December 23, 2015

Mr. Sadique Ahmed
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7012

Re: NYSDEC Standby Engineering Contract D006129-07
WA #7 75-09 Woodhaven Boulevard Off-Site RI
NYSDEC Site #2-41-036
Phase V - Addendum to Off -Site Remedial Investigation Report

Dear Mr. Ahmed:

Henningson, Durham & Richardson Architecture and Engineering, P.C. (HDR) is pleased to present this addendum to the June 2012 Remedial Investigation Report for the 75-09 Woodhaven Boulevard off-site RI/FS (D006129-07) and subsequent Phase III and IV Addendum Letter Reports from February 2014 and September 2014. This letter provides a summary of the field work and analytical results from Phase V of the off-site investigation conducted during June through August of 2015, which included installation and sampling of two supplemental intermediate depth monitoring wells in the residential area south of Union Turnpike, west of Woodhaven Boulevard and just north of Forest Park in the vicinity of the Jackie Robinson Parkway. Phase V activities also included a comprehensive round of groundwater sampling and water level measurements from all accessible monitoring wells installed during previous phases of the investigation. An updated presentation of recommendations based on the most recent phase of work is included as the final section of the report.

Background

As presented in the June 2012 Remedial Investigation Report and the supplemental February 2014 and September 2014 Addendum Letter Reports for the 75-09 Woodhaven Boulevard site (NYSDEC Site # 241036) four phases of an off-site remedial investigation were conducted over the course of 2010-2014 in association with the site at 75-09 Woodhaven Boulevard, which is currently being addressed under the Voluntary Cleanup Program (VCP). Contaminated soil was removed from the subsurface and an on-going containment effort using an SVE system was initiated at this site.

Despite the remedial efforts conducted to target the on-site contamination, concerns remained regarding the potential off-site migration of contaminants of concern (COCs),

particularly with the potential for dissolved phases of the chlorinated volatile organic compounds (cVOCs) detected at the site to impact the off-site groundwater quality of the underlying aquifers. To evaluate these potential impacts NYSDEC initiated an off-site RI in 2010, focusing on the areas south and southwest of the 75-09 Woodhaven Boulevard site in accordance with the predominant groundwater flow direction identified during the on-site RI and remedial activities.

As NYSDEC's standby consultant for the off-site RI work, HDR completed two phases of field work by the end of 2011 and presented a final RI report for the first two phases of work by June 2012 with the understanding that any further investigation related tasks would be presented as an addendum (in letter form) to the NYSDEC upon completion of the additional phases of work.

The first two phases of the off-site RI included the following:

- Installation and 2 rounds of sampling at a total of 30 soil gas locations
- Installation of 7 shallow monitoring wells ("S" designated wells)
- Installation of 6 intermediate monitoring wells ("I" designated wells)
- Installation of 2 deep monitoring wells ("D" designated wells)

Details of the first two phases of field work and sampling completed as part of the off-site RI are discussed and evaluated in-depth in the June 2012 RI Report. Following the evaluation of the data from the first two phases of the investigation, NYSDEC assigned an additional phase of off-site investigation to HDR in an effort to further delineate the areal and vertical extent of the groundwater contaminant plume.

The third phase of the off-site RI included the following:

- Installation and sampling of 15 additional soil gas points
- Installation and sampling of 4 additional monitoring wells

Details regarding the components and results from the Phase III work are summarized in the February 4, 2014 Addendum Letter Report. The primary findings from Phase III of the off-site investigation included confirmation of elevated cVOC levels in soil gas samples and groundwater samples collected in the mixed residential and commercial areas west of the Woodhaven Boulevard site, between Woodhaven Boulevard and 88th Street, and north of Union Turnpike. Significant soil gas results were found to be relatively localized with no discernible directional trend to those locations where significant cVOC concentrations were detected. Elevated levels of contaminants of concern in groundwater samples collected from the Phase III monitoring wells expanded the known extent of contamination southwestward from the site further downgradient from the previous furthest downgradient wells completed and sampled during Phase II of the investigation.

The results from Phase III of the off-site investigation indicated that supplemental soil gas sampling and installation of additional downgradient wells was warranted and further investigation of the groundwater would focus on a zone of intermediate depth in the underlying aquifer. Based on these objectives, components of the fourth phase of the off-site RI included:

- Installation and sampling of four (total) co-located intermediate (20 ft) and deep (40 ft) soil gas point pairs at two existing points (SG-22 and SG-34) installed during previous phases of the off-site investigation.
- Installation and sampling of two monitoring wells (MW-12I and MW-13I) screened at an intermediate depth at locations further south than any of the groundwater assessment performed during previous phases of the off-site investigation.

The results of the Phase IV work are summarized in the September 12, 2014 Addendum Letter Report. The supplemental soil vapor sampling program indicated that vapor phase contaminants were vertically distributed in both locations where deeper sampling was conducted. The distribution and concentrations of these contaminants detected in the deeper sampling zones did not however provide conclusive evidence clearly supporting or ruling out the presence of the vapor phase contaminants due to a shallow localized source or the deeper groundwater plume.

The primary result of interest related to the Phase IV groundwater sampling program was the detection of elevated groundwater cVOC levels, including both PCE and TCE at concentrations exceeding Class GA standards, in well MW-12I; this detection represented the furthest southward presence of these compounds in the (expanded) study area up to that point in the investigation. Despite its relative proximity to MW-12I, neither PCE nor TCE were detected in groundwater collected from MW-13I, the other new well installed during this phase of the investigation. Aside from expanding the southerly extent of the groundwater contamination, the groundwater quality data collected from the other subset of wells sampled during Phase IV generally confirmed the distribution of contamination observed during previous phases of the investigation.

The Phase V off-site RI work conducted during 2015 represents additional expansion downgradient (southward) of the maximum areal extent of off-site impact by further refining what appears to be the alignment of the primary axis of the contaminant plume and the depth interval of the most significantly impacted groundwater. The general components and procedures for the Phase V field work included the installation of two (2) additional intermediate monitoring wells and the sampling of these new wells and twenty (20) existing monitoring wells that had been installed during previous phases of the off-site investigation. These activities were conducted in accordance with requirements set forth in NYSDEC's DER-10 guidance and were similar to those for Phase I, II and III, and IV as described in the June 2012 RI Report and Addendum Reports. The details regarding the Phase V work are summarized in the sections that

follow. Table 1 presents a summary of the intrusive activities (monitoring wells and soil vapor points installed) as part of the project to date. Supporting documentation for this phase of the work including the field logs, analytical data packages, and DUSR are provided on a separate CD.

Off-Site RI - Phase V Components

MONITORING WELL INSTALLATION & SAMPLING

During July/August 2015, two additional monitoring wells (Figure 1a), both of which were installed in the intermediate depth zone of the underlying aquifer (final well installation depth bgs was dependent on the elevation of the ground surface at each location), were constructed as part of Phase V activities. These wells (MW-14I and MW-15I) were installed at locations selected to expand the area of well coverage and further delineate the extent of impacted groundwater at intermediate depths in the aquifer since past phases of the investigation had indicated the highest concentrations of contaminants of concern in this depth zone. These wells were drilled, constructed, developed, and sampled according to the procedures and specifications outlined for the Phase III and IV drilling, utilizing an ADT rotosonic drill rig to allow for more efficient drilling in the difficult conditions encountered at certain well locations due to the presence of nested cobbles and boulders (moraine deposits).

Drilling and well construction occurred between and July 27th and August 3rd, 2015 with well MW-14I completed to a depth of 160 ft below grade (screened 150-160 ft bgs) along 88th Street and Myrtle Avenue, and well MW-15I completed to a final depth of 165 ft below grade (screened 155-165 ft bgs) along 88th Place (Figure 1a).

Wells were developed on August 4th, 2015, with a Waterra inertial pump using standard overpumping techniques for a maximum of two hours each or until groundwater chemistries (particularly turbidity) had stabilized. Development water was contained in 55 gallon drums and staged at the designated staging area for subsequent waste disposal classification sampling and disposal via HDR's contracted IDW management subcontractor.

Given the anticipated schedule for groundwater sampling, an alternate subcontractor, Preferred Environmental Services, Inc (PES) was selected to perform sampling that had been conducted by YEC, Inc. (YEC) for previous sampling rounds. PES conducted the sampling in August 2015 submitting samples to Hampton-Clarke / Veritech analytical laboratory for VOC (USEPA Method 8260) analysis. Validation of the analytical data was performed by Data Validation Services, Inc. and a Data Usability Summary Report (DUSR) was generated summarizing the data quality for the sampling event. A copy of the DUSR is attached as a component of the appendix to this Phase V Addendum Report. In addition, PES collected a synoptic round of water level measurements from twenty-two of the currently accessible monitoring wells completed during the off-site

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RI. The twenty-third well (MW-7D), completed during Phase II, was found to be paved over, and was not sampled. The water levels were converted to groundwater elevations for use in constructing updated groundwater elevation contour and flow maps. The resultant elevations and flow maps are discussed in more detail in the Phase V results discussion that follows.

Off-Site RI – Phase V Subsurface Investigation Results

GROUNDWATER RESULTS

The comprehensive well sampling program conducted during 2015 continued to show a contaminant plume dominated by the presence of PCE and overall few detections of daughter breakdown products. Of the contaminants of concern associated with the 75-09 Woodhaven Boulevard site only PCE and TCE were detected in concentrations exceeding NYSDEC Class GA standards for these compounds in groundwater. A summary of the analytical data compiled from the comprehensive well sampling program in 2015 is summarized in Table 2 and the results are displayed on a map of the site in Figure 1a. Figure 1b through Figure 1d are historical summaries of the groundwater sampling conducted throughout the off-site RI for each of the well depth classifications (shallow, intermediate, and deep wells) sampled as part of the various phases of the investigation.

From the wells sampled during the 2015 event, six of the ten shallow wells installed for the off-site investigation exhibited PCE levels exceeding NYSDEC standards. The highest PCE concentration in a shallow well continued to be at MW-8S. The 390 µg/l PCE concentration at this well was an order of magnitude higher than the PCE concentration in any other off-site shallow well.

PCE concentrations exceeded the NYSDEC Class GA standard of 5 µg/l for this compound in all but one intermediate depth well (MW-7I) sampled during 2015. The only other compound detected at a concentration exceeding its respective NYSDEC standard was TCE (6.2 µg/l) in well MW-8I. Of particular note in the results from the sampling of the intermediate depth wells were the high levels of PCE detected in two of the southernmost wells in the investigation, MW-12I and MW-14I. The 1900 µg/l of PCE detected from the MW-14I sample was the single highest PCE detection made during any phase of the off-site investigation and the 750 µg/l PCE detected in the MW-12I sample indicates impacts to the groundwater in this area a significant distance from the site are similar to or higher than that observed in wells (MW-6I and MW-3I) located much closer to the 75-09 Woodhaven Boulevard site.

The lone deep well sampled during 2015 was MW-5D which yielded groundwater with a PCE concentration that had decreased to 1.3 µg/l in 2015 from 21 µg/l in 2011 (the last sampling event which included MW-5D), dropping it below the NYSDEC standard of 5 µg/l for PCE.

Groundwater samples have been obtained from wells installed in association with the off-site investigation for several years (in some cases going back to 2010). Shallow wells installed during the off-site investigation typically exhibit concentrations of PCE and TCE that have remained stable or decreased somewhat by the 2015 sampling event. The only shallow well with an increased PCE concentration in the 2015 sampling event was MW-6S. Similarly, many intermediate wells for which past sampling had been conducted exhibited lower PCE and TCE concentrations. Exceptions included increased PCE levels in MW-12I and MW-13I, increased PCE and TCE concentrations in MW-3I, and an increase in levels of the PCE breakdown product cis-1,2 DCE in MW-8I. Only one deep well (MW-5D) was sampled during the 2015 event and the detected PCE concentration was an order of magnitude lower than the next most recent sample (2011) from this well.

Based on a synoptic round of water level measurements collected during August 2015, groundwater elevations were determined for all of the wells installed as part of the off-site RI. Using the Phase V groundwater elevation data, with the inclusion of elevation data from new wells MW-14I and MW-15I, groundwater elevation contour maps (Figures 2 and 3) were generated to evaluate groundwater flow direction and hydraulic gradient. Based on this most recent set of data, the shallow and intermediate flow patterns appear similar to those determined from previous phases of the investigation. According to the elevations and contours derived from the shallow well measurements, shallow groundwater flow direction appears to be to the south-southeast with a component of flow on the eastern edge of the study area indicating flow in a southwesterly direction (Figure 2). As with previous rounds of water level measurements, the groundwater levels in monitoring wells MW-10S and MW-3S continue to be outliers and considered anomalous so they were not considered when preparing the shallow groundwater contours. Table 3 summarizes the groundwater elevations and associated monitoring well specifications for all of the wells installed through Phase V of the off-site investigation.

Based on the addition of groundwater elevation data from MW-14 and MW-15I, flow in the intermediate depth zone (Figure 3) appears to generally be southward. Limited data exists for the southern portion of the study area but also accounting for the distribution of contamination observed in the intermediate depth zone it appears that a slight southwesterly flow component exists in the southern half of the off-site area. Wider areal coverage with intermediate depth wells closer to the site indicate there may also be a southeasterly component of flow in the eastern portion of the off-site area closer to the site.

Only two deep wells have been installed during the off-site RI and the associated groundwater elevation data for these wells have been insufficient for determining the flow direction components. During groundwater level measurements in 2014, YEC, Inc. noted that they were unable to locate well MW-7D and PES verified this during

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2015 field activities, indicating that it appears to have been paved over in the cul-de-sac where it was located. Attempts at manually locating this well at its documented location were unsuccessful and due to multiple buried utilities in the vicinity and the thickness of asphalt used to pave the area, locating the well with an electronic metal detector was not attempted. Since Phase V activities then yielded only a single water level from the deepest interval defined as part of the investigation, no figure was produced to show groundwater elevations for this interval.

Data Interpretation & Recommendations

Primary interpretations from the data collected during the 2015 Phase V investigation conducted as part of the off-site RI include:

- A comprehensive groundwater sampling event, the first since 2011, was completed after the installation of two additional intermediate depth wells (MW-14I and MW-15I). Overall, for those wells where historical data were available, the current sampling results with a few notable exceptions have remained relatively stable or exhibit a general decrease in contaminant levels relative to the results from prior years. The inclusion of two additional intermediate depth wells at the furthest downgradient extent of the off-site investigation further defines the intermediate depth zone in the aquifer as the most significantly impacted zone. The single highest PCE concentration (1900 µg/l) yet detected in groundwater sampled as part of the off-site investigation was collected from new well MW-14I and even the furthest downgradient well MW-15I exhibited a PCE concentration similar to levels observed in some wells located much closer to the site.

- The inclusion of the additional Phase V wells and the subsequent analytical results from the 2015 sampling program shows that the primary axis of the contaminant plume in the intermediate depth is oriented towards the south (Figure 1c). Extending a flow line downgradient from the vicinity of the site to MW-6I connects the high PCE concentration there with even higher concentrations at MW-12I and MW-14I. The additional data appear to support a very elongated, relatively narrow plume at intermediate depths based on the high PCE concentrations at MW-6I constrained by lower concentrations at MW-4I and MW-5I located east and west of MW-6I. Further downgradient this constraint is also observed at MW-12I where the 750 µg/l PCE concentration in this well decreases significantly to the northeast (1.0 µg/l at MW-7I) and southwest (16 µg/l in MW-13I).

- Sampling results from the MW-8S and MW-8I well pair exhibit PCE concentrations significantly higher than many of the wells of these same depth

intervals in this area. In addition, well MW-8I exhibited the highest concentration of TCE of any well sampled during 2015 and the only one with a TCE level that exceeded NYSDEC standards. This well was also the only location from the comprehensive sampling program where cis-1,2 DCE was detected (at a concentration slightly below the NYSDEC standard for this compound), indicating that localized breakdown of PCE due to favorable sub-surface conditions for reductive dechlorination in this area. The detection and relatively high concentrations of these three compounds in an isolated location apart from other wells exhibiting higher concentrations continues to suggest that this contamination may be present as a lobe or discrete mass of contaminant cut off from the main plume associated with the 75-09 Woodhaven Boulevard site, perhaps due to release of contaminants during a different timeframe of industrial activities at the site.

Our recommendations relative to the on-going RI include:

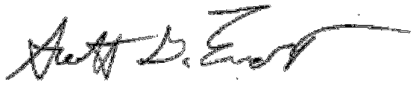
- Results from the comprehensive Phase V groundwater sampling program continue to indicate the presence of significant concentrations of cVOCs in the intermediate depth wells south of the site and the inclusion of data from the new Phase V wells MW-14I and MW-15I extends the area of contamination beyond Jackie Robinson Turnpike and to the northern edge of Forest Park. The placement of the newest wells appears to have intercepted heavily impacted groundwater in the intermediate depth zone of the aquifer. Based on the results from the sampling of wells completed for Phase V of the off-site investigation, the depth of the plume at the southernmost extent of the area investigated is at least 165 ft below the ground surface. The plume is relatively deep and no potential receptors were located within the area investigated, however it is possible that additional groundwater quality data can be obtained from other wells outside of the current extent of the study area which could supplement the data collected during the various phases of the off-site RI.

- Forest Park may utilize a groundwater supply well to supplement their water usage for irrigation purposes and the option to sample this well could be explored (if it does indeed exist and is suitably placed to provide useful groundwater quality data) to supplement, or as an alternative to drilling, a new monitoring well in the park. A review of the EDR report for the area indicated the presence of several water wells in the vicinity of the park, including near the cemetery / park border west of the plume and on either side of Woodhaven Boulevard at its intersection with Park Lane South (which marks the southern boundary of Forest Park in the vicinity of Woodhaven Boulevard). None of these wells were designated as public supply (drinking water) wells and are likely utilized for irrigation or other commercial purposes.

- A document review should also be initiated to determine whether other usable existing wells, possibly associated with other groundwater investigations (given the distance these proposed locations now represent from the 75-09 Woodhaven Boulevard site), are present in the Forest Park area or the neighborhood south of the park. If such wells do exist, a review of existing groundwater data should be initiated or a new sampling program could be conducted to provide supplemental data for the off-site investigation.

Please contact me at your earliest convenience if you have questions or comments on this phase of the RI. On your approval of this report our existing scope of work of this assignment will be completed and we will await further guidance regarding future activities associated with the off-site investigation.

Very truly yours,



Scott G. Englert
Project Manager

encl. Supporting Field Documentation (provided on CD)
cc: M. Lehtinen- HDR

hdrinc.com

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Table 1

Soil Vapor Point and Groundwater Monitoring Well Summary Table

75-09 Woodhaven Boulevard Off-Site RI- Queens, NY

NYSDEC Site No. 241036

Off-site RI Phase I

Soil Vapor Points	Date Installed
SG-1	8/19/2010
SG-2	8/19/2010
SG-3	8/19/2010
SG-4	8/29/2010
SG-5	8/29/2010
SG-6	8/29/2010
SG-7	8/29/2010
SG-8	8/31/2010
SG-9	8/31/2010
SG-10	8/31/2010
SG-11	8/18/2010
SG-12	8/18/2010
SG-13	8/18/2010

Monitoring Wells	Date Installed
MW-1S	8/28/2010
MW-2S	8/30/2010
MW-2I	9/8/2010
MW-3S	8/27/2010
MW-3I	9/1/2010
MW-4I	9/10/2010
MW-5I	9/9/2010
MW-6I	9/7/2010

Off-site RI Phase II

Soil Vapor Points	Date Installed
SG-14	10/4/2011
SG-15	10/4/2011
SG-16	10/3/2011
SG-17	10/3/2011
SG-18	10/5/2011
SG-19	10/5/2011
SG-20	10/7/2011
SG-21	10/7/2011
SG-22	10/6/2011
SG-23	10/6/2011
SG-24	10/3/2011
SG-25	10/4/2011
SG-26	10/5/2011
SG-27	10/5/2011
SG-28	10/3/2011
SG-29	10/3/2011
SG-30	10/4/2011

Monitoring Wells	Date Installed
MW-5S	10/12/2011
MW-5D	11/10/2011
MW-6S	10/19/2011
MW-7S	10/14/2011
MW-7I	10/21/2011
MW-7D	12/1/2011
MW-8S	10/25/2011

Off-site RI Phase III - V

Soil Vapor Points	Date Installed
SG-31	2/26/2013
SG-32	2/26/2013
SG-33	2/28/2013
SG-34	2/28/2013
SG-35	2/28/2013
SG-36	3/20/2013
SG-37	2/28/2013
SG-38	2/27/2013
SG-39	2/27/2013
SG-40	2/27/2013
SG-41	2/26/2013
SG-42	2/27/2013
SG-43	2/26/2013
SG-44	2/27/2013
SG-45	2/27/2013
SG-22I Phase IV	3/6/2014
SG-22D Phase IV	3/6/2014
SG-34I Phase IV	3/6/2014
SG-34D Phase IV	3/6/2014

Monitoring Wells	Date Installed
MW-9S	3/20/2013
MW-10S	3/22/2013
MW-11S	3/26/2013
MW-8I	3/15/2013
MW-12I Phase IV	5/21/2014
MW-13I Phase IV	5/19/2014
MW-14I Phase V	8/3/2015
MW-15I Phase V	8/4/2015

NOTE:

See Figures 1 for locations of new Phase V monitoring wells installed during 2015

Table 2.
August 2015 VOC Groundwater Monitoring Well Sampling Data
75-09 Woodhaven Blvd. Off-Site RI- Queens, NY
NYSDEC Site No. 241036

CLIENT ID: NYSDEC CLASS GA LAB ID: STANDARDS (a) COLLECTION DATE: AND GUIDANCE VALUES (b) (GV) SAMPLE UNITS: NY Water TAGM		MW-10S-20150821 8/21/2015 Aqueous ug/L			BD-2-20150821 MW-10S-20150821 8/21/2015 Aqueous ug/L			MW-11S-20150821 8/21/2015 Aqueous ug/L			MW-12I20150818 8/18/2015 Aqueous ug/L			MW-13I20150819 8/19/2015 Aqueous ug/L		
Analyte	ug/L	Result		RL	Result		RL	Result		RL	Result		RL	Result		RL
1,1,1-Trichloroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,1,2,2-Tetrachloroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,1,2-Trichloroethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,1-Dichloroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,1-Dichloroethene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,2,4-Trichlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,2-Dibromo-3-chloropropane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,2-Dibromoethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,2-Dichlorobenzene	4.7	ND	U	1	ND	U	1	ND	U	1	ND	U	5	ND	U	0.5
1,2-Dichloroethane	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	10	ND	U	1
1,2-Dichloropropane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,3-Dichlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
1,4-Dichlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
2-Butanone	50	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
2-Hexanone	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
4-Methyl-2-pentanone	50	ND	U	1	ND	U	1	ND	U	1	ND	U	50	ND	U	5
Acetone	50	ND	U	5	ND	U	5	ND	U	5	ND	U	5	ND	U	0.5
Benzene	0.7	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	10	ND	U	1
Bromodichloromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Bromoform	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Bromomethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Carbon disulfide	50	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Carbon tetrachloride	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Chlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Chloroethane	50	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Chloroform	7	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Chloromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
cis-1,2-Dichloroethene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
cis-1,3-Dichloropropene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Cyclohexane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Dibromochloromethane	50	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Dichlorodifluoromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Ethylbenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Isopropylbenzene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
m&p-Xylenes	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Methyl Acetate	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Methylcyclohexane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Methylene chloride	5	ND	U	1	ND	U	1	ND	U	1	ND	U	5	ND	U	0.5
Methyl-t-butyl ether	NA	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	10	ND	U	1
o-Xylene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Styrene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Tetrachloroethene	5	ND	U	1	1		1	**23**		1	**750**		10	**16**		1
Toluene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
trans-1,2-Dichloroethene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
trans-1,3-Dichloropropene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Trichloroethene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Trichlorofluoromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Vinyl chloride	2	ND	U	1	ND	U	1	ND	U	1	ND	U	10	ND	U	1
Xylenes (Total)	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	5	ND	U	1

Table 2.
August 2015 VOC Groundwater Monitoring Well Sampling Data
75-09 Woodhaven Blvd. Off-Site RI- Queens, NY
NYSDEC Site No. 241036

CLIENT ID: NYSDEC CLASS GA LAB ID: STANDARDS (a) COLLECTION DATE: AND GUIDANCE SAMPLE UNITS: VALUES (b) (GV) NY Water TAGM		MW-14I20150818 8/18/2015 Aqueous ug/L			MW-15I20150818 8/18/2015 Aqueous ug/L			MW-1S20150818 8/18/2015 Aqueous ug/L			MW-2I-20150820 8/20/2015 Aqueous ug/L			MW-2S-20150820 8/20/2015 Aqueous ug/L			MW-3I-20150820 8/20/2015 Aqueous ug/L		
Analyte	ug/L	Result		RL	Result		RL	Result		RL	Result		RL	Result		RL	Result		RL
1,1,1-Trichloroethane	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2,2-Tetrachloroethane	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2-Trichloroethane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1-Dichloroethane	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1-Dichloroethene	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2,4-Trichlorobenzene	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dibromo-3-chloropropane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dibromoethane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dichlorobenzene	4.7	ND	U	10	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
1,2-Dichloroethane	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dichloropropane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,3-Dichlorobenzene	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,4-Dichlorobenzene	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
2-Butanone	50	ND	U	20	ND	U	1	ND	U	1	ND	UJ	1	ND	U	1	ND	U	1
2-Hexanone	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
4-Methyl-2-pentanone	50	ND	U	100	ND	U	5	ND	U	5	ND	U	5	ND	U	5	ND	U	5
Acetone	50	ND	U	10	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
Benzene	0.7	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Bromodichloromethane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Bromoform	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Bromomethane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Carbon disulfide	50	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Carbon tetrachloride	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chlorobenzene	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloroethane	50	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloroform	7	ND	U	20	3		1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloromethane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
cis-1,2-Dichloroethene	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
cis-1,3-Dichloropropene	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Cyclohexane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Dibromochloromethane	50	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Dichlorodifluoromethane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Ethylbenzene	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Isopropylbenzene	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
m&p-Xylenes	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methyl Acetate	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methylcyclohexane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methylene chloride	5	ND	U	10	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
Methyl-t-butyl ether	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	23		1
o-Xylene	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Styrene	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Tetrachloroethene	5	**1900**		20	**230**		1	**33**		1	**17**		1	**15**		1	**340**		1
Toluene	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
trans-1,2-Dichloroethene	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
trans-1,3-Dichloropropene	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Trichloroethene	5	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	1.7		1
Trichlorofluoromethane	NA	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Vinyl chloride	2	ND	U	20	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Xylenes (Total)	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 2.
August 2015 VOC Groundwater Monitoring Well Sampling Data
75-09 Woodhaven Blvd. Off-Site RI- Queens, NY
NYSDEC Site No. 241036

CLIENT ID: NYSDEC CLASS GA LAB ID: STANDARDS (a) COLLECTION DATE: AND GUIDANCE SAMPLE UNITS: VALUES (b) (GV) NY Water TAGM		MW-3S-20150820 8/20/2015 Aqueous ug/L			MW-4I-20150820 8/20/2015 Aqueous ug/L			MW-5D-20180821 8/21/2015 Aqueous ug/L			MW-5I20150819 8/19/2015 Aqueous ug/L			MW-5S20150819 8/19/2015 Aqueous ug/L		
Analyte	ug/L	Result		RL	Result		RL	Result		RL	Result		RL	Result		RL
1,1,1-Trichloroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2,2-Tetrachloroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2-Trichloroethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1-Dichloroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1-Dichloroethene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2,4-Trichlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dibromo-3-chloropropane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dibromoethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dichlorobenzene	4.7	ND	U	0.5	ND	U	0.5	ND	U	1	ND	U	0.5	ND	U	0.5
1,2-Dichloroethane	5	ND	U	1	ND	U	1	ND	U	0.5	ND	U	1	ND	U	1
1,2-Dichloropropane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,3-Dichlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,4-Dichlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
2-Butanone	50	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
2-Hexanone	NA	ND	UJ	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
4-Methyl-2-pentanone	50	ND	U	5	ND	U	5	ND	U	1	ND	U	5	ND	U	5
Acetone	50	ND	U	0.5	ND	U	0.5	ND	U	5	ND	U	0.5	ND	U	0.5
Benzene	0.7	ND	U	1	ND	U	1	ND	U	0.5	ND	U	1	ND	U	1
Bromodichloromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Bromoform	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Bromomethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Carbon disulfide	50	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Carbon tetrachloride	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloroethane	50	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloroform	7	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
cis-1,2-Dichloroethene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
cis-1,3-Dichloropropene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Cyclohexane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Dibromochloromethane	50	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Dichlorodifluoromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Ethylbenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Isopropylbenzene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
m&p-Xylenes	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methyl Acetate	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methylcyclohexane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methylene chloride	5	ND	U	0.5	ND	U	0.5	ND	U	1	ND	U	0.5	ND	U	0.5
Methyl-t-butyl ether	NA	ND	U	1	0.63		1	1.4		0.5	0.89		1	ND	U	1
o-Xylene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Styrene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Tetrachloroethene	5	2.1		1	**110**		1	1.6		1	**110**		1	3.5		1
Toluene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
trans-1,2-Dichloroethene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
trans-1,3-Dichloropropene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Trichloroethene	5	ND	U	1	ND	U	1	ND	U	1	1.6		1	ND	U	1
Trichlorofluoromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Vinyl chloride	2	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Xylenes (Total)	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 2.
August 2015 VOC Groundwater Monitoring Well Sampling Data
75-09 Woodhaven Blvd. Off-Site RI- Queens, NY
NYSDEC Site No. 241036

CLIENT ID: NYSDEC CLASS GA LAB ID: STANDARDS (a) COLLECTION DATE: AND GUIDANCE SAMPLE UNITS: VALUES (b) (GV) NY Water TAGM		MW-6I-20150820 8/20/2015 Aqueous ug/L			MW-6S-20150820 8/20/2015 Aqueous ug/L			MW-7I20150819 8/19/2015 Aqueous ug/L			BD-120150819 MW-7I20150819 8/19/2015 Aqueous ug/L			MW-7S20150819 8/19/2015 Aqueous ug/L		
Analyte	ug/L	Result		RL	Result		RL	Result		RL	Result		RL	Result		RL
1,1,1-Trichloroethane	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2,2-Tetrachloroethane	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2-Trichloroethane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1-Dichloroethane	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1-Dichloroethene	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2,4-Trichlorobenzene	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dibromo-3-chloropropane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dibromoethane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dichlorobenzene	4.7	ND	U	2.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
1,2-Dichloroethane	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dichloropropane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,3-Dichlorobenzene	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,4-Dichlorobenzene	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
2-Butanone	50	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
2-Hexanone	NA	ND	UJ	5	ND	UJ	1	ND	U	1	ND	U	1	ND	U	1
4-Methyl-2-pentanone	50	ND	U	25	ND	U	5	ND	U	5	ND	U	5	ND	U	5
Acetone	50	ND	U	2.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
Benzene	0.7	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Bromodichloromethane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Bromoform	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Bromomethane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Carbon disulfide	50	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Carbon tetrachloride	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chlorobenzene	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloroethane	50	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloroform	7	ND	U	5	ND	U	1	ND	U	1	1.1		1	1.1		1
Chloromethane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
cis-1,2-Dichloroethene	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
cis-1,3-Dichloropropene	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Cyclohexane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Dibromochloromethane	50	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Dichlorodifluoromethane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Ethylbenzene	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Isopropylbenzene	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
m&p-Xylenes	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methyl Acetate	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methylcyclohexane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methylene chloride	5	ND	U	2.5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	0.5
Methyl-t-butyl ether	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
o-Xylene	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Styrene	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Tetrachloroethene	5	**730**	U	5	**5.3**		1	1		1	1.1		1	2.3		1
Toluene	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
trans-1,2-Dichloroethene	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
trans-1,3-Dichloropropene	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Trichloroethene	5	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Trichlorofluoromethane	NA	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Vinyl chloride	2	ND	U	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Xylenes (Total)	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 2.
August 2015 VOC Groundwater Monitoring Well Sampling Data
75-09 Woodhaven Blvd. Off-Site RI- Queens, NY
NYSDEC Site No. 241036

CLIENT ID: NYSDEC CLASS GA LAB ID: STANDARDS (a) COLLECTION DATE: AND GUIDANCE SAMPLE UNITS: VALUES (b) (GV) NY Water TAGM		MW-8I-20150821 8/21/2015 Aqueous ug/L			MW-8S20150818 8/18/2015 Aqueous ug/L			MW-9S20150819 8/19/2015 Aqueous ug/L			EB-120120819 8/19/2015 Aqueous ug/L			EB-2-20150821 8/21/2015 Aqueous ug/L			TB-120150818 8/18/2015 Aqueous ug/L			TB-2-20150821 8/21/2015 Aqueous ug/L		
Analyte	ug/L	Result		RL	Result		RL	Result		RL	Result		RL	Result		RL	Result		RL	Result		RL
1,1,1-Trichloroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2,2-Tetrachloroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2-Trichloro-1,2,2-trifluoroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1,2-Trichloroethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1-Dichloroethane	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,1-Dichloroethene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2,4-Trichlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dibromo-3-chloropropane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dibromoethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,2-Dichlorobenzene	4.7	ND	U	1	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	1	ND	U	0.5	ND	U	1
1,2-Dichloroethane	5	ND	U	0.5	ND	U	1	ND	U	1	ND	U	1	ND	U	0.5	ND	U	1	ND	U	0.5
1,2-Dichloropropane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,3-Dichlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
1,4-Dichlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
2-Butanone	50	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
2-Hexanone	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
4-Methyl-2-pentanone	50	ND	U	1	ND	U	5	ND	U	5	ND	U	5	ND	U	1	ND	U	5	ND	U	1
Acetone	50	ND	U	5	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	5	ND	U	0.5	ND	U	5
Benzene	0.7	ND	U	0.5	ND	U	1	ND	U	1	ND	U	1	ND	U	0.5	ND	U	1	ND	U	0.5
Bromodichloromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Bromoform	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Bromomethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Carbon disulfide	50	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Carbon tetrachloride	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chlorobenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloroethane	50	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloroform	7	ND	U	1	1.2	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Chloromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
cis-1,2-Dichloroethene	NA	4.9		1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
cis-1,3-Dichloropropene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Cyclohexane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Dibromochloromethane	50	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Dichlorodifluoromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Ethylbenzene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Isopropylbenzene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
m&p-Xylenes	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methyl Acetate	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methylcyclohexane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Methylene chloride	5	ND	U	1	ND	U	0.5	ND	U	0.5	ND	U	0.5	ND	U	1	ND	U	0.5	ND	U	1
Methyl-t-butyl ether	NA	0.59		0.5	ND	U	1	ND	U	1	ND	U	1	ND	U	0.5	ND	U	1	ND	U	0.5
o-Xylene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Styrene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Tetrachloroethene	5	**220**		1	**390**		1	**33**	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Toluene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
trans-1,2-Dichloroethene	5	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
trans-1,3-Dichloropropene	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Trichloroethene	5	**6.2**		1	2.6		1	2.8	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Trichlorofluoromethane	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Vinyl chloride	2	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1
Xylenes (Total)	NA	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1	ND	U	1

Table 2.
August 2015 VOC Groundwater Monitoring Well Sampling
Data 75-09 Woodhaven Blvd. Off-Site RI- Queens, NY
NYSDEC Site No. 241036

(a) NYCRR Part 703. NYSDEC Regulations, Chapter X – Division of Water;
Surface Water and Groundwater Quality and Groundwater Effluent Limitations. Revised January 2008
(b) NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) , June 1998, and addenda.
Note - Numbers in Bold exceed standard or guidance value
NS- No Standard
U - The analyte was analyzed for, but was not detected above the limit
J - The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
NJ - The detection is tentative in identification and estimated in value.
UJ - The analyte was not detected. The reported quantitation limit is an estimate and may be inaccurate or imprecise.

Footnotes

Table 3
Monitoring Well Summary
Depths and Groundwater Elevations
75-09 Woodhaven Boulevard Off-Site RI- Queens, NY
NYSDEC Site No. 241036

Well ID	Total Depth (from top of PVC, ft)	Screen Length (ft)	DTW 9/13/10	DTW 3/23/11	DTW 12/19/11	DTW 4/17/13	DTW 6/17/14	DTW 8/17/15	PVC Elev (Feet MSL)	GW Elev 9/13/10	GW Elev 3/23/11	GW Elev 12/19/11	GW Elev 4/17/13	GW Elev 6/17/14	GW Elev 8/17/15
MW-1S	70.55	15	55.02	55.84	54.58	56.13	55.94	55.84	72.79	17.77	16.95	18.21	16.66	16.85	16.95
MW-2S	70.82	15	57.77	58.54	57.16	58.86	58.63	58.69	75.62	17.85	17.08	18.46	16.76	17.02	16.96
MW-2I	111.30	10	57.63	58.38	56.98	58.51	58.38	58.54	75.50	17.87	17.12	18.52	16.99	17.12	16.96
MW-3S	65.08	10	56.48	54.02	53.07	54.07	53.70	54.49	75.50	19.02	21.48	22.43	21.43	21.80	21.01
MW-3I	111.19	10	57.39	58.20	56.82	58.51	58.51	58.24	75.23	17.84	17.03	18.41	16.72	16.72	16.99
MW-4I	112.48	10	72.40	73.34	71.94	73.55	73.28	73.28	90.07	17.67	16.73	18.13	16.52	16.79	16.79
MW-5S	74.44	10	NM	NM	61.97	63.57	63.34	63.34	79.92	NM	NM	17.95	16.35	16.58	16.58
MW-5I	113.00	10	63.82	64.65	63.26	64.85	64.71	63.26	81.60	17.78	16.95	18.34	16.75	16.89	18.34
MW-5D	150.34	10	NM	NM	63.48	65.08	64.98		81.76	NM	NM	18.28	16.68	16.78	NM
MW-6S	70.15	10	NM	NM	62.22	63.82	63.66	63.54	80.31	NM	NM	18.09	16.49	16.65	16.77
MW-6I	111.24	10	62.67	63.53	62.15	63.78	63.46	63.52	80.33	17.66	16.80	18.18	16.55	16.87	16.81
MW-7S	100.14	10	NM	NM	84.43	86.6	85.81	85.7	102.37	NM	NM	17.94	15.77	16.56	16.67
MW-7I	120.49	10	NM	NM	84.79	86.37	86.17	86.06	102.59	NM	NM	17.80	16.22	16.42	16.53
MW-7D	165.64	10	NM	NM	86.62	88.24	NM	NM	102.18	NM	NM	15.56	13.94	NM	NM
MW-8S	80.10	10	NM	NM	64.27	65.89	65.71	65.58	82.22	NM	NM	17.95	16.33	16.51	16.64
MW-8I	113.27	10	NM	NM	NM	66.08	65.81	65.84	82.63	NM	NM	NM	16.55	16.82	16.79
MW-9S	76.75	10	NM	NM	NM	62.66	62.46	62.44	79.24	NM	NM	NM	16.58	16.78	16.8
MW-10S	79.71	10	NM	NM	NM	71.48	67.37	70.23	94.68	NM	NM	NM	23.20	27.01	24.45
MW-11S	79.55	10	NM	NM	NM	74.21	73.96	73.95	90.59	NM	NM	NM	16.38	16.63	16.64
MW-12I	130.44	10	NM	NM	NM	NM	84.83	84.77	91.42	NM	NM	NM	NM	16.38	16.44
MW-13I	140.13	10	NM	NM	NM	NM	91.41	91.55	108.15	NM	NM	NM	NM	16.45	16.31
MW-14I	158.07	10	NM	NM	NM	NM	NM	110.04	126.39	NM	NM	NM	NM	NM	16.07
MW-15I	166.19	10	NM	NM	NM	NM	NM	137.4	153.44	NM	NM	NM	NM	NM	15.55

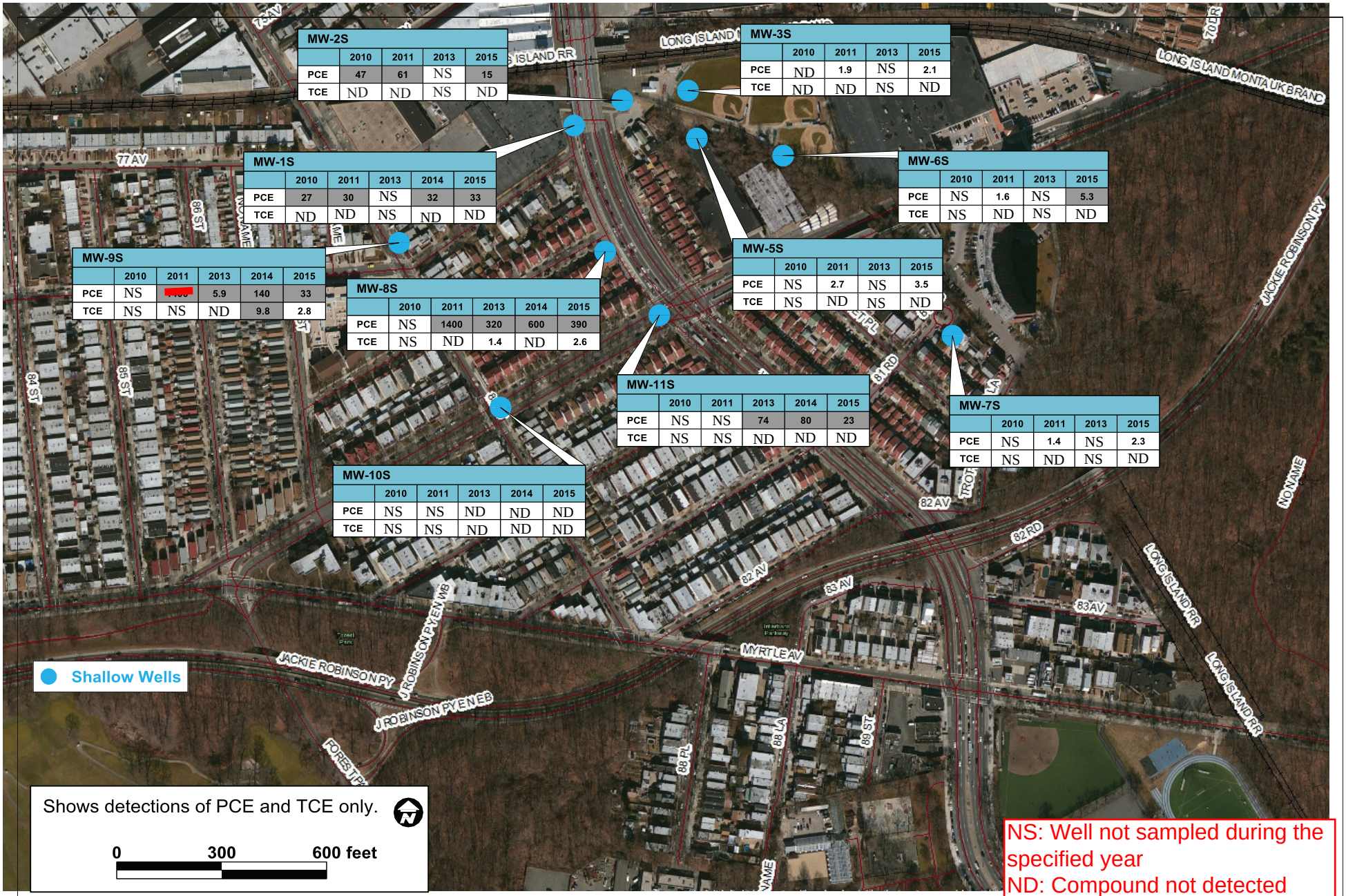
NOTE: NM - Well Not Measured / Well Not Installed

Monitoring Well Sampling Results - August 2015

75-09 Woodhaven Boulevard Off-Site RI NYSDEC Site #241036
Rego Park - Queens, New York

DATE
09/23/2015

FIGURE
1a



MW-2S	2010	2011	2013	2015
PCE	47	61	NS	15
TCE	ND	ND	NS	ND

MW-3S	2010	2011	2013	2015
PCE	ND	1.9	NS	2.1
TCE	ND	ND	NS	ND

MW-1S	2010	2011	2013	2014	2015
PCE	27	30	NS	32	33
TCE	ND	ND	NS	ND	ND

MW-6S	2010	2011	2013	2015
PCE	NS	1.6	NS	5.3
TCE	NS	ND	NS	ND

MW-9S	2010	2011	2013	2014	2015
PCE	NS	[illegible]	5.9	140	33
TCE	NS	NS	ND	9.8	2.8

MW-8S	2010	2011	2013	2014	2015
PCE	NS	1400	320	600	390
TCE	NS	ND	1.4	ND	2.6

MW-5S	2010	2011	2013	2015
PCE	NS	2.7	NS	3.5
TCE	NS	ND	NS	ND

MW-11S	2010	2011	2013	2014	2015
PCE	NS	NS	74	80	23
TCE	NS	NS	ND	ND	ND

MW-7S	2010	2011	2013	2015
PCE	NS	1.4	NS	2.3
TCE	NS	ND	NS	ND

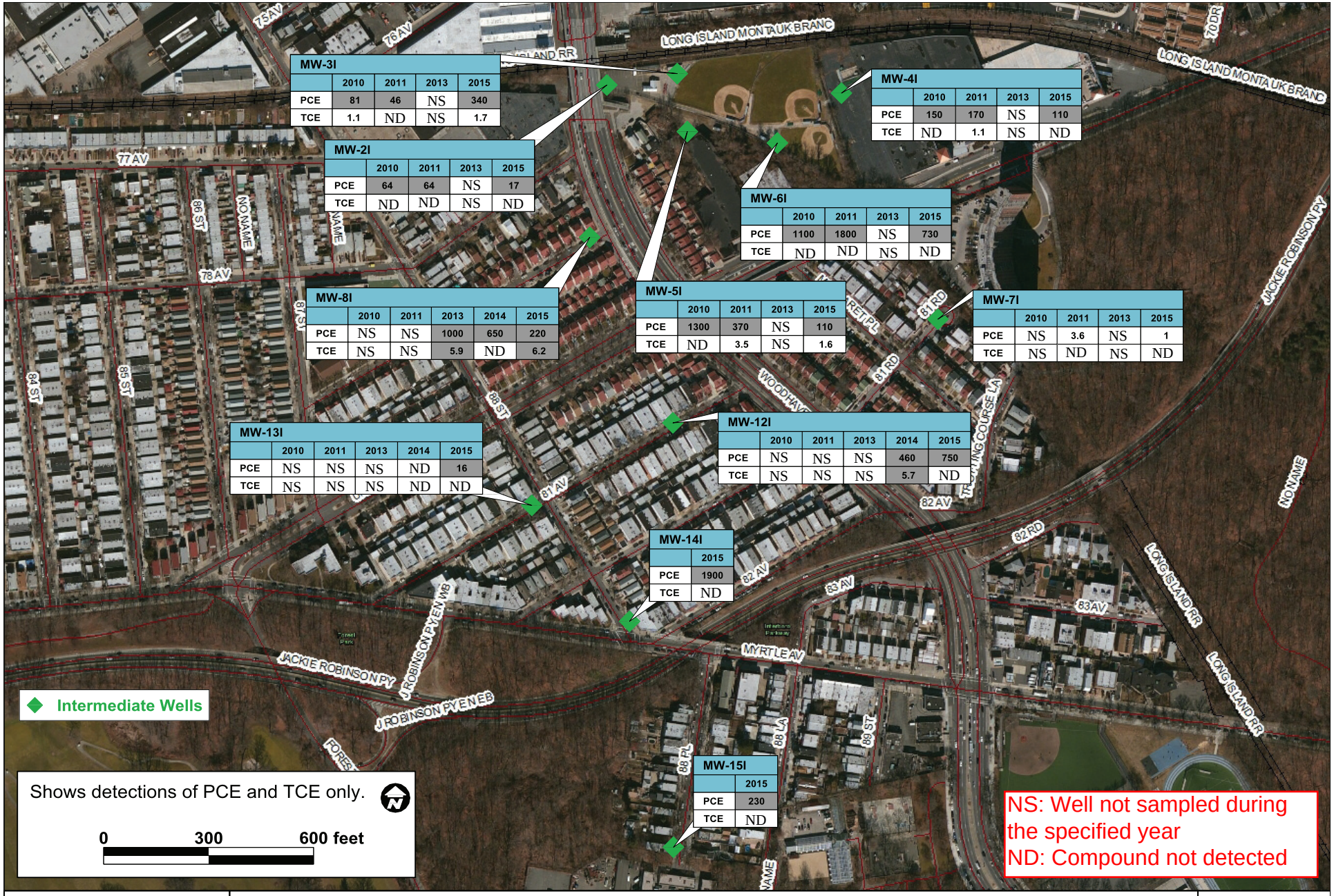
MW-10S	2010	2011	2013	2014	2015
PCE	NS	NS	ND	ND	ND
TCE	NS	NS	ND	ND	ND

Summary of Shallow Monitoring Well Sampling Results

75-09 Woodhaven Boulevard Off-Site RI NYSDEC Site #241036
Rego Park - Queens, New York

DATE: 12/23/2015

FIGURE: 1b



Summary of Intermediate Monitoring Well Sampling Results

75-09 Woodhaven Boulevard Off-Site RI NYSDEC Site #241036
Rego Park - Queens, New York

DATE 12/23/2015

FIGURE 1c

Summary of Deep Monitoring Well Sampling Results

75-09 Woodhaven Boulevard Off-Site RI NYSDEC Site #241036
Rego Park - Queens, New York

DATE 12/23/2015

FIGURE 1d

Shallow Well Groundwater Elevations

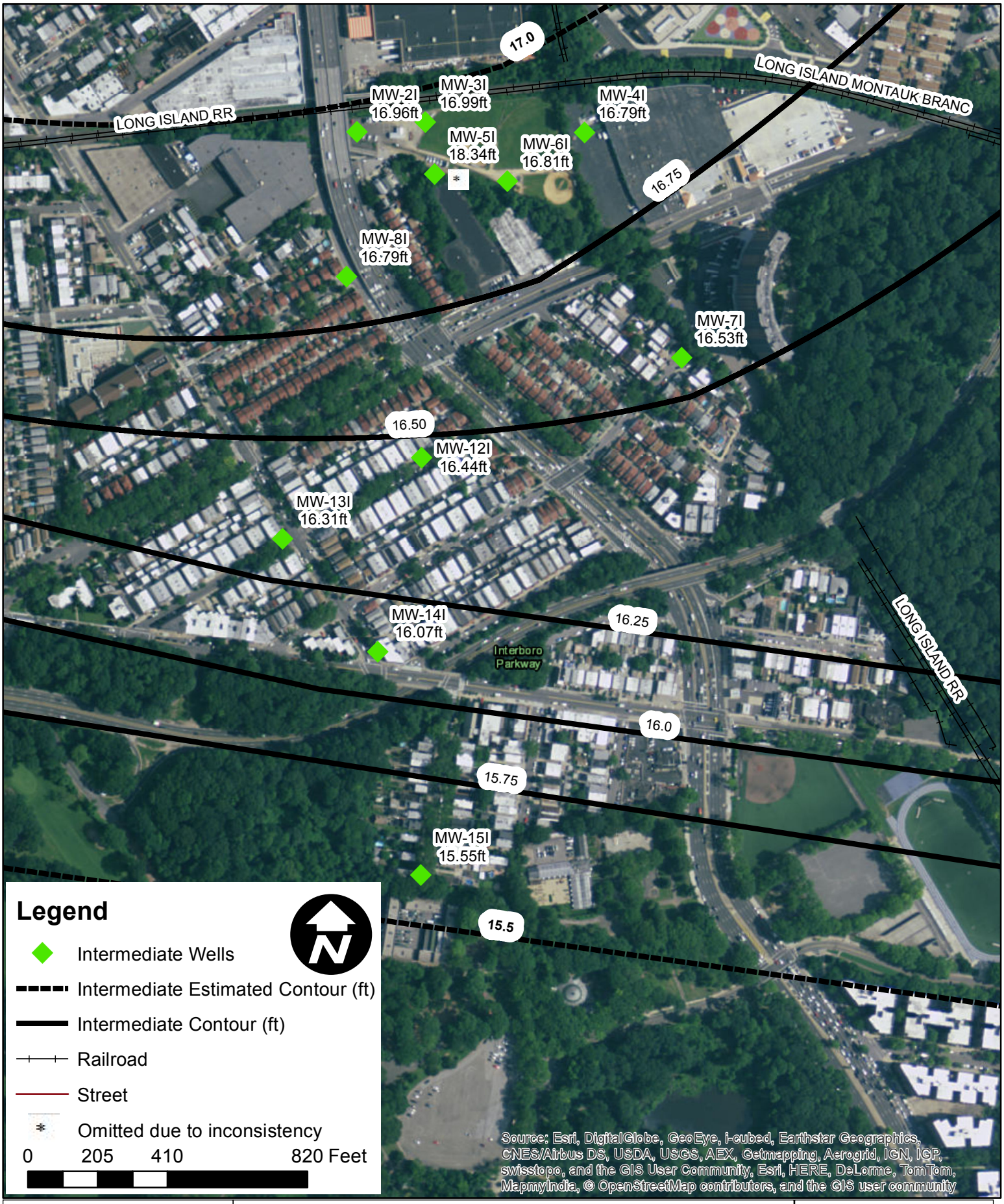
75-09 Woodhaven Boulevard Off-Site RI NYSDEC Site #241036

Rego Park - Queens, New York

Date: 09/23/2015

Figure: 2

\\any-srv1\Projects\D006129 NYSDEC Standby Contract\Work Assignment Folders\WA#7 Woodhaven RI\GIS\NYSDEC_Woodhaven\NYSDEC_Woodhaven\EI\Contouring_Figures\Shallow_Well_Contours.mxd



Intermediate Well Groundwater Elevations

75-09 Woodhaven Boulevard Off-Site RI NYSDEC Site #241036

Rego Park - Queens, New York

Date: 09/23/2015

Figure: 3

\\any-srv1\Projects\D006129 NYSDEC Standby Contract\Work Assignment Folders\WA#7 Woodhaven RI\GIS\NYSDEC_Woodhaven\NYSDEC_Woodhaven\EIContouring_Figures\Intermediate_groundwater_contours.mxd

HDR Field Logs and Documentation

FIELD BORING LOG

Boring	MW-14I
SURFACE ELEV	TBD
DATUM	
SHEET	1 OF 1

PROJECT NAME Woodhaven

SITE LOCATION 88th St and Myrtle Ave **DATE** 7/28/2015 - 7/29/0215 **DRILLER NAME / COMPANY** ADT

MONITORING INSTRUMENTATION PPM RAE **HDR FIELD INSPECTOR** JCS

Depth (ft.)	Sample No.	Sample Depth (ft)	Geoprobe Sample Recov. (ft.)	Geoprobe Sample PID	Sample Description	Remarks
100						
	1			0	Brown, medium-coarse ground sands Large, rounded igeneous cobbles present	Dry except top drilling fluid No Odor ~2.5' in bag
105	2			0.1	Large rounded cobbles in medium to coarse grain sand At bottom, finer, compressed silty clay with pebble inclussions Sample is dry except at 110' - Possible top of groundwater	Dry except 110' No Odor ~4' in bag
110	3			0	Top is medium to coarse grain sands with larger pebble inclussions Bottom is well packed clayey sand	1' in bag wet
115	4			0	2.5' in bag is brown, wet clayey sand/silt 2' in bag is medium - coarse grain sand with rounded pebbles and cobbles	~4' in bag wet
120	5			0.6	Brown, medium to coarse grain sands. Well-sorted.	wet ~4' in bag
125	6			2.6	Brown, medium to coarse grain sands. Well-sorted.	4' in bag CO spike to 50 ppm wet
130	7			3.1	Brown, medium to coarse grain sands. Well-sorted.	4' in bag CO @ 7ppm
135	8			0.9	Fairly well-sorted medium-coarse grain, brown sands slight fining downards to fine/clayey sands	4' in bag wet
140	9			0.2	Brown, medium to coarse grain sands. Well-sorted. Noticably micaceous	1' in bag No odor very wet from driling
145	10			0.3	Brown, medium to coarse grain sands. Noticably micaceous	4' in bag Wet
150	11			3.9	Brown, medium to coarse grain sands with occasional small pebble inclusions	wet no odor
155	12			0.6	Brown, medium to coarse grain sands with occasional small pebble inclusions	wet no odor 4' in bag
160						

NOTES:

WOR - Weight of Rods
WOH - Weight of Hammer
BOH - Bottom of Hole
NS - No Split Spoon Sample
S___ - Split Spoon Sample
U___ - Undisturbed Sample

Proportions
And - Equal
Sandy - 31 - 49%
Some - 13 - 30%
Trace - 1 - 12%

Blows per 1' Compaction
0 - 10 - Loose
11 - 29 - Med. Compact
30 - 50 - Compact
> 50 - V. Compact
50/6" - Refusal

Pocket Pen. (Clays only)
< 0.5 - Soft
0.5 - 1.0 - Medium
1.0 - 4.0 - Stiff
> 4.0 - Hard

Strata Descriptions
F - Fill
O - Organic Deposits
S - Predominantly Sand
M - Predominantly Silt
C - Predominantly Clay

FIELD BORING LOG

Boring	**MW-15I**
SURFACE ELEV	TBD
DATUM	
SHEET	1 **OF** 1

PROJECT NAME Woodhaven

SITE LOCATION 88th St and Myrtle Ave **DATE** 7/31/0215 **DRILLER NAME / COMPANY** ADT

MONITORING INSTRUMENTATION PPM RAE **HDR FIELD INSPECTOR** JCS

Depth (ft.)	Sample No.	Sample Depth (ft)	Geoprobe Sample Recov. (ft.)	Geoprobe Sample PID	Sample Description	Remarks
120						
	1			0	Large, angular boulder pieces (portions drilled through) wet, coarse grain sands beneath	~1' in bag Top is wet from drilling
125						fluid
	2			0	Top appears wet, with coarse grain sands Middle 2' is a dry, fine powder with small pebbles (some rounded) Bottom is wet, poorly sorteds silty sands with pebbles.	Driller says middle is rock power from a boulder
130						he cored through.
	3			0	Wet, brown, silty sands.	1' in bag Wet from drilling
135						
	4			0	Wet, medium- coarse grain sands with small pebble inclusions	3' in bag wet
140						
	5				No Recovery Sampling rod was lost downhold- took ~30 minutes to recover, but sample had fallen out	
145						
	6				No Recovery Sampling rod was lost downhold- took ~30 minutes to recover, but sample had fallen out	
150						
	7			0	Brown, well-sorted medium- coarse grain sands Noticably micaceous	wet
155						
	8			0	Brown, well-sorted medium- coarse grain sands	wet
160						
	9				No recovery	
165						

NOTES:

WOR - Weight of Rods	Proportions	Blows per 1' Compaction	Pocket Pen. (Clays only)	Strata Descriptions
WOH - Weight of Hammer	And - Equal	0 - 10 - Loose	< 0.5 - Soft	F - Fill
BOH - Bottom of Hole	Sandy - 31 - 49%	11 - 29 - Med. Compact	0.5 - 1.0 - Medium	O - Organic Deposits
NS - No Split Spoon Sample	Some - 13 - 30%	30 - 50 - Compact	1.0 - 4.0 - Stiff	S - Predominantly Sand
S___ - Split Spoon Sample	Trace - 1 - 12%	> 50 - V. Compact	> 4.0 - Hard	M - Predominantly Silt
U___ - Undisturbed Sample		50/6" - Refusal		C - Predominantly Clay

MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: **MW-14I**

CLIENT: NYSDEC

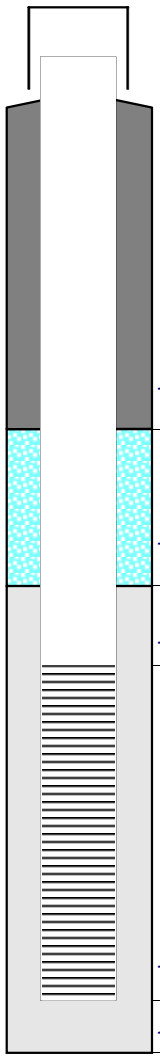
LOCATION: 88th St and Myrtle Ave, Queens, NY

DATE DRILLED: July 28, 2015

DATE DEVELOPED: August 4, 2015

CONSTRUCTION COMPLETED: July 30, 2015

DEVELOPING METHOD: Overpumping with Waterra Pump



NOT TO SCALE

INSPECTOR: Jusitn Starr

DRILLING CONTRACTOR: Aquifer Drilling & Testing

TYPE OF WELL: Overburden Groundwater Monitoring Well

STATIC WATER LEVEL: 110.5 DATE: August 4, 2015

MEASURING POINT: TOC

TOTAL DEPTH OF WELL: 160' TOTAL DEPTH OF BORING: 160'

DRILLING METHOD TYPE: Sonic

DIAMETER: 5" OD CASING: PVC

SAMPLING METHOD TYPE:

DIAMETER: WEIGHT:

FALL: INTERVAL:

RISER PIPE LEFT IN PLACE MATERIAL: PVC

DIAMETER: 2" LENGTH: 150' JOINT TYPE: Flush Thread

SCREEN MATERIAL: PVC 40

INTERVAL: 160' - 150' DIAMETER: 2"

STRATIGRAPHIC UNITS SCREENED: SLOT SIZE: 0.01"

FILTER PACK GRADE:

SAND: #00N GRAVEL: n/a NATURAL: n/a

AMOUNT: 1.5 bags INTERVAL: 160' - 146'

SEAL(s)

Portland Cement	INTERVAL:		AMOUNT:	
Bentonite/Portland Slurry	INTERVAL:	144' - 2'	AMOUNT:	5 bags
Bentonite Pellets	INTERVAL:	146' - 144'	AMOUNT:	0.5 bags
Other:	INTERVAL:		AMOUNT:	

LOCKING CASING: ☐ YES ☒ NO KEY NO:

NOTES:

- A - Top of Casing
- B - Grade
- C - Top of Seal
- D - Top of Sand Pack
- E - Top of Screen
- F - Bottom of Screen
- G - Bottom of Borehole

MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: **MW-15I**

CLIENT: NYSDEC

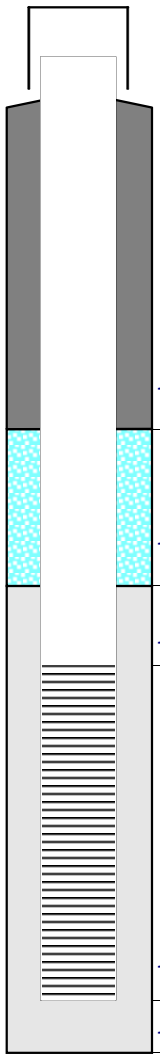
LOCATION: 88th Place, Ridgewood, NY

DATE DRILLED: July 30, 2015

DATE DEVELOPED: August 4, 2015

CONSTRUCTION COMPLETED: August 3, 2015

DEVELOPING METHOD: Overpumping with Waterra Pump



NOT TO SCALE

INSPECTOR: Jusitn Starr

DRILLING CONTRACTOR: Aquifer Drilling & Testing

TYPE OF WELL: Overburden Groundwater Monitoring Well

STATIC WATER LEVEL: 137' DATE: August 4, 2015

MEASURING POINT: TOC

TOTAL DEPTH OF WELL: 165' TOTAL DEPTH OF BORING: 165'

DRILLING METHOD

TYPE: Sonic

DIAMETER: 5" OD CASING: PVC

SAMPLING METHOD

TYPE:

DIAMETER: WEIGHT:

FALL: INTERVAL:

RISER PIPE LEFT IN PLACE

MATERIAL: PVC

DIAMETER: 2" LENGTH: 155' JOINT TYPE: Flush Thread

SCREEN

MATERIAL: PVC 40

INTERVAL: 165' - 155' DIAMETER: 2"

STRATIGRAPHIC UNITS SCREENED: SLOT SIZE: 0.01"

FILTER PACK

GRADE:

SAND: #00N GRAVEL: n/a NATURAL: n/a

AMOUNT: 2 bags INTERVAL: 165' - 151'

SEAL(s)

NOTES:

- A - Top of Casing
- B - Grade
- C - Top of Seal
- D - Top of Sand Pack
- E - Top of Screen
- F - Bottom of Screen
- G - Bottom of Borehole

Portland Cement	INTERVAL:		AMOUNT:	
Bentonite/Portland Slurry	INTERVAL:	149' - 1'	AMOUNT:	9 bags
Bentonite Pellets	INTERVAL:	151' - 149'	AMOUNT:	0.5 bags
Other:	INTERVAL:		AMOUNT:	

LOCKING CASING: ☐ YES ☒ NO KEY NO:

Well Development Log

Well ID No.: MW-14I

Well Casing Type: 2" PVC
Well Depth*: 160'
Screened Interval: 160-150'
Well Elevation*:
Ground Elevation:
Well Condition: First Developmer
Weather Conditions:

Start SWL: 110.5'
Water Column Ht.:
Well Volume (gallons):

Project: NYSDEC Woodhaven
Date: 8/4/2015
Crew: ADT
Purge Method: Inertial (Waterra)
Meters Used: YSI ProDSS
PID Head Space (ppm): 1.1

Time	Est. Gal. Purged	Purge Rate (gpm)	pH	Cond. (uS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp. (C^o)	Salinity (%)	TDS (g/L)	ORP (mV)	Depth to Water*	Comments
0954	0.5		11.68	1140	152	4.00	21.0			-124.4		
1004	4.0	0.35	9.45	994	35.8	1.95	1735			-86.0		
1014	8	0.4	8.35	1238	32.9	2.29	17			-23.2		
1024	12	0.4	7.76	1320	28.4	2.73	17.1			7.3		
1034	17	0.5	7.54	1357	24.2	32.97	17.1			12.4		
1044	22	0.5	7.42	1383	20.6	3.16	16.9			12.7		
1054	27	0.5	7.35	1406	15	3.24	16.9			17.8		
1104	32	0.5	7.31	1413	12.8	3.30	17.0			23.9		
1114	37	0.5	7.28	1417	12.6	3.34	16.9			28.6		
1124	42	0.5	7.26	1419.0	10.3	3.32	17.2			31.8		
1134	46	0.4	7.26	1421.0	9.4	3.32	17.2			33.3		
1144	49	0.3	7.25	1431.0	8.6	3.32	17.0			35.4		
1154	53	0.4	7.24	1425.0	7.9	3.34	16.9			356.5		

Comments:

Notes: Volume is measured in Gallons
* - Measurement taken from top of well casing

Well Development Log

Well ID No.: MW-15I

Well Casing Type: 2" PVC
Well Depth*: 165
Screened Interval: 155-165
Well Elevation*:
Ground Elevation:
Well Condition: New Developmer
Weather Conditions:

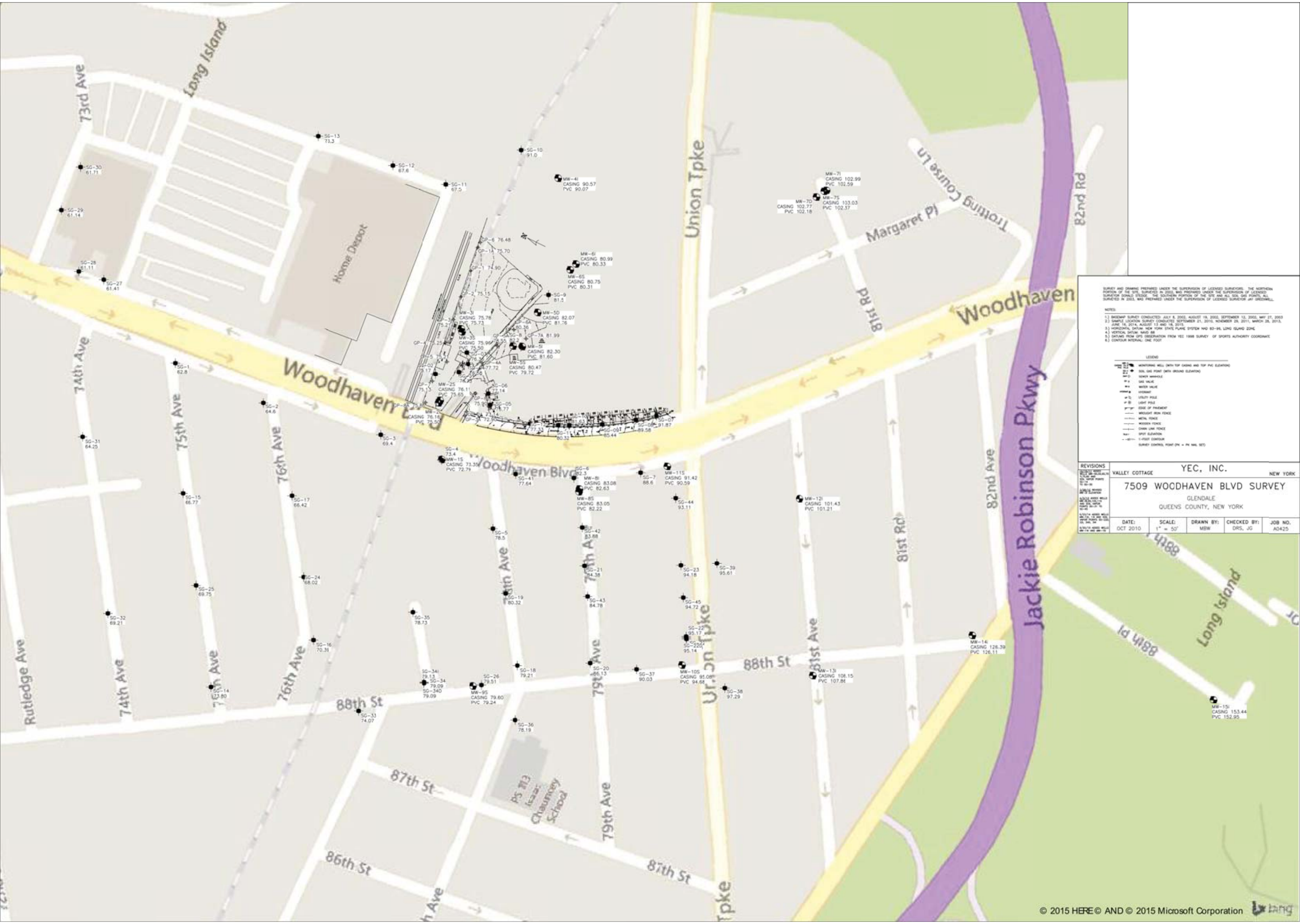
Start SWL: 137'
Water Column Ht.:
Well Volume (gallons):

Project: NYSDEC Woodhaven
Date: 8/4/2015
Crew: ADT
Purge Method: Interial (Waterra)
Meters Used: YSI ProDSS
PID Head Space (ppm): 2.6

Time	Est. Gal. Purged	Purge Rate (gpm)	pH	Cond. (uS/cm)	Turbidity (NTU)	D.O. (mg/L)	Temp. (C^o)	Salinity (%)	TDS (g/L)	ORP (mV)	Depth to Water*	Comments
1303	0.5		9.08	338.7	2466.7	8.43	22.9			2.1		
1313	2	0.15	9.44	299.2	810.8	8.20	22.7			-12.7		
1323	3	0.1	9.37	270.6	531	7.81	24.7			-14.2		Pump initially pumping very slow
1333	5	0.2	8.75	372.7	900.1	7.04	19.3			-4.3		
1343	8	0.3	8.32	591	278.1	8.05	18.2			6.8		
1353	13	0.5	7.98	835	110	8.29	18.4			25.6		
1403	18	0.5	7.82	949	84.3	8.38	18.1			35.2		
1413	23	0.5	7.69	1038	80.1	8.29	18.2			41.9		
1423	27	0.4	7.59	1086	88	8.32	18.2			46.5		Turb keeps spiking to >100
1433	34	0.7	7.58	1127.0	90	7.96	18.2			46.4		
1443	37	0.3	7.53	1149.0	78.5	7.92	18.0			49.0		
1453	41	0.4	7.52	1167.0	76	8.09	18.3			49.7		
1503	45	0.4	7.50	1197.0	63	7.98	17.8			50.3		

Comments:

Notes: Volume is measured in Gallons
* - Measurement taken from top of well casing


YEC, INC.
VALLEY COTTAGE
NEW YORK
7509 WOODHAVEN BLVD SURVEY
GLENDALE
QUEENS COUNTY, NEW YORK
REVISIONS
DATE: OCT 2010
SCALE: 1" = 50'
DRAWN BY: MBW
CHECKED BY: DRS, JG
JOB NO. A0425
NOTES:
LEGEND
Woodhaven Blvd
Union Tpke
Jackie Robinson Pkwy
Long Island
Home Depot
73rd Ave
74th Ave
75th Ave
76th Ave
79th Ave
81st Ave
81st Rd
82nd Rd
82nd Ave
Margaret Pl
Trotting Course Ln
Rutledge Ave
88th St
87th St
86th St
88th Pl
PS 113 Isaac Chauncey School
SG-13 73.3
SG-12 67.6
SG-11 67.5
SG-10 91.0
SG-30 61.71
SG-29 61.14
SG-28 61.11
SG-27 61.41
MW-4I CASING 90.57 PVC 90.07
MW-7I CASING 102.99 PVC 102.59
MW-7S CASING 103.03 PVC 102.37
MW-7D CASING 102.77 PVC 102.18
MW-6I CASING 80.99 PVC 80.33
MW-6S CASING 80.75 PVC 80.31
SG-9 81.5
MW-5D CASING 82.07 PVC 81.76
MW-3I CASING 75.76 PVC 75.73
MW-5I CASING 82.30 PVC 81.60
MW-5S CASING 80.47 PVC 79.72
MW-2S CASING 76.11 PVC 75.65
SG-1 62.8
SG-2 64.6
SG-3 69.4
SG-31 64.25
SG-4 73.4
MW-1S CASING 73.35 PVC 72.79
SG-6 82.3
MW-8I CASING 83.08 PVC 82.63
MW-8S CASING 83.05 PVC 82.22
SG-41 77.64
SG-7 88.6
MW-11S CASING 91.42 PVC 90.59
SG-44 93.11
MW-12I CASING 101.43 PVC 101.21
SG-15 65.77
SG-17 66.42
SG-5 78.5
SG-42 83.88
SG-24 68.02
SG-25 69.75
SG-21 84.38
SG-23 94.18
SG-39 95.61
SG-19 80.32
SG-43 84.78
SG-45 94.72
SG-32 69.21
SG-35 78.73
SG-16 70.31
SG-22 95.17
SG-20 86.13
SG-37 90.03
MW-10S CASING 95.08 PVC 94.68
MW-13I CASING 108.15 PVC 107.86
MW-14I CASING 126.39 PVC 126.11
MW-15I CASING 153.44 PVC 152.95
SG-14 73.80
SG-26 79.51
SG-18 79.21
MW-9S CASING 79.60 PVC 79.24
SG-38 97.29
SG-33 74.07
SG-36 78.19
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