	MW-8 A3259-07 6/22/2009 10	MW-8 A4500-06 9/29/2009 1	MW-8 A5558-08 12/15/2009 5	MW-8 (DUP) A5558-11 12/15/2009 5
1,2,4-Trichlorobenzene	5	0.38 U	0.38 U	0.38 U	1 U	0.38 U	0.38 U
1,2-Dichlorobenzene	3	0.19 U	0.19 U	0.19 U	1 U	0.19 U	0.19 U
1,3-Dichlorobenzene	3	0.37 U	0.37 U	0.37 U	1 U	0.37 U	0.37 U
1,4-Dichlorobenzene	3	0.22 U	0.22 U	0.22 U	1 U	0.22 U	0.22 U
2,2'-oxybis[1-chloropropane]	5	3.5 U	3.5 U	3.57 U	10 U	1.77 U	1.79 U
2,4,5-Trichlorophenol	NS	23 U	23 U	23 U	10 U	11 U	12 U
2,4,6-Trichlorophenol	NS	21 U	21 U	22 U	10 U	11 U	11 U
2,4-Dichlorophenol	5	32 U	32 U	33 U	10 U	16 U	16 U
2,4-Dimethylphenol	50	7 U	7 U	7.1 U	10 U	3.8 J	3.6 U
2,4-Dinitrophenol	10	19 U	19 U	19 U	10 U	9.5 U	9.6 U
2,4-Dinitrotoluene	5	21 U	21 U	22 U	10 U	11 U	11 U
2,6-Dinitrotoluene	5	2.7 U	2.7 U	2.8 U	10 U	1.4 U	1.4 U
2-Chloronaphthalene	10	1.5 U	1.5 U	1.5 U	10 U	0.76 U	0.77 U
2-Chlorophenol	NS	1.9 U	1.9 U	1.9 U	10 U	0.96 U	0.97 U
2-Methylnaphthalene	NS	450	510	300	280	250	240
2-Methylphenol	NS	18 U	18 U	18 U	10 U	9.1 U	9.2 U
2-Nitroaniline	5	42 U	42 U	43 U	10 U	21 U	22 U
2-Nitrophenol	NS	44 U	44 U	45 U	10 U	22 U	22 U
3,3'-Dichlorobenzidine	5	36 U	36 U	37 U	10 U	18 U	18 U
3-Nitroaniline	5	20 U	20 U	21 U	10 U	10 U	10 U
4,6-Dinitro-2-methylphenol	NS	19 U	19 U	19 U	10 U	9.4 U	9.5 U
4-Bromophenyl phenyl ether	NS	4.2 U	4.2 U	4.3 U	10 U	2.1 U	2.1 U
4-Chloro-3-methylphenol	NS	17 U	17 U	18 U	10 U	8.7 U	8.8 U
4-Chloroaniline	5	26 U	26 U	27 U	10 U	13 U	13 U
4-Chlorophenyl phenyl ether	NS	2.7 U	2.7 U	2.8 U	10 U	1.4 U	1.4 U
4-Nitroaniline	5	25 U	25 U	25 U	10 U	13 U	13 U
4-Nitrophenol	NS	39 U	39 U	39 U	10 U	20 U	20 U
Acenaphthene	20	**250**	**280**	**300**	**490**	**260**	**230**
Acenaphthylene	NS	2.7 J	1.6 U	1.6 U	2.4 J	0.81 U	0.82 U
Anthracene	50	9.5 J	9.8 J	10 J	7.8 J	7.3 J	7.1 J
Benzo[a]anthracene	0.002	1.2 U	1.2 U	1.2 U	10 U	0.61 U	0.61 U
Benzo[a]pyrene	ND	1.7 U	1.7 U	1.7 U	10 U	0.86 U	0.87 U
Benzo[b]fluoranthene	0.002	1.7 U	1.7 U	1.7 U	10 U	0.86 U	0.87 U
Benzo[g,h,i]perylene	NS	1.3 U	1.3 U	1.3 U	10 U	0.66 U	0.66 U
Benzo[k]fluoranthene	0.002	2.8 U	2.8 U	2.9 U	10 U	1.4 U	1.4 U
Bis(2-chloroethoxy)methane	5	11 U	11 U	11 U	10 U	5.6 U	5.7 U
Bis(2-chloroethyl)ether	1	3.5 U	3.5 U	3.6 U	10 U	1.8 U	1.8 U
Bis(2-ethylhexyl) phthalate	5	2.9 U	2.9 U	3 U	10 U	1.5 U	1.5 U
Butyl benzyl phthalate	50	2.2 U	2.2 U	2.2 U	10 U	1.1 U	1.1 U
Chrysene	0.002	2.4 U	2.4 U	2.4 U	10 U	1.2 U	1.2 U
Dibenz(a,h)anthracene	NS	2.8 U	2.8 U	2.9 U	10 U	1.4 U	1.4 U
Dibenzofuran	NS	160	180	210	270	180	160
Diethyl phthalate	50	1 U	1 U	1 U	10 U	0.51 U	0.51 U
Dimethyl phthalate	50	1.7 U	1.7 U	1.7 U	10 U	0.86 U	0.87 U
Di-n-butyl phthalate	50	5.9 U	5.9 U	6 U	10 U	3 U	3 U
Di-n-octyl phthalate	50	3.1 U	3.1 U	3.2 U	10 U	1.6 U	1.6 U
Fluoranthene	50	8.4 U	8.4 U	8.6 U	1.5 J	4.2 U	4.3 U
Fluorene	50	81 J	87 J	99 J	140	84	75
Hexachlorobenzene	0.04	2.2 U	2.2 U	2.2 U	10 U	1.1 U	1.1 U
Hexachlorobutadiene	0.5	1.7 U	1.7 U	1.7 U	10 U	0.86 U	0.87 U
Hexachlorocyclopentadiene	5	15 U	15 U	15 U	10 U	7.6 U	7.7 U
Hexachloroethane	5	2.5 U	2.5 U	2.6 U	10 U	1.3 U	1.3 U
Indeno[1,2,3-cd]pyrene	0.002	6.6 U	6.6 U	6.7 U	10 U	3.3 U	3.4 U
Isophorone	50	4.1 U	4.1 U	4.2 U	10 U	2.1 U	2.1 U
Naphthalene	10	**5600**	**6300**	**11000**	**1900**	**4200**	**4000**
Nitrobenzene	0.4	6.5 U	6.5 U	6.6 U	10 U	3.3 U	3.3 U
N-Nitrosodi-n-propylamine	NS	2.2 U	2.2 U	2.2 U	10 U	1.1 U	1.1 U
N-Nitrosodiphenylamine	50	8 U	8 U	8.2 U	10 U	4 U	4.1 U
Pentachlorophenol	NS	27 U	27 U	27 U	10 U	14 U	14 U
Phenanthrene	50	42 J	43 J	50 J	60	45 J	41 J
Phenol	NS	4.6 U	4.6 U	4.7 U	10 U	2.3 U	2.3 U
Pyrene	50	1.3 U	1.3 U	1.3 U	1 J	0.66 U	0.66 U

Notes:
AWQVs - Ambient Water Quality Standards and 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
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-11R	MW-11R	MW-11R	MW-11R	MW-12R	MW-12R	MW-12R (DUP)	MW-12R	MW-12R
Lab Sample ID	Class GA	A2070-06	A3259-06	A4500-05	A5558-04	A2070-02	A3259-05	A3259-08	A4500-02	A5558-03
Date Sampled	AWQV	3/27/2009	6/22/2009	9/29/2009	12/14/2009	3/26/2009	6/22/2009	6/22/2009	9/29/2009	12/14/2009
Dilution		1	1	1	1	5	5	5	1	5
Units=ug/L										
1,2,4-Trichlorobenzene	5	0.38 U	0.38 U	1 U	0.38 U	0.38 U	0.38 U	0.38 U	1 U	0.38 U
1,2-Dichlorobenzene	3	0.19 U	0.19 U	1 U	0.19 U	0.19 U	0.19 U	0.19 U	1 U	0.19 U
1,3-Dichlorobenzene	3	0.37 U	0.37 U	1 U	0.37 U	0.37 U	0.37 U	0.37 U	1 U	0.37 U
1,4-Dichlorobenzene	3	0.22 U	0.22 U	1 U	0.22 U	0.22 U	0.22 U	0.22 U	1 U	0.22 U
2,2'-oxybis[1-chloropropane]	5	0.35 U	0.38 U	10 U	0.35 U	1.79 U	1.79 U	1.79 U	10 U	1.77 U
2,4,5-Trichlorophenol	NS	2.3 U	2.5 U	10 U	2.3 U	12 U	12 U	12 U	10 U	11 U
2,4,6-Trichlorophenol	NS	2.1 U	2.3 U	10 U	2.1 U	11 U	11 U	11 U	10 U	11 U
2,4-Dichlorophenol	5	3.2 U	3.5 U	10 U	3.2 U	16 U	16 U	16 U	10 U	16 U
2,4-Dimethylphenol	50	0.7 U	0.76 U	10 U	0.71 U	4 J	3.6 U	3.6 U	3.4 J	3.5 U
2,4-Dinitrophenol	10	1.9 U	2 U	10 U	1.9 U	9.6 U	9.6 U	9.6 U	10 U	9.5 U
2,4-Dinitrotoluene	5	2.1 U	2.3 U	10 U	2.1 U	11 U	11 U	11 U	10 U	11 U
2,6-Dinitrotoluene	5	0.27 U	0.29 U	10 U	0.27 U	1.4 U	1.4 U	1.4 U	10 U	1.4 U
2-Chloronaphthalene	10	0.15 U	0.16 U	10 U	0.15 U	0.77 U	0.77 U	0.77 U	10 U	0.76 U
2-Chlorophenol	NS	0.19 U	0.21 U	10 U	0.19 U	0.97 U	0.97 U	0.97 U	10 U	0.96 U
2-Methylnaphthalene	NS	0.19 U	0.21 U	10 U	0.19 U	0.97 U	0.97 U	0.97 U	0.29 J	0.96 U
2-Methylphenol	NS	1.8 U	2 U	10 U	1.8 U	9.2 U	9.2 U	9.2 U	10 U	9.1 U
2-Nitroaniline	5	4.2 U	4.6 U	10 U	4.3 U	22 U	22 U	22 U	10 U	21 U
2-Nitrophenol	NS	4.4 U	4.8 U	10 U	4.4 U	22 U	22 U	22 U	10 U	22 U
3,3'-Dichlorobenzidine	5	3.6 U	3.9 U	10 U	3.6 U	18 U	18 U	18 U	10 U	18 U
3-Nitroaniline	5	2 U	2.2 U	10 U	2 U	10 U	10 U	10 U	10 U	10 U
4,6-Dinitro-2-methylphenol	NS	1.9 U	2 U	10 U	1.9 U	9.5 U	9.5 U	9.5 U	10 U	9.4 U
4-Bromophenyl phenyl ether	NS	0.42 U	0.46 U	10 U	0.42 U	2.1 U	2.1 U	2.1 U	10 U	2.1 U
4-Chloro-3-methylphenol	NS	1.7 U	1.9 U	10 U	1.7 U	8.8 U	8.8 U	8.8 U	10 U	8.7 U
4-Chloroaniline	5	2.6 U	2.9 U	10 U	2.7 U	13 U	13 U	13 U	10 U	13 U
4-Chlorophenyl phenyl ether	NS	0.27 U	0.29 U	10 U	0.27 U	1.4 U	1.4 U	1.4 U	10 U	1.4 U
4-Nitroaniline	5	2.5 U	2.7 U	10 U	2.5 U	13 U	13 U	13 U	10 U	13 U
4-Nitrophenol	NS	3.9 U	4.2 U	10 U	3.9 U	20 U	20 U	20 U	10 U	20 U
Acenaphthene	20	**0.17** U	**0.28** J	**10** U	**0.17** U	**1.7** J	**0.87** U	**1.4** J	**0.47** J	**0.86** U
Acenaphthylene	NS	0.16 U	0.17 U	10 U	0.16 U	0.82 U	0.82 U	0.82 U	10 U	0.81 U
Anthracene	50	0.3 U	0.33 U	10 U	0.3 U	1.5 U	1.5 U	1.5 U	0.42 J	1.5 U
Benzo[a]anthracene	0.002	0.12 U	0.13 U	10 U	0.12 U	0.61 U	0.61 U	0.61 U	10 U	0.61 U
Benzo[a]pyrene	ND	0.17 U	0.18 U	10 U	0.17 U	0.87 U	0.87 U	0.87 U	10 U	0.86 U
Benzo[b]fluoranthene	0.002	0.17 U	0.18 U	10 U	0.17 U	0.87 U	0.87 U	0.87 U	10 U	0.86 U
Benzo[g,h,i]perylene	NS	0.13 U	0.14 U	10 U	0.13 U	0.66 U	0.66 U	0.66 U	10 U	0.66 U
Benzo[k]fluoranthene	0.002	0.28 U	0.3 U	10 U	0.28 U	1.4 U	1.4 U	1.4 U	10 U	1.4 U
Bis(2-chloroethoxy)methane	5	1.1 U	1.2 U	10 U	1.1 U	5.7 U	5.7 U	5.7 U	10 U	5.6 U
Bis(2-chloroethyl)ether	1	0.35 U	0.38 U	10 U	0.35 U	1.8 U	1.8 U	1.8 U	10 U	1.8 U
Bis(2-ethylhexyl) phthalate	5	0.31 J	0.32 U	10 U	0.29 U	1.5 U	1.5 U	1.5 U	10 U	1.5 U
Butyl benzyl phthalate	50	0.22 U	0.24 U	10 U	0.22 U	1.1 U	1.1 U	1.1 U	10 U	1.1 U
Chrysene	0.002	0.24 U	0.26 U	10 U	0.24 U	1.2 U	1.2 U	1.2 U	10 U	1.2 U
Dibenz(a,h)anthracene	NS	0.28 U	0.3 U	10 U	0.28 U	1.4 U	1.4 U	1.4 U	10 U	1.4 U
Dibenzofuran	NS	2.1 U	2.3 U	10 U	2.1 U	11 U	11 U	11 U	10 U	11 U
Diethyl phthalate	50	0.1 U	0.11 U	10 U	0.1 U	0.51 U	0.51 U	0.51 U	10 U	0.51 U
Dimethyl phthalate	50	0.17 U	0.18 U	10 U	0.17 U	0.87 U	0.87 U	0.87 U	10 U	0.86 U
Di-n-butyl phthalate	50	0.59 U	0.64 U	10 U	0.74 J	3 U	3 U	3 U	10 U	3 U
Di-n-octyl phthalate	50	0.31 U	0.34 U	10 U	0.31 U	1.6 U	1.6 U	1.6 U	10 U	1.6 U
Fluoranthene	50	0.84 U	0.91 U	10 U	0.85 U	4.3 U	4.3 U	4.3 U	10 U	4.2 U
Fluorene	50	0.15 U	0.16 U	10 U	0.15 U	0.77 U	0.77 U	0.77 U	10 U	0.76 U
Hexachlorobenzene	0.04	0.22 U	0.24 U	10 U	0.22 U	1.1 U	1.1 U	1.1 U	10 U	1.1 U
Hexachlorobutadiene	0.5	0.17 U	0.18 U	10 U	0.17 U	0.87 U	0.87 U	0.87 U	10 U	0.86 U
Hexachlorocyclopentadiene	5	1.5 U	1.6 U	10 U	1.5 U	7.7 U	7.7 U	7.7 U	10 U	7.6 U
Hexachloroethane	5	0.25 U	0.27 U	10 U	0.25 U	1.3 U	1.3 U	1.3 U	10 U	1.3 U
Indeno[1,2,3-cd]pyrene	0.002	0.66 U	0.72 U	10 U	0.67 U	3.4 U	3.4 U	3.4 U	10 U	3.3 U
Isophorone	50	0.41 U	0.45 U	10 U	0.41 U	2.1 U	2.1 U	2.1 U	10 U	2.1 U
Naphthalene	10	**0.19** U	**0.95** J	**10** U	**0.19** U	**16** J	**4.4** J	**4.5** J	**8.9** J	**7** J
Nitrobenzene	0.4	0.65 U	0.71 U	10 U	0.66 U	3.3 U	3.3 U	3.3 U	10 U	3.3 U
N-Nitrosodi-n-propylamine	NS	0.22 U	0.24 U	10 U	0.22 U	1.1 U	1.1 U	1.1 U	10 U	1.1 U
N-Nitrosodiphenylamine	50	0.8 U	0.87 U	10 U	0.81 U	4.1 U	4.1 U	4.1 U	10 U	4 U
Pentachlorophenol	NS	2.7 U	2.9 U	10 U	2.7 U	14 U	14 U	14 U	10 U	14 U
Phenanthrene	50	0.11 U	0.12 U	10 U	0.11 U	0.56 U	0.56 U	0.56 U	0.29 J	0.56 U
Phenol	NS	0.46 U	0.5 U	10 U	0.46 U	2.3 U	2.3 U	2.3 U	10 U	2.3 U
Pyrene	50	0.13 U	0.14 U	10 U	0.13 U	0.66 U	0.66 U	0.66 U	10 U	0.66 U

Notes:
AWQVs - Ambient Water Quality Standards and Guidanc
U - Analyzed for but not detected.
J - Indicates an estimated value.
B - Analyte was detected in assocated blank, as well as
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	MW-14	MW-15	MW-15	MW-15	MW-15 (DUP)	MW-15
Lab Sample ID	Class GA	A3267-03	A5558-07	A2070-01	A3259-01	A4500-01	A4500-08	A5558-01
Date Sampled	AWQV	6/23/2009	12/14/2009	3/26/2009	6/22/2009	9/29/2009	9/29/2009	12/14/2009
Dilution		5	5	1	1	1	1	1
Units=ug/L								
1,2,4-Trichlorobenzene	5	0.18 U	0.38 U	0.38 U	0.38 U	1 U	1 U	0.38 U
1,2-Dichlorobenzene	3	0.17 U	0.19 U	0.19 U	0.19 U	1 U	1 U	0.19 U
1,3-Dichlorobenzene	3	0.38 U	0.37 U	0.37 U	0.37 U	1 U	1 U	0.37 U
1,4-Dichlorobenzene	3	0.53 U	0.22 U	0.22 U	0.22 U	1 U	1 U	0.22 U
2,2'-oxybis[1-chloropropane]	5	19 U	1.75 U	0.35 U	0.35 U	10 U	10 U	0.36 U
2,4,5-Trichlorophenol	NS	1.4 U	11 U	2.3 U	2.3 U	10 U	10 U	2.3 U
2,4,6-Trichlorophenol	NS	2.1 U	11 U	2.1 U	2.1 U	10 U	10 U	2.2 U
2,4-Dichlorophenol	5	31 U	16 U	3.2 U	3.2 U	10 U	10 U	3.3 U
2,4-Dimethylphenol	50	3.5 U	3.5 U	0.7 U	0.7 U	10 U	10 U	0.71 U
2,4-Dinitrophenol	10	13 U	9.4 U	1.9 U	1.9 U	10 U	10 U	1.9 U
2,4-Dinitrotoluene	5	1.75 U	11 U	2.1 U	2.1 U	10 U	10 U	2.2 U
2,6-Dinitrotoluene	5	2.3 U	1.4 U	0.27 U	0.27 U	10 U	10 U	0.28 U
2-Chloronaphthalene	10	1.8 U	0.75 U	0.15 U	0.15 U	10 U	10 U	0.15 U
2-Chlorophenol	NS	5.6 U	0.95 U	0.19 U	0.19 U	10 U	10 U	0.19 U
2-Methylnaphthalene	NS	1.4 U	0.95 U	0.19 U	0.19 U	10 U	10 U	0.19 U
2-Methylphenol	NS	1.6 U	9 U	1.8 U	1.8 U	10 U	10 U	1.8 U
2-Nitroaniline	5	1.1 U	21 U	4.2 U	4.2 U	10 U	10 U	4.3 U
2-Nitrophenol	NS	1.7 J	22 U	4.4 U	4.4 U	10 U	10 U	4.5 U
3,3'-Dichlorobenzidine	5	16 U	18 U	3.6 U	3.6 U	10 U	10 U	3.7 U
3-Nitroaniline	5	3.4 J	10 U	2 U	2 U	10 U	10 U	2.1 U
4,6-Dinitro-2-methylphenol	NS	0.85 U	9.4 U	1.9 U	1.9 U	10 U	10 U	1.9 U
4-Bromophenyl phenyl ether	NS	11 U	2.1 U	0.42 U	0.42 U	10 U	10 U	0.43 U
4-Chloro-3-methylphenol	NS	2.8 U	8.6 U	1.7 U	1.7 U	10 U	10 U	1.8 U
4-Chloroaniline	5	0.65 U	13 U	2.6 U	2.6 U	10 U	10 U	2.7 U
4-Chlorophenyl phenyl ether	NS	3.3 U	1.4 U	0.27 U	0.27 U	10 U	10 U	0.28 U
4-Nitroaniline	5	0.85 U	12 U	2.5 U	2.5 U	10 U	10 U	2.5 U
4-Nitrophenol	NS	4.2 U	19 U	3.9 U	3.9 U	10 U	10 U	3.9 U
Acenaphthene	20	**1.4** U	**12** J	**0.17** U	**0.17** U	**10** U	**10** U	**7.8** J
Acenaphthylene	NS	0.8 U	0.8 U	0.16 U	0.16 U	10 U	10 U	0.16 U
Anthracene	50	0.85 U	1.5 U	0.3 U	0.3 U	10 U	10 U	0.31 U
Benzo[a]anthracene	0.002	1.4 U	0.6 U	0.12 U	0.12 U	10 U	10 U	0.12 U
Benzo[a]pyrene	ND	0.6 U	0.85 U	0.17 U	0.17 U	10 U	10 U	0.17 U
Benzo[b]fluoranthene	0.002	8.6 U	0.85 U	0.17 U	0.17 U	10 U	10 U	0.17 U
Benzo[g,h,i]perylene	NS	1.4 U	0.65 U	0.13 U	0.13 U	10 U	10 U	0.13 U
Benzo[k]fluoranthene	0.002	1.1 U	1.4 U	0.28 U	0.28 U	10 U	10 U	0.29 U
Bis(2-chloroethoxy)methane	5	2.9 U	5.6 U	1.1 U	1.1 U	10 U	10 U	1.1 U
Bis(2-chloroethyl)ether	1	1.2 U	1.8 U	0.35 U	0.35 U	10 U	10 U	0.36 U
Bis(2-ethylhexyl) phthalate	5	1.4 U	1.4 U	0.29 U	0.29 U	10 U	10 U	0.3 U
Butyl benzyl phthalate	50	7.5 U	1.1 U	0.22 U	0.22 U	10 U	10 U	0.22 U
Chrysene	0.002	0.5 U	1.2 U	0.24 U	0.24 U	10 U	10 U	0.24 U
Dibenz(a,h)anthracene	NS	3 U	1.4 U	0.28 U	0.28 U	10 U	10 U	0.29 U
Dibenzofuran	NS	5.5 J	11 U	2.1 U	2.1 U	10 U	10 U	2.2 U
Diethyl phthalate	50	1.1 U	0.5 U	0.27 J	0.1 U	0.46 J	0.51 J	0.1 U
Dimethyl phthalate	50	4 U	0.85 U	0.17 U	0.17 U	10 U	10 U	0.17 U
Di-n-butyl phthalate	50	11 J	3 U	0.59 U	0.59 U	10 U	10 U	0.6 U
Di-n-octyl phthalate	50	5.6 J	1.6 U	0.31 U	0.31 U	10 U	10 U	0.32 U
Fluoranthene	50	0.85 U	4.2 U	0.84 U	0.84 U	10 U	10 U	0.86 U
Fluorene	50	13 U	3.1 J	0.15 U	0.15 U	10 U	10 U	0.15 U
Hexachlorobenzene	0.04	11 U	1.1 U	0.22 U	0.22 U	10 U	10 U	0.22 U
Hexachlorobutadiene	0.5	21 U	0.85 U	0.17 U	0.17 U	10 U	10 U	0.17 U
Hexachlorocyclopentadiene	5	22 U	7.5 U	1.5 U	1.5 U	10 U	10 U	1.5 U
Hexachloroethane	5	30 J	1.2 U	0.25 U	0.25 U	10 U	10 U	0.26 U
Indeno[1,2,3-cd]pyrene	0.002	6.6 J	3.3 U	0.66 U	0.66 U	10 U	10 U	0.67 U
Isophorone	50	0.75 U	2 U	0.41 U	0.41 U	10 U	10 U	0.42 U
Naphthalene	10	**18** U	**0.95** U	**0.76** J	**0.19** U	**10** U	**10** U	**0.19** U
Nitrobenzene	0.4	1.3 U	3.2 U	0.65 U	0.65 U	10 U	10 U	0.66 U
N-Nitrosodi-n-propylamine	NS	9 U	1.1 U	0.22 U	0.22 U	10 U	10 U	0.22 U
N-Nitrosodiphenylamine	50	0.95 U	4 U	0.8 U	0.8 U	10 U	10 U	0.82 U
Pentachlorophenol	NS	11 U	13 U	2.7 U	2.7 U	10 U	10 U	2.7 U
Phenanthrene	50	1 U	0.55 U	0.11 U	0.11 U	10 U	10 U	0.11 U
Phenol	NS	3.2 U	2.3 U	0.46 U	0.46 U	10 U	10 U	0.47 U
Pyrene	50	10 U	0.65 U	0.13 U	0.13 U	10 U	10 U	0.13 U

Notes:
AWQVs - Ambient Water Quality Standards and Guidanc
U - Analyzed for but not detected.
J - Indicates an estimated value.
B - Analyte was detected in assocated blank, as well as
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-16	MW-16	MW16	MW-16	MW-17	MW-17	MW17	MW-17
Lab Sample ID	Class GA	A2070-08	A3267-01	A4517-02	A5558-09	A2070-09	A3267-02	A4517-01	A5558-10
Date Sampled	AWQV	3/27/2009	6/23/2009	9/30/2009	12/15/2009	3/27/2009	6/23/2009	9/30/2009	12/15/2009
Dilution		1	1	1	1	1	1	1	1
Units=ug/L									
1,2,4-Trichlorobenzene	5	0.38 U	0.18 U	1 U	0.38 U	0.38 U	0.18 U	1 U	0.38 U
1,2-Dichlorobenzene	3	0.19 U	0.17 U	1 U	0.19 U	0.19 U	0.17 U	1 U	0.19 U
1,3-Dichlorobenzene	3	0.37 U	0.38 U	1 U	0.37 U	0.37 U	0.38 U	1 U	0.37 U
1,4-Dichlorobenzene	3	0.22 U	0.53 U	1 U	0.22 U	0.22 U	0.53 U	1 U	0.22 U
2,2'-oxybis[1-chloropropane]	5	0.36 U	3.9 U	10 U	0.36 U	0.36 U	4.3 U	10 U	0.36 U
2,4,5-Trichlorophenol	NS	2.3 U	0.28 U	10 U	2.3 U	2.3 U	0.31 U	10 U	2.3 U
2,4,6-Trichlorophenol	NS	2.2 U	0.42 U	10 U	2.2 U	2.2 U	0.47 U	10 U	2.2 U
2,4-Dichlorophenol	5	3.3 U	6.2 U	10 U	3.3 U	3.3 U	6.9 U	10 U	3.3 U
2,4-Dimethylphenol	50	0.72 U	0.71 U	10 U	0.71 U	0.72 U	0.78 U	10 U	0.72 U
2,4-Dinitrophenol	10	1.9 U	2.7 U	10 U	1.9 U	1.9 U	2.9 U	10 U	1.9 U
2,4-Dinitrotoluene	5	2.2 U	0.35 U	10 U	2.2 U	2.2 U	0.39 U	10 U	2.2 U
2,6-Dinitrotoluene	5	0.28 U	0.46 U	10 U	0.28 U	0.28 U	0.51 U	10 U	0.28 U
2-Chloronaphthalene	10	0.15 U	0.35 U	10 U	0.15 U	0.15 U	0.39 U	10 U	0.15 U
2-Chlorophenol	NS	0.2 U	1.1 U	10 U	0.19 U	0.2 U	1.2 U	10 U	0.2 U
2-Methylnaphthalene	NS	0.2 U	0.29 U	0.66 J	1.1 J	0.2 U	0.32 U	0.49 J	0.7 J
2-Methylphenol	NS	1.9 U	0.31 U	10 U	1.8 U	1.9 U	0.34 U	10 U	1.9 U
2-Nitroaniline	5	4.4 U	0.22 U	10 U	4.3 U	4.4 U	0.24 U	10 U	4.4 U
2-Nitrophenol	NS	4.5 U	0.3 U	10 U	4.5 U	4.5 U	0.33 U	10 U	4.5 U
3,3'-Dichlorobenzidine	5	3.7 U	3.2 U	10 U	3.7 U	3.7 U	3.6 U	10 U	3.7 U
3-Nitroaniline	5	2.1 U	0.13 U	10 U	2.1 U	2.1 U	0.14 U	10 U	2.1 U
4,6-Dinitro-2-methylphenol	NS	1.9 U	0.17 U	10 U	1.9 U	1.9 U	0.19 U	10 U	1.9 U
4-Bromophenyl phenyl ether	NS	0.43 U	2.1 U	10 U	0.43 U	0.43 U	2.4 U	10 U	0.43 U
4-Chloro-3-methylphenol	NS	1.8 U	0.57 U	10 U	1.8 U	1.8 U	0.62 U	10 U	1.8 U
4-Chloroaniline	5	2.7 U	0.13 U	10 U	2.7 U	2.7 U	0.14 U	10 U	2.7 U
4-Chlorophenyl phenyl ether	NS	0.28 U	0.67 U	10 U	0.28 U	0.28 U	0.73 U	10 U	0.28 U
4-Nitroaniline	5	2.6 U	0.17 U	10 U	2.5 U	2.6 U	0.19 U	10 U	2.6 U
4-Nitrophenol	NS	4 U	0.85 U	10 U	3.9 U	4 U	0.93 U	10 U	4 U
Acenaphthene	20	**0.18** U	**0.28** U	**0.63** J	**1.3** J	**0.18** U	**0.31** U	**0.65** J	**0.79** J
Acenaphthylene	NS	0.16 U	0.16 U	10 U	0.16 U	0.16 U	0.18 U	10 U	0.16 U
Anthracene	50	0.31 U	0.17 U	10 U	0.31 U	0.31 U	0.19 U	10 U	0.31 U
Benzo[a]anthracene	0.002	0.12 U	0.28 U	10 U	0.12 U	0.12 U	0.31 U	10 U	0.12 U
Benzo[a]pyrene	ND	0.18 U	0.12 U	10 U	0.17 U	0.18 U	0.13 U	10 U	0.18 U
Benzo[b]fluoranthene	0.002	0.18 U	1.7 U	10 U	0.17 U	0.18 U	1.9 U	10 U	0.18 U
Benzo[g,h,i]perylene	NS	0.13 U	0.27 U	10 U	0.13 U	0.13 U	0.3 U	10 U	0.13 U
Benzo[k]fluoranthene	0.002	0.29 U	0.22 U	10 U	0.29 U	0.29 U	0.24 U	10 U	0.29 U
Bis(2-chloroethoxy)methane	5	1.1 U	0.59 U	10 U	1.1 U	1.1 U	0.64 U	10 U	1.1 U
Bis(2-chloroethyl)ether	1	0.36 U	0.25 U	10 U	0.36 U	0.36 U	0.28 U	10 U	0.36 U
Bis(2-ethylhexyl) phthalate	5	0.37 J	0.27 U	10 U	0.3 U	0.3 U	0.3 U	10 U	0.3 U
Butyl benzyl phthalate	50	0.23 U	1.5 U	10 U	0.22 U	0.23 U	1.7 U	10 U	0.23 U
Chrysene	0.002	0.25 U	0.1 U	10 U	0.24 U	0.25 U	0.11 U	10 U	0.25 U
Dibenz(a,h)anthracene	NS	0.29 U	0.6 U	10 U	0.29 U	0.29 U	0.66 U	10 U	0.29 U
Dibenzofuran	NS	2.2 U	0.11 U	10 U	2.2 U	2.2 U	0.12 U	10 U	2.2 U
Diethyl phthalate	50	0.1 U	0.22 U	10 U	0.1 U	0.1 U	0.24 U	0.29 J	0.1 U
Dimethyl phthalate	50	0.18 U	0.81 U	10 U	0.17 U	0.18 U	0.89 U	10 U	0.18 U
Di-n-butyl phthalate	50	0.61 U	0.15 U	10 U	0.6 U	0.61 U	0.17 U	10 U	0.61 U
Di-n-octyl phthalate	50	0.32 U	0.47 U	10 U	0.32 U	0.32 U	0.52 U	10 U	0.32 U
Fluoranthene	50	0.87 U	0.17 U	10 U	0.86 U	0.87 U	0.19 U	10 U	0.87 U
Fluorene	50	0.15 U	2.7 U	10 U	0.6 J	0.15 U	3 U	0.32 J	0.29 J
Hexachlorobenzene	0.04	0.23 U	2.1 U	10 U	0.22 U	0.23 U	2.4 U	10 U	0.23 U
Hexachlorobutadiene	0.5	0.18 U	4.3 U	10 U	0.17 U	0.18 U	4.7 U	10 U	0.18 U
Hexachlorocyclopentadiene	5	1.5 U	4.4 U	10 U	1.5 U	1.5 U	4.9 U	10 U	1.5 U
Hexachloroethane	5	0.26 U	14	10 U	0.26 U	0.26 U	18	10 U	0.26 U
Indeno[1,2,3-cd]pyrene	0.002	0.68 U	0.41 J	10 U	0.67 U	0.68 U	0.57 J	10 U	0.68 U
Isophorone	50	0.42 U	0.15 U	10 U	0.42 U	0.42 U	0.17 U	10 U	0.42 U
Naphthalene	10	**0.2** U	**3.6** U	**29**	**31**	**0.2** U	**4** U	**23**	**29**
Nitrobenzene	0.4	0.67 U	0.26 U	10 U	0.66 U	0.67 U	0.29 U	10 U	0.67 U
N-Nitrosodi-n-propylamine	NS	0.23 U	1.8 U	10 U	0.22 U	0.23 U	2 U	10 U	0.23 U
N-Nitrosodiphenylamine	50	0.82 U	0.19 U	10 U	0.82 U	0.82 U	0.21 U	10 U	0.82 U
Pentachlorophenol	NS	2.8 U	2.3 U	10 U	2.7 U	2.8 U	2.5 U	10 U	2.8 U
Phenanthrene	50	0.11 U	0.2 U	10 U	0.64 J	0.11 U	0.22 U	10 U	0.11 U
Phenol	NS	0.47 U	0.66 U	10 U	0.47 U	0.47 U	0.72 U	10 U	0.47 U
Pyrene	50	0.13 U	2 U	10 U	0.13 U	0.13 U	2.2 U	10 U	0.13 U

Notes:
AWQVs - Ambient Water Quality Standards and Guidanc
U - Analyzed for but not detected.
J - Indicates an estimated value.
B - Analyte was detected in assocated blank, as well as
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	FB	FB	FB	FB
Lab Sample ID	Class GA	A2070-11	A3259-09	A4500-09	A5558-12
Date Sampled	AWQV	3/27/2009	6/22/2009	9/29/2009	12/15/2009
Dilution		1	1	1	1
Units=ug/L					
1,2,4-Trichlorobenzene	5	0.38 U	0.38 U	1 U	0.38 U
1,2-Dichlorobenzene	3	0.19 U	0.19 U	1 U	0.19 U
1,3-Dichlorobenzene	3	0.37 U	0.37 U	1 U	0.37 U
1,4-Dichlorobenzene	3	0.22 U	0.22 U	1 U	0.22 U
2,2'-oxybis[1-chloropropane]	5	0.37 U	0.35 U	10 U	0.37 U
2,4,5-Trichlorophenol	NS	2.4 U	2.3 U	10 U	2.4 U
2,4,6-Trichlorophenol	NS	2.2 U	2.1 U	10 U	2.2 U
2,4-Dichlorophenol	5	3.3 U	3.2 U	10 U	3.3 U
2,4-Dimethylphenol	50	0.73 U	0.71 U	10 U	0.73 U
2,4-Dinitrophenol	10	2 U	1.9 U	10 U	2 U
2,4-Dinitrotoluene	5	2.2 U	2.1 U	10 U	2.2 U
2,6-Dinitrotoluene	5	0.28 U	0.27 U	10 U	0.28 U
2-Chloronaphthalene	10	0.16 U	0.15 U	10 U	0.16 U
2-Chlorophenol	NS	0.2 U	0.19 U	10 U	0.2 U
2-Methylnaphthalene	NS	0.2 U	0.19 U	10 U	0.2 U
2-Methylphenol	NS	1.9 U	1.8 U	10 U	1.9 U
2-Nitroaniline	5	4.4 U	4.3 U	10 U	4.4 U
2-Nitrophenol	NS	4.6 U	4.4 U	10 U	4.6 U
3,3'-Dichlorobenzidine	5	3.7 U	3.6 U	10 U	4 J
3-Nitroaniline	5	2.1 U	2 U	10 U	2.1 U
4,6-Dinitro-2-methylphenol	NS	1.9 U	1.9 U	10 U	1.9 U
4-Bromophenyl phenyl ether	NS	0.44 U	0.42 U	10 U	0.44 U
4-Chloro-3-methylphenol	NS	1.8 U	1.7 U	10 U	1.8 U
4-Chloroaniline	5	2.8 U	2.7 U	10 U	2.8 U
4-Chlorophenyl phenyl ether	NS	0.28 U	0.27 U	10 U	0.28 U
4-Nitroaniline	5	2.6 U	2.5 U	10 U	2.6 U
4-Nitrophenol	NS	4 U	3.9 U	10 U	4 U
Acenaphthene	20	**0.18** U	**0.17** U	**10** U	**0.18** U
Acenaphthylene	NS	0.17 U	0.16 U	10 U	0.17 U
Anthracene	50	0.31 U	0.3 U	10 U	0.31 U
Benzo[a]anthracene	0.002	0.12 U	0.12 U	10 U	0.12 U
Benzo[a]pyrene	ND	0.18 U	0.17 U	10 U	0.18 U
Benzo[b]fluoranthene	0.002	0.18 U	0.17 U	10 U	0.18 U
Benzo[g,h,i]perylene	NS	0.14 U	0.13 U	10 U	0.14 U
Benzo[k]fluoranthene	0.002	0.29 U	0.28 U	10 U	0.29 U
Bis(2-chloroethoxy)methane	5	1.2 U	1.1 U	10 U	1.2 U
Bis(2-chloroethyl)ether	1	0.36 U	0.35 U	10 U	0.36 U
Bis(2-ethylhexyl) phthalate	5	0.3 U	0.29 U	10 U	0.3 U
Butyl benzyl phthalate	50	0.23 U	0.22 U	10 U	0.23 U
Chrysene	0.002	0.25 U	0.24 U	10 U	0.25 U
Dibenz(a,h)anthracene	NS	0.29 U	0.28 U	10 U	0.29 U
Dibenzofuran	NS	2.2 U	2.1 U	10 U	2.2 U
Diethyl phthalate	50	0.1 U	0.1 U	10 U	0.1 U
Dimethyl phthalate	50	0.18 U	0.17 U	10 U	0.18 U
Di-n-butyl phthalate	50	0.61 U	0.6 U	10 U	0.61 U
Di-n-octyl phthalate	50	0.32 U	0.31 U	10 U	0.32 U
Fluoranthene	50	0.87 U	0.85 U	10 U	0.87 U
Fluorene	50	0.16 U	0.15 U	10 U	0.16 U
Hexachlorobenzene	0.04	0.23 U	0.22 U	10 U	0.23 U
Hexachlorobutadiene	0.5	0.18 U	0.17 U	10 U	0.18 U
Hexachlorocyclopentadiene	5	1.6 U	1.5 U	10 U	1.6 U
Hexachloroethane	5	0.26 U	0.25 U	10 U	0.26 U
Indeno[1,2,3-cd]pyrene	0.002	0.69 U	0.67 U	10 U	0.69 U
Isophorone	50	0.43 U	0.41 U	10 U	0.43 U
Naphthalene	10	**0.2** U	**0.19** U	**10** U	**0.86** J
Nitrobenzene	0.4	0.68 U	0.66 U	10 U	0.68 U
N-Nitrosodi-n-propylamine	NS	0.23 U	0.22 U	10 U	0.23 U
N-Nitrosodiphenylamine	50	0.83 U	0.81 U	10 U	0.83 U
Pentachlorophenol	NS	2.8 U	2.7 U	10 U	2.8 U
Phenanthrene	50	0.11 U	0.11 U	10 U	0.11 U
Phenol	NS	0.48 U	0.46 U	10 U	0.48 U
Pyrene	50	0.14 U	0.13 U	10 U	0.14 U

Notes:
AWQVs - Ambient Water Quality Standards and Guidanc
U - Analyzed for but not detected.
J - Indicates an estimated value.
B - Analyte was detected in assocated blank, as well as
ug/L - micrograms per liter.
Bold - exceeds TOGS
FB - Field Blank

APPENDICES

Appendix A - Site Cover Inspection Log and Photographs
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
Appendix G - Institutional and Engineering Control Certification Form

(ALL APPENDICES ARE AVAILABLE ON CD)