



Environment

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# Annual Long Term Monitoring Report For 2015 Utility Manufacturing/Wonder King (Site No. 130043H) October 28, 2015



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## 1.0 Introduction

AECOM Technical Services Northeast, Inc. (AECOM) has been issued Work Assignment #D007626-16 under the New York State Department of Environmental Conservation (NYSDEC) State Superfund Standby Program. The site under this work assignment is Utility Manufacturing/Wonder King (Utility Manufacturing), Operable Unit No. 2 (Site No. 130043H). The location of the site is shown on Figure 1.

The scope of work for this project consisted of collecting a round of groundwater samples from nine wells in 2013. The work was performed in accordance with NYSDEC Division of Environmental Remediation Final DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC, May 2010). The annual long term monitoring report for 2013 was converted to a periodic review report, which was submitted December 30, 2013. The scope of work was amended on May 16, 2014 to include annual long term groundwater monitoring and reporting for 2014 through 2017.

### 1.1 Background

The Utility Manufacturing site is located at 700-712 Main Street (south side) between Bond Street and Frost Street, approximately 500 feet (ft) north of Old Country Road in the New Cassel Industrial Area (NCIA), Westbury, Nassau County, New York. The site and study area for Operable Unit No. 2 are located within the NCIA (Figure 1), which is a 170-acre industrial and commercial area on the north side of Old Country Road. The sites within the Operable Unit No. 2 consist mostly of commercial and industrial operations including an auto repair facility, auto garage, office spaces, warehouse, and machine tool shop. The Former Applied Fluidics site, No. 130043M, is located approximately 750 feet east of the Utility Manufacturing site. The 89 Frost Street site, No. 130043L, and the Former Autoline Automotive site, No. 130043I, are adjacent to the Former Applied Fluidics site. All three of these sites are Class 2 sites.

### 1.2 Previous Investigations Conducted at the Utility Manufacturing Site

AECOM completed the initial scope of work for this project including project scoping, preparation of plans and specifications, oversight of construction services including sub-slab depressurization system installation at one facility and installation of six monitoring wells, and one round of groundwater and indoor air sampling under Work Assignment #D004436-32 issued by NYSDEC. The work was performed in accordance with NYSDEC Division of Environmental Remediation Final DER-10 Technical Guidance for Site Investigation and Remediation (NYSDEC, May 2010) and the Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH; Final, October 2006). The work conducted under the initial scope (well installation, groundwater sampling, and indoor air sampling) was completed in 2010 and documented in the Final Annual Long Term Monitoring Report (AECOM, 2011). In August 2011, two rounds of monitoring well sampling and vapor intrusion sampling at two structures was conducted. One round of monitoring well sampling and soil vapor intrusion sampling at one structure conducted in 2011 was documented in the Annual Long Term Monitoring Report for 2011 (AECOM, 2012a). One round of monitoring well sampling in 2012 was documented in the Annual Long Term Monitoring Report for 2012 (AECOM, 2012b). The Periodic Review Report Review Period November 27, 2012 to December 14, 2013 (AECOM, 2013) which was prepared for the site included documentation of one round of groundwater sampling in 2013.

A summary of the site investigations conducted for the Utility Manufacturing site between 1986 and 2007 is provided in the Record of Decision (ROD) dated March 2008 for Operable Unit No. 2 (NYSDEC, 2008).

### 1.3 Selected Remedy

A ROD presenting the selected remedy for Operable Unit No. 2 was finalized by NYSDEC in March 2008. The elements of the selected remedy are as follows:

1. Implementation of a remedial design program to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.
2. Installation of sub-slab depressurization systems in three off-site buildings that have vapor intrusion impacts.
3. Collection of periodic sub-slab vapor, indoor air and outdoor air samples at three properties where the potential for vapor intrusion exists. Periodic sampling will continue until sampling results indicate that continued sampling is no longer required.
4. Natural attenuation of groundwater contamination within the study area.
5. Imposition of an institutional control in the form of an environmental easement on the site that will require: (a) compliance with the approved site management plan; and (b) the property owner to complete and submit to NYSDEC (the Department) a periodic certification of institutional and engineering controls.
6. Development of a site management plan which will include the following institutional and engineering controls: (a) monitoring of groundwater, sub-slab vapor, indoor air and outdoor air; and (b) provisions for the continued proper operation and maintenance of the components of the remedy.
7. Provision of a periodic certification of institutional and engineering controls by the property owner, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed.
8. Continued operation of the components of the remedy until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible.
9. Since the remedy results in untreated hazardous waste remaining at the site, a long-term monitoring program will be instituted. Up to nine monitoring wells will be sampled periodically for VOCs to track the progress of the natural attenuation. In addition, sub-slab vapor, indoor air and outdoor air samples will be obtained and analyzed for VOCs at three buildings with potential vapor intrusion impacts. This program will allow the effectiveness of the natural attenuation and soil vapor intrusion mitigation measures to be monitored and will be a component of the operation, maintenance, and monitoring for the site.

Vapor intrusion sampling at three structures (item 3) and groundwater monitoring sampling (item 9) were conducted in 2010 and documented in the Final Annual Long Term Monitoring Report for 2011 (AECOM, 2011). Of the three off-site buildings identified for installation of sub-slab depressurization systems (item 2), property managers for two of the structures (6 and 9) have declined to have the systems installed. NYSDEC has proposed to collect vapor intrusion samples from these structures instead. To date, the firm managing Structure 9 has declined to have the vapor intrusion samples collected. Subsequent testing at Structure 6 indicates an SSDS system is not required. Since finalizing the ROD, NYSDEC has determined that an environmental easement (item 5) is not needed for the site (NYSDEC, 2012). A site management plan (AECOM, 2012c) was approved for the site by NYSDEC in September 2012 (item 6). The groundwater sampling documented in this report was completed in accordance with the long-term monitoring requirements for the site (item 9).

## 2.0 Field Investigation

Groundwater sampling and collection of groundwater elevation measurements was conducted in May 2015. Groundwater samples were collected from the nine wells shown on Figure 2. Well construction data is provided in Table 1. A well inspection checklist was completed for each monitoring well sampled. Field forms are provided in Appendix A.

### 2.1 Groundwater Sampling

AECOM collected one round of samples from two wells installed for the off-site remedial investigation (MW1S and MW1D), six wells installed off-site in May 2010 (MW11S, MW11D, MW12S, MW12D, MW13S, and MW13D), and one well installed by Nassau County (NC-12). Well sampling forms showing compliance with EPA low-flow sampling procedures (EPA SOP, 1998) are provided in Appendix A. A bladder pump was used for sampling. The pump intake was set at the midpoint of the screened interval. Dedicated Teflon-lined tubing was used for all groundwater sample collection. Field measurements recorded during purging include flow rate, depth to water, temperature, pH, conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP) and turbidity. The measurements were recorded on a well sampling form. Measurements were collected approximately every five minutes. A flow-through cell was used to measure the parameters. Purging was considered complete when the indicator parameters stabilized over three consecutive readings. If the groundwater parameters did not stabilize, the samples were collected after two hours of purging. Stabilization parameters are:

- depth to water: less than 0.3 ft drawdown during purging;
- pH:  $\pm 0.1$
- conductivity:  $\pm 3\%$
- DO:  $\pm 10\%$  or less than 5 mg/L
- ORP:  $\pm 10$  mV and
- Turbidity:  $\pm 10\%$  or less than 5 (NTU)
- Temperature:  $\pm 3\%$ .

During sample collection, the flow cell was disconnected and the sample tubing discharge was poured directly into the laboratory-supplied sample containers and field vials. Water samples were collected in pre-preserved bottles provided by the laboratory, cooled to 4°C after collection, and shipped to the subcontracted laboratory for analysis of VOCs, dissolved iron (field filtered), sulfates, nitrates, carbon dioxide, and methane. All parameters other than VOCs are referred to as monitored natural attenuation (MNA) parameters. Analyses were performed by Pace Analytical Services, Inc. (formerly H2M Labs, Inc.), Melville, New York, a NYSDOH Environmental Laboratory Approval Program (ELAP) certified lab (ELAP ID 10478).

A round of water table elevation data for the monitoring wells was collected on May 27, 2015, prior to groundwater sampling. All wells were sampled between May 27, 2015 and May 28, 2015. The results are presented in Table 2. Groundwater elevations are shown on Figure 3 for the shallow wells and Figure 4 for the deep wells. The groundwater flow direction appears to be to the south.

## 3.0 Laboratory Analytical Results

### 3.1 Groundwater Samples

#### 3.1.1 VOC Data

Groundwater samples were collected from nine wells and submitted for the following analyses: VOCs (EPA SW-846 Method 8260), dissolved iron (EPA SW-846 Method 6010B), sulfates (EPA 300.0), nitrates (EPA 353.2), carbon dioxide (EPA SM4500CO<sub>2</sub> D), dissolved oxygen (EPA 360.2), and methane (EPA RSK-175). The VOC groundwater results are compared to the NYS Class GA groundwater criteria and presented in Table 3. VOC detections are summarized on Figure 5. A summary of concentrations exceeding the NYS Class GA groundwater criteria are provided below:

- Tetrachloroethene (PCE) was detected in all wells except MS12S and NC-12. The concentrations exceed the NYS Class GA criterion of 5 µg/L in three of the nine wells with concentrations of 6 µg/L (MW13S), 12 µg/L (MW1D), and 13 µg/L (MW11D);
- Trichloroethene (TCE) was detected in wells MW11D, MW12D, MW13S, MW13D, and MW1D. The concentrations exceed the NYS Class GA criterion of 5 µg/L in MW13D (11 µg/L) and MW1D (61 µg/L);
- Cis-1,2-dichloroethene (cis-1,2-DCE) was detected in all wells except MW12S, MW12D, and NC-12. The concentration exceeds the NYS Class GA criterion of 5 µg/L in MW13S (17 µg/L).
- Trans-1,2-dichloroethene was not detected in any of the wells;
- 1,1-Dichloroethene (1,1-DCE) was detected in MW11D, MW12D, MW13S, MW13D, and MW1D. The concentration exceeds the NYS Class GA criterion of 5 µg/L in MW1D (16 µg/L);
- 1,1,1-Trichloroethane (1,1,1-TCA) was detected in MW1D, MW12D, and MW13S. The concentrations are below the NYS Class GA criterion of 5 µg/L; and,
- 1,1-Dichloroethane (1,1-DCA) was detected in MW1D, MW11D, and MW13S. The concentration exceeds the NYS Class GA criterion of 5 µg/L in MW13S (10 µg/L).

The VOC concentrations for parameters with exceedances of the NY Class GA criteria are presented over time in Figure 6. Groundwater samples collected from monitoring wells MW1S and MW1D in 2005 for the remedial investigation (ERM, 2005) are also included. The concentrations were compared as follows:

- Shallow well concentration differs from the deeper well concentration by more than 5 µg/L;
- The concentration differs from the previous year by more than 5 µg/L; and,
- The concentration in the well is greater than the NY Class GA criterion (5 µg/L for each parameter) or greater than twice the NY Class GA criterion.

A description of the data collected in 2015 compared to data collected in 2014 is provided below.

For wells MW11S and MW11D, the current PCE concentration in the deep well is more than 5 µg/L higher than in the shallow well. The PCE concentration in MW11D is greater than the NY Class GA criterion of 5 µg/L (13 µg/L). The PCE concentration in MW11D increased in 2015 compared to the concentration in 2014. No other parameters have exceedances in these wells in 2014 and 2015.

For wells MW12S and MW12D, the 2014 and 2015 concentrations are below the NY Class GA criteria.

For wells MW13S and MW13D, the TCE concentration in the deep well is more than 5 µg/L higher than in the shallow well, and the TCE concentrations in the deep well is greater than twice the NY Class GA criterion. The TCE concentrations in the shallow and deep wells decreased more than 5 µg/L over the 2014 level. The cis-1,2-DCE concentration in the shallow well is more than 5 µg/L higher than in the deep well. The cis-1,2-DCE concentration in the shallow well has decreased more than 5 µg/L from the 2014 level.

For wells MW1S and MW1D, the concentrations are lower in the shallow well than in the deeper well by more than 5 µg/L for PCE, TCE, and 1,1-DCE. Concentrations are greater than twice the NY Class GA criterion of 5 µg/L for PCE, TCE, and cis-1,2-DCE in MW1D. The concentration TCE declined between 2014 and 2015 in well MW1D by more than 5 µg/L.

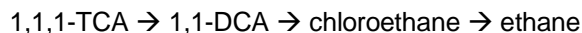
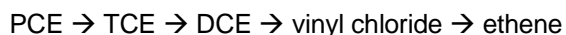
For NC-12, there were no VOC detections in 2014 or 2015.

The groundwater concentrations generally appear to be stabilizing over time. All concentrations are within 5 µg/L of the 2014 levels or have declined by more than 5 µg/L. There were no exceedances of criteria in MW-11S, MW12S, MW12D, MW1S or NC-12 in 2013, 2014 and 2015. The concentration of TCE has declined in MW1D since 2014. The VOC concentrations in MW13S and MW13D which are located farther to the west generally decreased compared to the 2014 levels.

### 3.1.2 MNA Data

The results for laboratory MNA parameters are provided in Table 4. The final field measurements of temperature and dissolved oxygen are also listed. The data were evaluated to determine whether reductive dechlorination is occurring.

Biologically-mediated reductive dechlorination of chlorinated VOCs occurs through a series of progressive biochemical reactions where chloride atoms are replaced by hydrogen atoms to sequentially dechlorinate the chlorinated ethenes.



Because the chlorinated ethenes are acting as electron acceptors the availability of other electron acceptors will compete with the process. Therefore, reductive dechlorination is more efficient in reducing conditions (ORP less than -75 mV). Dissolved oxygen is a strong oxidizing agent (electron acceptor) so negligible levels of dissolved oxygen are necessary for the process to occur efficiently. In conditions sustaining anaerobic activities (dissolved oxygen less than 0.5 mg/L) nitrate, ferric iron and sulfate will act as electron acceptors that compete with reductive dechlorination. The anaerobic generation of methane (methanogenesis) during the biodegradation of organic carbon is an indication of a highly reducing environment. Furthermore, in order for most of the common bacteria to thrive, the groundwater must be circumneutral (pH between 6.0 and 8.5).

For microbial-mediated reactions, aerobic reactions are the most energetically favorable. As dissolved oxygen is consumed, microbes use electron acceptors in the order of reducing energy efficiencies (denitrification of nitrate, manganese reduction, ferric iron reduction, sulfate reduction,



carbon dioxide in methanogenesis). Biotic reductive dechlorination typically occurs most favorably in the ORP range needed for sulfate reduction or methanogenesis (i.e., below -100 mV).

- pH: Water quality measurements indicate that the groundwater is slightly acidic (pH 5.50 to 6.54), and five of the nine wells sampled have pH values less than pH 6.0. The low pH values observed are below the range indicated above and could limit biological natural attenuation processes.
- ORP: Water quality measurements collected in real time during the field sampling indicate that the groundwater conditions are generally oxidizing (ORP 205 to 314 mV) in all of the nine wells. Biotic reductive dechlorination does not occur under these oxidizing conditions.
- Dissolved Oxygen: Water quality measurements collected in real time and laboratory analyses for dissolved oxygen indicate that the monitoring wells have high levels of dissolved oxygen (lab values ranged from 3.48 to 22.4 mg/L). The availability of dissolved oxygen as an electron acceptor limits reductive dechlorination.
- Nitrate: was detected in all nine wells sampled (0.9 mg/L to 6.0 mg/L). Under the conditions required for reductive dechlorination, nitrate is converted to nitrite and ammonia through denitrification. Therefore, the presence of nitrate indicates unfavorable conditions for reductive dechlorination. Nitrate concentrations have been relatively stable from 2010 to 2015.
- Dissolved Iron: An increase in dissolved ferrous iron (Fe II) may indicate reducing conditions since it indicates the reduction of insoluble ferric iron (Fe III). Total dissolved iron was detected at very low concentrations (<1 mg/L) in all of the nine monitoring wells.
- Sulfate was detected in all nine wells sampled (10 mg/L to 45 mg/L). In the environment required for reductive dechlorination, sulfate reducing bacteria would convert sulfate to sulfide and sulfate concentrations would decrease. Such conditions would be favorable for reductive dechlorination of most of the chlorinated ethenes. Sulfate concentrations have been relatively stable from 2010 to 2015.
- Methane is a byproduct of microbial degradation using carbon dioxide as an electron acceptor, and the presence of methane is an indicator of reducing conditions in groundwater, such conditions would be optimal for reductive dechlorination. Methane was not detected above 1 mg/L in any of the nine monitoring wells sampling in May 2015.
- Carbon dioxide: An increase in carbon dioxide may provide an indication of microbial processes. Carbon dioxide was detected in all wells with concentrations ranging from 1,800 µg/L to 18,000 µg/L. These values are consistent with the previous sampling rounds.
- Daughter products are another indicator of reductive dechlorination processes, and increases in daughter products accompany decreases in parent VOCs as shown in the reactions above (i.e., increase in cis-1,2-DCE as TCE decreases). In addition, 1,1-DCA is an abiotic breakdown product of 1,1,1-TCA. Concentrations of TCE were detected in five of the nine wells and 1,2-DCE was detected in six of the nine monitoring wells. Concentrations of 1,1-DCA were detected in three of the nine monitoring wells. Daughter products of both PCE and 1,1,1-TCA have been relatively stable over time. In addition, chloroethane and vinyl chloride were not detected.

The concentrations for 2010 through 2015 are shown over time for VOCs exceeding the NYS Class GA Groundwater Criteria in Figure 6 and for methane, carbon dioxide, sulfate, nitrate, dissolved oxygen in Figure 7. From the evaluation of MNA analyses and water quality parameters in this section, there is no evidence suggesting that biological reductive dechlorination is occurring in site groundwater for the majority of the monitoring wells. The overall biogeochemical environment in the wells tends to favor aerobic bacteria. Reductions in concentrations of VOCs are mostly likely the result of dilution and dispersion and to a lesser extent sorption and volatilization. For bioremediation

of site VOCs to occur, the pH would need to be raised to circumneutral levels and groundwater would need to become more reducing.

## 4.0 Data Validation

Data validation was provided by Environmental Data Services, Inc. (EDS) of Williamsburg, Virginia, an independent chemist under subcontract to AECOM. Data usability summary reports (DUSRs) for each sample delivery group (SDG) are included in Appendix B.

Groundwater data from samples collected in May 2015 were reported by Pace Analytical Services, Inc., Melville, New York as one SDG, AECOM238. A total of 15 analyses were validated, including two trip blanks, one storage blank, one matrix spike/matrix spike duplicate (MS/MSD) pair, one field duplicate, and nine environmental samples.

AECOM238: There were no rejections of data. Overall, the data are acceptable for the intended purposes as qualified for the following deficiencies:

- Cis-1,2-Dichloroethene was qualified as estimated in one sample due to a high MS/MSD recovery.
- Two compounds (bromomethane and dichlorodifluoromethane) were qualified as estimated in all samples due to high continuing calibration percent difference values.

## 5.0 Conclusions and Recommendations

Groundwater sampling was performed at the Utility Manufacturing site in Westbury, NY with field work conducted in May 2015. A summary of the sampling effort is provided below:

- The groundwater flow direction appears to be to the south.
- All groundwater concentrations are within 5 µg/L of the 2014 levels or have declined by more than 5 µg/L. There were no exceedances of criteria in MW-11S, MW12S, MW12D, MW1S or NC-12 in 2013, 2014, or 2015.
- Groundwater concentrations in the shallow wells have decreased over time such that only cross-gradient well MW13S has detects over the NYS Class GA criteria. Groundwater concentrations in the deep wells MW1D and MW11D are above the NYS Class GA criteria for several compounds and do not show any discernible trends, while cross-gradient well MW13D has shown a definitive downward trend.
- Review of the MNA and VOC data indicate that natural attenuation is occurring primarily through dilution and dispersion and to a lesser extent sorption and volatilization.
- Continued annual groundwater monitoring is recommended due to detections of VOCs in the May 2015 samples exceeding the NYS Class GA groundwater criteria.

## 6.0 References

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Table 1  
Well Construction Data

Well Number	Northing	Easting	Ground Elevation	Top of Casing Elevation	Total Depth of Well
MW-1D	214,707.10	1,106,646.90	120.18	119.77	130
MW-1S	214,708.46	1,106,651.34	120.28	119.82	90
MW-11D	214,701.44	1,106,744.20	119.77	119.51	124
MW-11S	214,706.18	1,106,741.07	119.96	119.66	95
MW-12D	214,675.55	1,106,597.69	118.56	118.26	125
MW-12S	214,670.11	1,106,598.27	118.51	117.88	95
MW-13D	214,630.74	1,106,353.23	116.82	116.41	126
MW-13S	214,625.69	1,106,354.25	116.66	116.32	96
FSMW-07A	214,823.99	1,107,063.34	122.84	122.7	70
FSMW-07B	214,817.40	1,107,063.14	122.84	122.73	150
MW-02	215,480.78	1,106,935.05	123.48	122.49	58
MW-08	215,542.41	1,106,801.90	122.86	122.68	60.35
MW-09	215,055.99	1,106,860.06	122.08	121.86	62.05
NC-12	214,665.28	1,107,007.09	121.9	121.1	54
NC-25	215,133.85	1,106,575.82	119.28	119.05	60
U-1	215,414.79	1,106,492.01	124.2	124.03	67

Notes:

All elevations and depths are in feet.

Vertical datum: NAVD88

Horizontal datum: NY State Plane NAD83

Table 2  
Groundwater Elevations

Well Number	Top of Inner Casing	Depth To Water 5/12/10	Elevation 5/12/10	Depth To Water 8/9/11	Elevation 8/9/11	Depth To Water 4/24/12	Elevation 4/24/12	Depth To Water 6/20/13	Elevation 6/20/13	Depth To Water 6/3/14	Elevation 6/3/14	Depth To Water 5/28/15	Elevation 5/28/15
MW-1D	119.77	42.4	77.37	45.59	74.18	43.84	75.93	44.06	75.71	46.52	73.25	46.18	73.59
MW-1S	119.82	41.85	77.97	45.58	74.24	43.82	76.00	44.05	75.77	46.38	73.44	46.21	73.61
MW-11D	119.51	42.74	76.77	46.65	72.86	44.7	74.81	44.95	74.56	47.36	72.15	47.13	72.38
MW-11S	119.66	42.76	76.90	46.5	73.16	44.66	75.00	45.01	74.65	47.37	72.29	47.2	72.46
MW-12D	118.26	41.47	76.79	45.25	73.01	43.52	74.74	43.76	74.50	45.6	72.66	45.82	72.44
MW-12S	117.88	41.08	76.80	44.82	73.06	43.12	74.76	43.38	74.50	46.1	71.78	45.43	72.45
MW-13D	116.41	39.74	76.67	43.5	72.91	41.81	74.6	42.1	74.31	44.35	72.06	44.11	72.3
MW-13S	116.32	39.68	76.64	43.4	72.92	41.73	74.59	42.05	74.27	44.27	72.05	43.97	72.35
FSMW-07A	122.7	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	48.67	74.03
FSMW-07B	122.73	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	49.04	73.69
MW-02	122.49	NM	NM	NM	NM	NM	NM	46.28	76.21	NM	NM	47.93	74.56
MW-08	122.68	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	48.06	74.62
MW-09	121.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	38.51	83.35
NC-12	121.1	NM	NM	NM	NM	NM	NM	45.25	75.85	47.6	73.5	47.44	73.66
NC-25	119.05	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	44.92	74.13
U-1	124.03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	49.65	74.38

Notes:

All elevations and depths are in feet.

Vertical datum: NAVD88

NM - No measurement

Table 3  
VOCs in Groundwater

Units: µg/L	NYS Class GA	MW11S 5/12/2010	MW11S 10/3/2011	MW11S 4/24/2012	MW11S 6/20/2013	MW11S 6/3/2014	(dup) 6/3/2014	MW11S 5/27/2015	(dup) 5/27/2015
1,1,1-Trichloroethane	5	1 U	<b>0.78 J</b>	1 UJ	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	1 U	5 U	5 UJ	5 UJ	5 U	5 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichlorotrifluoroethane	5	1 U	1 U	1 U	NA	NA	NA	NA	NA
1,1-Dichloroethane	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	5	1 U	1 U	1 U	5 UJ	5 UJ	5 UJ	5 U	5 U
1,2-Dibromo-3-chloropropane	0.04	1 U	1 UJ	1 U	5 UJ	R	R	5 U	5 U
1,2-Dibromoethane (EDB)	5	1 U	1 U	1 U	5 U	5 UJ	5 UJ	5 U	5 U
1,2-Dichlorobenzene	3	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	0.6	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene, Total	5	2 U	1 U	NA	<b>3</b>	<b>1.5</b>	<b>1.7</b>	<b>2 J</b>	<b>2</b>
1,2-Dichloropropane	1	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	3	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	3	1 U	1 U	1 U	5 UJ	5 U	5 U	5 U	5 U
2-Butanone (MEK)	5	5 U	R	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U
2-Hexanone	5	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U
4-Methyl-2-pentanone (MIBK)	5	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U
Acetone	5	5 U	R	R	5 UJ	5 U	5 U	5 U	5 U
Benzene	1	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Bromoform	5	1 U	1 UJ	1 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	5	1 UJ	1 U	1 U	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
Carbon disulfide	60	1 U	1 UJ	1 U	5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride	5	1 U	1 U	1 UJ	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Chlorodibromomethane	NA	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	5	1 U	1 U	1 U	5 UJ	5 U	5 U	5 U	5 U
Chloroform	7	1 U	1 UJ	1 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	1 U	1 U	1 U	<b>3 J</b>	<b>1 J</b>	<b>2 J</b>	<b>2 J</b>	<b>2 J</b>
cis-1,3-Dichloropropene	0.4	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Cyclohexane	NA	1 U	1 U	1 UJ	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	5	1 U	1 U	1 UJ	5 U	5 U	5 U	5 UJ	5 UJ
Ethylbenzene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Methyl Acetate	NA	1 U	1 U	1 UJ	5 U	5 U	5 U	5 U	5 U
Methyl tert-Butyl Ether	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	NA	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	5	1 U	1 U	1 UJ	5 U	5 U	5 U	5 U	5 U
Styrene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene (PCE)	5	<b>8.7</b>	<b>5.5 J</b>	<b>4.7</b>	<b>4 J</b>	<b>2 J</b>	<b>2 J</b>	<b>2 J</b>	<b>2 J</b>
Toluene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene (TCE)	5	1 U	<b>0.71 J</b>	1 UJ	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	5	1 U	1 U	1 U	5 UJ	5 U	5 U	5 U	5 U
Vinyl chloride	2	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U
Xylenes, total	5	2 U	2 U	2 U	5 U	5 U	5 U	5 U	5 U

U-Not detected

J-Estimated

R-Rejected

Detections are in bold text.

Exceedances are highlighted



Table 3  
VOCs in Groundwater

Units: µg/L	NYS	MW11D	MW11D	MW11D	(dup)	MW11D	MW11D	MW11D
	Class GA	5/12/2010	10/3/2011	4/24/2012	4/24/2012	6/20/2013	6/3/2014	5/27/2015
1,1,1-Trichloroethane	5	1.8	2.1	0.82 J	1	1 J	5 U	5 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	1 U	1 U	5 U	5 UJ	5 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	1 U	5 U	5 U	5 U
1,1,2-Trichlorotrifluoroethane	5	1 U	1 U	1 U	1 U	NA	NA	NA
1,1-Dichloroethane	5	2.5	3	1.6	2	2 J	2 J	2 J
1,1-Dichloroethene	5	4	5.2	2	2.5	3 J	2 J	4 J
1,2,4-Trichlorobenzene	5	1 U	1 U	1 U	1 UJ	5 UJ	5 UJ	5 U
1,2-Dibromo-3-chloropropane	0.04	1 U	1 UJ	1 U	1 U	5 UJ	R	5 U
1,2-Dibromoethane (EDB)	5	1 U	1 U	1 U	1 U	5 U	5 UJ	5 U
1,2-Dichlorobenzene	3	1 U	1 U	1 U	1 U	5 U	5 U	5 U
1,2-Dichloroethane	0.6	1 U	1 U	1 U	1 U	5 U	5 U	5 U
1,2-Dichloroethene, Total	5	1.2 J	1.9	NA	NA	1	1.4	2
1,2-Dichloropropane	1	1 U	1 U	1 U	1 U	5 U	5 U	5 U
1,3-Dichlorobenzene	3	1 U	1 U	1 U	1 U	5 U	5 U	5 U
1,4-Dichlorobenzene	3	1 U	1 U	1 U	1 U	5 UJ	5 U	5 U
2-Butanone (MEK)	5	5 UJ	R	5 U	5 R	5 UJ	5 UJ	5 U
2-Hexanone	5	5 UJ	5 U	5 U	5 U	5 UJ	5 UJ	5 U
4-Methyl-2-pentanone (MIBK)	5	5 UJ	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Acetone	5	4.8 J	R	R	R	5 UJ	5 U	5 U
Benzene	1	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Bromodichloromethane	5	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Bromoform	5	1 UJ	1 UJ	1 U	1 U	5 U	5 U	5 U
Bromomethane	5	1 U	1 U	1 U	1 U	5 UJ	5 UJ	5 UJ
Carbon disulfide	60	1 U	1 UJ	1 U	1 U	5 U	5 U	5 U
Carbon Tetrachloride	5	1 U	1 U	1 UJ	1 U	5 U	5 U	5 U
Chlorobenzene	5	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Chlorodibromomethane	NA	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Chloroethane	5	1 U	1 U	1 U	1 U	5 UJ	5 U	5 U
Chloroform	7	1 U	1 UJ	1 U	1 U	5 U	5 U	5 U
Chloromethane	5	1 U	1 U	1 U	1 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	1.2	1.9	1.1	1.2	1 J	1 J	2 J
cis-1,3-Dichloropropene	0.4	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Cyclohexane	NA	1 U	1 U	1 UJ	1 U	5 U	5 U	5 U
Dichlorodifluoromethane	5	1 U	1 U	1 UJ	1 U	5 U	5 U	5 UJ
Ethylbenzene	5	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Isopropylbenzene	5	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Methyl Acetate	NA	1 UJ	1 U	1 UJ	1 U	5 U	5 U	5 U
Methyl tert-Butyl Ether	5	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Methylcyclohexane	NA	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Methylene Chloride	5	1 U	1 U	1 UJ	1 U	5 U	5 U	5 U
Styrene	5	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Tetrachloroethene (PCE)	5	8.1	17 J	9	8	14	8	13
Toluene	5	1 U	1 U	1 U	1 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	1 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Trichloroethene (TCE)	5	3 U	5.3	2.4 J	2.6	4 J	3 J	4 J
Trichlorofluoromethane	5	1 U	1 U	1 U	1 U	5 UJ	5 U	5 U
Vinyl chloride	2	1 U	1 U	1 U	1 U	5 U	5 U	5 U
Xylenes, total	5	2 U	2 U	2 U	2 U	5 U	5 U	5 U

Table 3  
VOCs in Groundwater

Units: µg/L	NYS	MW12S (dup)		MW12S	MW12S	MW12S	MW12S	MW12S
	Class GA	5/11/2010	5/11/2010	8/9/2011	4/24/2012	6/20/2013	6/3/2014	5/27/2015
1,1,1-Trichloroethane	5	1 U	1 U	5 U	1 UJ	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	5 U	1 U	5 U	5 UJ	5 U
1,1,2-Trichloroethane	1	1 U	1 U	5 U	1 U	5 U	5 U	5 U
1,1,2-Trichlorotrifluoroethane	5	1 U	1 U	5 U	1 U	NA	NA	NA
1,1-Dichloroethane	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
1,1-Dichloroethene	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	5	1 U	1 U	5 U	1 U	5 UJ	5 UJ	5 U
1,2-Dibromo-3-chloropropane	0.04	1 UJ	1 U	5 UJ	1 U	5 UJ	R	5 U
1,2-Dibromoethane (EDB)	5	1 U	1 U	5 U	1 U	5 U	5 UJ	5 U
1,2-Dichlorobenzene	3	1 U	1 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethane	0.6	1 U	1 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethene, Total	5	15	15	2.2 J	NA	5 U	5 U	5 U
1,2-Dichloropropane	1	1 U	1 U	5 U	1 U	5 U	5 U	5 U
1,3-Dichlorobenzene	3	1 U	1 U	5 U	1 U	5 U	5 U	5 U
1,4-Dichlorobenzene	3	1 U	1 U	5 U	1 U	5 UJ	5 U	5 U
2-Butanone (MEK)	5	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
2-Hexanone	5	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
4-Methyl-2-pentanone (MIBK)	5	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Acetone	5	5 U	5 U	R	R	5 UJ	5 U	5 U
Benzene	1	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Bromodichloromethane	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Bromoform	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Bromomethane	5	1 U	1 UJ	5 U	1 U	5 UJ	5 UJ	5 UJ
Carbon disulfide	60	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Carbon Tetrachloride	5	1 U	1 U	5 U	1 UJ	5 U	5 U	5 U
Chlorobenzene	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Chlorodibromomethane	NA	1 UJ	1 U	5 U	1 U	5 U	5 U	5 U
Chloroethane	5	1 U	1 U	5 U	1 U	5 UJ	5 U	5 U
Chloroform	7	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Chloromethane	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	15	15	2.2 J	1.7	5 U	5 U	5 U
cis-1,3-Dichloropropene	0.4	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Cyclohexane	NA	1 U	1 U	5 U	1 UJ	5 U	5 U	5 U
Dichlorodifluoromethane	5	1 UJ	1 U	5 U	1 UJ	5 U	5 U	5 UJ
Ethylbenzene	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Isopropylbenzene	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Methyl Acetate	NA	1 U	1 U	5 UJ	1 UJ	5 U	5 U	5 U
Methyl tert-Butyl Ether	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Methylcyclohexane	NA	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Methylene Chloride	5	1 U	1 U	5 U	1 UJ	5 U	5 U	5 U
Styrene	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Tetrachloroethene (PCE)	5	10	10	18	21	5	1 J	5 U
Toluene	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	1 U	1 U	5 U	1 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	1 UJ	1 U	5 U	1 U	5 U	5 U	5 U
Trichloroethene (TCE)	5	2.5	2.4	1.9 J	3 J	2 J	5 U	5 U
Trichlorofluoromethane	5	1 UJ	1 U	5 U	1 U	5 UJ	5 U	5 U
Vinyl chloride	2	1 U	1 U	5 U	1 U	5 U	5 U	5 U
Xylenes, total	5	2 U	2 U	5 U	2 U	5 U	5 U	5 U

Table 3  
VOCs in Groundwater

Units: µg/L	NYS Class GA	MW12D 5/11/2010	MW12D 8/9/2011	MW12D 4/24/2012	MW12D 6/20/2013	MW12D 6/3/2014	MW12D 5/27/2015
1,1,1-Trichloroethane	5	8.8	0.91 J	1.1 J	2 J	1 J	1 J
1,1,2,2-Tetrachloroethane	5	1 U	5 U	1 U	5 U	5 UJ	5 U
1,1,2-Trichloroethane	1	1 U	5 U	1 U	5 U	5 U	5 U
1,1,2-Trichlorotrifluoroethane	5	2.2	5 U	1 U	NA	NA	NA
1,1-Dichloroethane	5	2.4	5 U	1 U	5 U	5 U	5 U
1,1-Dichloroethene	5	17	1.5 J	1 U	4 J	1 J	2 J
1,2,4-Trichlorobenzene	5	1 U	5 U	1 U	5 UJ	5 UJ	5 U
1,2-Dibromo-3-chloropropane	0.04	1 U	5 UJ	1 U	5 UJ	R	5 U
1,2-Dibromoethane (EDB)	5	1 U	5 U	1 U	5 U	5 UJ	5 U
1,2-Dichlorobenzene	3	1 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethane	0.6	1 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethene, Total	5	1.8 J	5 U	NA	5 U	5 U	5 U
1,2-Dichloropropane	1	1 U	5 U	1 U	5 U	5 U	5 U
1,3-Dichlorobenzene	3	1 U	5 U	1 U	5 U	5 U	5 U
1,4-Dichlorobenzene	3	1 U	5 U	1 U	5 UJ	5 U	5 U
2-Butanone (MEK)	5	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
2-Hexanone	5	5 U	5 U	5 U	5 UJ	5 UJ	5 U
4-Methyl-2-pentanone (MIBK)	5	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Acetone	5	5 U	R	R	5 UJ	5 U	5 U
Benzene	1	1 U	5 U	1 U	5 U	5 U	5 U
Bromodichloromethane	5	1 U	5 U	1 U	5 U	5 U	5 U
Bromoform	5	1 U	5 U	1 U	5 U	5 U	5 U
Bromomethane	5	1 UJ	5 U	1 U	5 UJ	5 UJ	5 UJ
Carbon disulfide	60	1 U	5 U	1 U	5 U	5 U	5 U
Carbon Tetrachloride	5	1 U	5 U	1 UJ	5 U	5 U	5 U
Chlorobenzene	5	1 U	5 U	1 U	5 U	5 U	5 U
Chlorodibromomethane	NA	1 U	5 U	1 U	5 U	5 U	5 U
Chloroethane	5	1 U	5 U	1 U	5 UJ	5 U	5 U
Chloroform	7	1 U	5 U	1 U	5 U	5 U	5 U
Chloromethane	5	1 U	5 U	1 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	1.8	5 U	1 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	0.4	1 U	5 U	1 U	5 U	5 U	5 U
Cyclohexane	NA	1 U	5 U	1 UJ	5 U	5 U	5 U
Dichlorodifluoromethane	5	1 U	5 U	1 UJ	5 U	5 U	5 UJ
Ethylbenzene	5	1 U	5 U	1 U	5 U	5 U	5 U
Isopropylbenzene	5	1 U	5 U	1 U	5 U	5 U	5 U
Methyl Acetate	NA	1 U	5 UJ	1 UJ	5 U	5 U	5 U
Methyl tert-Butyl Ether	5	1 U	5 U	1 U	5 U	5 U	5 U
Methylcyclohexane	NA	1 U	5 U	1 U	5 U	5 U	5 U
Methylene Chloride	5	1 U	5 U	1 UJ	5 U	5 U	5 U
Styrene	5	1 U	5 U	1 U	5 U	5 U	5 U
Tetrachloroethene (PCE)	5	7.1	1.8 J	2.6	3 J	2 J	2 J
Toluene	5	1 U	5 U	1 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	1 U	5 U	1 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	1 U	5 U	1 U	5 U	5 U	5 U
Trichloroethene (TCE)	5	25	1.4 J	1.6 J	3 J	5 U	2 J
Trichlorofluoromethane	5	1 U	5 U	1 U	5 UJ	5 U	5 U
Vinyl chloride	2	1 U	5 U	1 U	5 U	5 U	5 U
Xylenes, total	5	2 U	5 U	2 U	5 U	5 U	5 U

Table 3  
VOCs in Groundwater

Units: µg/L	NYS Class GA	MW13S 5/11/2010	MW13S 8/9/2011	(dup) 8/9/2011	MW13S 4/24/2012	MW13S 6/20/2013	MW13S 6/4/2014	MW13S 5/28/2015
1,1,1-Trichloroethane	5	1 U	2.1 J	1.8 J	2.5 J	6	8 J	4 J
1,1,2,2-Tetrachloroethane	5	1 U	5 U	5 U	1 U	5 U	5 UJ	5 U
1,1,2-Trichloroethane	1	1 U	5 U	5 U	1 U	5 U	5 U	5 U
1,1,2-Trichlorotrifluoroethane	5	1 U	5 U	5 U	1 U		NA	NA
1,1-Dichloroethane	5	1 U	4.2 J	3.6 J	5.3	15	18 J	10
1,1-Dichloroethene	5	1 U	0.82 J	0.74 J	1 U	2 J	2 J	1 J
1,2,4-Trichlorobenzene	5	1 U	5 U	5 U	1 U	5 UJ	5 UJ	5 U
1,2-Dibromo-3-chloropropane	0.04	1 UJ	5 UJ	5 UJ	1 U	5 UJ	R	5 U
1,2-Dibromoethane (EDB)	5	1 U	5 U	5 U	1 U	5 U	5 UJ	5 U
1,2-Dichlorobenzene	3	1 U	5 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethane	0.6	1 U	5 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethene, Total	5	0.74 J	6.1	5.3	NA	24	31 J	18
1,2-Dichloropropane	1	1 U	5 U	5 U	1 U	5 U	5 U	5 U
1,3-Dichlorobenzene	3	1 U	5 U	5 U	1 U	5 U	5 U	5 U
1,4-Dichlorobenzene	3	1 U	5 U	5 U	1 U	5 UJ	5 U	5 U
2-Butanone (MEK)	5	5 U	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 U
2-Hexanone	5	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
4-Methyl-2-pentanone (MIBK)	5	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Acetone	5	5 U	R	R	R	5 UJ	5 U	5 U
Benzene	1	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Bromodichloromethane	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Bromoform	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Bromomethane	5	1 U	5 U	5 U	1 U	5 UJ	2 J	5 UJ
Carbon disulfide	60	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Carbon Tetrachloride	5	1 U	5 U	5 U	1 UJ	5 U	5 U	5 U
Chlorobenzene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Chlorodibromomethane	NA	1 UJ	5 U	5 U	1 U	5 U	5 U	5 U
Chloroethane	5	1 U	5 U	5 U	1 U	5 UJ	5 U	5 U
Chloroform	7	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Chloromethane	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	1 U	6.1	5.3	7.9	24	30 J	17
cis-1,3-Dichloropropene	0.4	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Cyclohexane	NA	1 U	5 U	5 U	1 UJ	5 U	5 U	5 U
Dichlorodifluoromethane	5	1 UJ	5 U	5 U	1 UJ	5 U	5 U	5 UJ
Ethylbenzene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Isopropylbenzene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Methyl Acetate	NA	1 U	5 UJ	5 UJ	1 UJ	5 U	5 U	5 U
Methyl tert-Butyl Ether	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Methylcyclohexane	NA	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Methylene Chloride	5	1 U	5 U	5 U	1 UJ	5 U	5 U	5 U
Styrene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Tetrachloroethene (PCE)	5	1.2	3.5 J	3.3 J	5.5	14	13 J	6
Toluene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	1 UJ	5 U	5 U	1 U	5 U	5 U	5 U
Trichloroethene (TCE)	5	1.7	16	14	16 J	22	12	5
Trichlorofluoromethane	5	1 UJ	5 U	5 U	1 U	5 UJ	5 U	5 U
Vinyl chloride	2	1 U	5 U	5 U	1 U	5 U	5 U	5 U
Xylenes, total	5	2 U	5 U	5 U	2 U	5 U	5 U	5 U

Table 3  
VOCs in Groundwater

Units: µg/L	NYS Class GA	MW13D 5/11/2010	MW13D 8/9/2011	MW13D 4/24/2012	MW13D 6/20/2013	MW13D 6/4/2014	MW13D 5/28/2015
1,1,1-Trichloroethane	5	4.2	4.7 J	3.1 J	2 J	2 J	5 U
1,1,2,2-Tetrachloroethane	5	1 U	5 U	1 U	5 U	5 UJ	5 U
1,1,2-Trichloroethane	1	1 U	5 U	1 U	5 U	5 U	5 U
1,1,2-Trichlorotrifluoroethane	5	1.2	5 U	1 U	NA	NA	NA
1,1-Dichloroethane	5	1.2	0.72 J	0.63 J	5 U	5 U	5 U
1,1-Dichloroethene	5	7	5.6	3.8	5	3 J	1 J
1,2,4-Trichlorobenzene	5	1 U	5 U	1 U	5 UJ	5 UJ	5 U
1,2-Dibromo-3-chloropropane	0.04	1 UJ	5 UJ	1 U	5 UJ	R	5 U
1,2-Dibromoethane (EDB)	5	1 U	5 U	1 U	5 U	5 UJ	5 U
1,2-Dichlorobenzene	3	1 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethane	0.6	0.58 J	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethene, Total	5	17	8.5	NA	8	3.6	2
1,2-Dichloropropane	1	1 U	5 U	1 U	5 U	5 U	5 U
1,3-Dichlorobenzene	3	1 U	5 U	1 U	5 U	5 U	5 U
1,4-Dichlorobenzene	3	1 U	5 U	1 U	5 UJ	5 U	5 U
2-Butanone (MEK)	5	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
2-Hexanone	5	5 U	5 U	5 U	5 UJ	5 UJ	5 U
4-Methyl-2-pentanone (MIBK)	5	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Acetone	5	5 U	R	R	5 UJ	5 U	5 U
Benzene	1	1 U	5 U	1 U	5 U	5 U	5 U
Bromodichloromethane	5	1 U	5 U	1 U	5 U	5 U	5 U
Bromoform	5	1 U	5 U	1 U	5 U	5 U	5 U
Bromomethane	5	1 U	5 U	1 U	5 UJ	5 UJ	5 UJ
Carbon disulfide	60	1 U	5 U	1 U	5 U	5 U	5 U
Carbon Tetrachloride	5	1 U	5 U	1 UJ	5 U	5 U	5 U
Chlorobenzene	5	1 U	5 U	1 U	5 U	5 U	5 U
Chlorodibromomethane	NA	1 UJ	5 U	1 U	5 U	5 U	5 U
Chloroethane	5	1 U	5 U	1 U	5 UJ	5 U	5 U
Chloroform	7	1 U	5 U	1 U	5 U	5 U	5 U
Chloromethane	5	1 U	5 U	1 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	17	8.5	6.1	8	4 J	2 J
cis-1,3-Dichloropropene	0.4	1 U	5 U	1 U	5 U	5 U	5 U
Cyclohexane	NA	1 U	5 U	1 UJ	5 U	5 U	5 U
Dichlorodifluoromethane	5	1 UJ	5 U	1 UJ	5 U	5 U	5 UJ
Ethylbenzene	5	1 U	5 U	1 U	5 U	5 U	5 U
Isopropylbenzene	5	1 U	5 U	1 U	5 U	5 U	5 U
Methyl Acetate	NA	1 U	5 UJ	1 UJ	5 U	5 U	5 U
Methyl tert-Butyl Ether	5	1 U	5 U	1 U	5 U	5 U	5 U
Methylcyclohexane	NA	1 U	5 U	1 U	5 U	5 U	5 U
Methylene Chloride	5	1 U	5 U	1 UJ	5 U	5 U	5 U
Styrene	5	1 U	5 U	1 U	5 U	5 U	5 U
Tetrachloroethene (PCE)	5	9.4	5.5	5.2	7	3 J	2 J
Toluene	5	1 U	5 U	1 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	1 U	5 U	1 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	1 UJ	5 U	1 U	5 U	5 U	5 U
Trichloroethene (TCE)	5	200	88	60 J	65	30	11
Trichlorofluoromethane	5	1 UJ	5 U	1 U	5 UJ	5 U	5 U
Vinyl chloride	2	1 U	5 U	1 U	5 U	5 U	5 U
Xylenes, total	5	2 U	5 U	2 U	5 U	5 U	5 U

Table 3  
VOCs in Groundwater

Units: µg/L	NYS Class GA	MW1S 4/5/2005	MW1S 5/12/2010	MW1S 8/10/2011	MW1S 4/24/2012	MW1S 6/20/2013	MW1S 6/3/2014	MW1S 5/28/2015
1,1,1-Trichloroethane	5	3.6	1 U	5 U	1 UJ	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	0.5 U	1 U	5 U	1 U	5 U	5 UJ	5 U
1,1,2-Trichloroethane	1	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
1,1,2-Trichlorotrifluoroethane	5	0.5 U	1 U	5 U	1 U	NA	NA	NA
1,1-Dichloroethane	5	0.9	1 U	5 U	1 U	5 U	5 U	5 U
1,1-Dichloroethene	5	1.4	1 U	5 U	1 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	5	0.5 U	1 U	5 U	1 U	5 UJ	5 UJ	5 U
1,2-Dibromo-3-chloropropane	0.04	0.5 U	1 U	5 UJ	1 U	5 UJ	R	5 U
1,2-Dibromoethane (EDB)	5	0.5 U	1 U	5 U	1 U	5 U	5 UJ	5 U
1,2-Dichlorobenzene	3	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethane	0.6	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethene, Total	5	NA	18	20	NA	4	2.8	3
1,2-Dichloropropane	1	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
1,3-Dichlorobenzene	3	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
1,4-Dichlorobenzene	3	0.5 U	1 U	5 U	1 U	5 UJ	5 U	5 U
2-Butanone (MEK)	5	5 U	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 U
2-Hexanone	5	5 U	5 UJ	5 U	5 U	5 UJ	5 UJ	5 U
4-Methyl-2-pentanone (MIBK)	5	5 U	5 UJ	5 U	5 U	5 UJ	5 UJ	5 U
Acetone	5	5 U	5 J	R	R	5 UJ	5 U	5 U
Benzene	1	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Bromodichloromethane	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Bromoform	5	0.5 U	1 UJ	5 U	1 U	5 U	5 U	5 U
Bromomethane	5	0.5 U	1 U	5 U	1 U	5 UJ	5 UJ	5 UJ
Carbon disulfide	60	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Carbon Tetrachloride	5	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 U
Chlorobenzene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Chlorodibromomethane	NA	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Chloroethane	5	0.5 U	1 U	5 U	1 U	5 UJ	5 U	5 U
Chloroform	7	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Chloromethane	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	84	18	20	12	4 J	3 J	3 J
cis-1,3-Dichloropropene	0.4	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Cyclohexane	NA	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 U
Dichlorodifluoromethane	5	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 UJ
Ethylbenzene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Isopropylbenzene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Methyl Acetate	NA	0.5 U	1 UJ	5 UJ	1 UJ	5 U	5 U	5 U
Methyl tert-Butyl Ether	5	0.97	1 U	5 U	1 U	5 U	5 U	5 U
Methylcyclohexane	NA	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Methylene Chloride	5	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 U
Styrene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Tetrachloroethene (PCE)	5	220	8.9	4.4 J	5.5	4 J	2 J	3 J
Toluene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	0.76	1 U	5 U	1 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Trichloroethene (TCE)	5	33	3.1 U	2.2 J	1.8 J	2 J	5 U	5 U
Trichlorofluoromethane	5	0.5 U	1 U	5 U	1 U	5 UJ	5 U	5 U
Vinyl chloride	2	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Xylenes, total	5	0.5 U	2 U	5 U	2 U	5 U	5 U	5 U

Table 3  
VOCs in Groundwater

Units: µg/L	NYS Class GA	MW1D 4/5/2005	MW1D 5/12/2010	MW1D 8/10/2011	MW1D 4/24/2012	MW1D 6/20/2013	MW1D 6/3/2014	MW1D 5/27/2015
1,1,1-Trichloroethane	5	17	15	3.7 J	9.9 J	9	6	4 J
1,1,2,2-Tetrachloroethane	5	0.5 U	1 U	5 U	1 U	5 U	5 UJ	5 U
1,1,2-Trichloroethane	1	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
1,1,2-Trichlorotrifluoroethane	5	1.7	3.5	5 U	1 U	NA	NA	NA
1,1-Dichloroethane	5	4	4.3	2.2 J	2.8	3 J	5 U	2 J
1,1-Dichloroethene	5	22	30	4.3 J	24	28	15	16
1,2,4-Trichlorobenzene	5	0.5 U	1 U	5 U	1 U	5 UJ	5 UJ	5 U
1,2-Dibromo-3-chloropropane	0.04	0.5 U	1 U	5 UJ	1 U	5 UJ	R	5 U
1,2-Dibromoethane (EDB)	5	0.5 U	1 U	5 U	1 U	5 U	5 UJ	5 U
1,2-Dichlorobenzene	3	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethane	0.6	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
1,2-Dichloroethene, Total	5	NA	4.4	5.7	NA	7	5.9	5
1,2-Dichloropropane	1	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
1,3-Dichlorobenzene	3	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
1,4-Dichlorobenzene	3	0.5 U	1 U	5 U	1 U	5 UJ	5 U	5 U
2-Butanone (MEK)	5	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
2-Hexanone	5	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
4-Methyl-2-pentanone (MIBK)	5	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Acetone	5	5 U	5 U	R	R	5 UJ	5 U	5 U
Benzene	1	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Bromodichloromethane	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Bromoform	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Bromomethane	5	0.5 U	1 UJ	5 U	1 U	5 UJ	5 UJ	5 UJ
Carbon disulfide	60	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Carbon Tetrachloride	5	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 U
Chlorobenzene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Chlorodibromomethane	NA	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Chloroethane	5	0.5 U	1 U	5 U	1 U	5 UJ	5 U	5 U
Chloroform	7	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Chloromethane	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	4.4	4.4	5.7	6.6	7	6	5
cis-1,3-Dichloropropene	0.4	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Cyclohexane	NA	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 U
Dichlorodifluoromethane	5	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 UJ
Ethylbenzene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Isopropylbenzene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Methyl Acetate	NA	0.5 U	1 U	5 UJ	1 UJ	5 U	5 U	5 U
Methyl tert-Butyl Ether	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Methylcyclohexane	NA	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Methylene Chloride	5	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 U
Styrene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Tetrachloroethene (PCE)	5	8.6	18	6.6	24	26	13	12
Toluene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Trichloroethene (TCE)	5	54	74	65	110 J	110	77	61
Trichlorofluoromethane	5	0.5 U	1 U	5 U	1 U	5 UJ	5 U	5 U
Vinyl chloride	2	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U
Xylenes, total	5	0.5 U	2 U	5 U	2 U	5 U	5 U	5 U

Table 3  
VOCs in Groundwater

Units: µg/L	NYS Class GA	NC-12 6/20/2013	NC-12 6/3/2014	NC-12 5/28/2015
1,1,1-Trichloroethane	5	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5	5 U	5 UJ	5 U
1,1,2-Trichloroethane	1	5 U	5 U	5 U
1,1,2-Trichlorotrifluoroethane	5	NA	NA	NA
1,1-Dichloroethane	5	5 U	5 U	5 U
1,1-Dichloroethene	5	5 U	5 U	5 U
1,2,4-Trichlorobenzene	5	5 UJ	5 UJ	5 U
1,2-Dibromo-3-chloropropane	0.04	5 UJ	R	5 U
1,2-Dibromoethane (EDB)	5	5 U	5 UJ	5 U
1,2-Dichlorobenzene	3	5 U	5 U	5 U
1,2-Dichloroethane	0.6	5 U	5 U	5 U
1,2-Dichloroethene, Total	5	5 U	5 U	5 U
1,2-Dichloropropane	1	5 U	5 U	5 U
1,3-Dichlorobenzene	3	5 U	5 U	5 U
1,4-Dichlorobenzene	3	5 U	5 U	5 U
2-Butanone (MEK)	5	5 UJ	5 UJ	5 U
2-Hexanone	5	5 UJ	5 UJ	5 U
4-Methyl-2-pentanone (MIBK)	5	5 U	5 UJ	5 U
Acetone	5	5 UJ	5 U	5 U
Benzene	1	5 U	5 U	5 U
Bromodichloromethane	5	5 U	5 U	5 U
Bromoform	5	5 U	5 U	5 U
Bromomethane	5	5 UJ	5 UJ	5 UJ
Carbon disulfide	60	5 UJ	5 U	5 U
Carbon Tetrachloride	5	5 U	5 U	5 U
Chlorobenzene	5	5 U	5 U	5 U
Chlorodibromomethane	NA	5 UJ	5 U	5 U
Chloroethane	5	5 UJ	5 U	5 U
Chloroform	7	5 U	5 U	1 J
Chloromethane	5	5 U	5 U	5 U
cis-1,2-Dichloroethene	5	5 U	5 U	5 U
cis-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Cyclohexane	NA	5 UJ	5 U	5 U
Dichlorodifluoromethane	5	5 U	5 U	5 UJ
Ethylbenzene	5	5 U	5 U	5 U
Isopropylbenzene	5	5 U	5 U	5 U
Methyl Acetate	NA	5 UJ	5 U	5 U
Methyl tert-Butyl Ether	5	5 U	5 U	5 U
Methylcyclohexane	NA	5 UJ	5 U	5 U
Methylene Chloride	5	5 U	5 U	5 U
Styrene	5	5 U	5 U	5 U
Tetrachloroethene (PCE)	5	5 U	5 U	5 U
Toluene	5	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U
Trichloroethene (TCE)	5	5 U	5 U	5 U
Trichlorofluoromethane	5	5 UJ	5 U	5 U
Vinyl chloride	2	5 U	5 U	5 U
Xylenes, total	5	5 U	5 U	5 U



Table 4  
MNA Parameters in Groundwater

ANALYTE	UNITS	NY Class GA	MW11S						MW11D					
			5/12/2010	10/3/2011	4/24/2012	6/20/2013	6/3/2014	5/27/2015	5/12/2010	10/3/2011	4/24/2012	6/20/2013	6/3/2014	5/27/2015
Methane	µg/L	NA	1 U	1.9	1.8	1 U	1 U	1 U	0.63 J	1.7	13	1 U	1 U	0.3 J
Carbon Dioxide	µg/L	NA	<b>5200</b>	<b>1750</b>	<b>2340</b>	<b>13200</b>	<b>10600</b>	<b>1800</b>	<b>1000</b>	<b>7350</b>	<b>10300</b>	<b>26400</b>	<b>25500</b>	<b>7000</b>
Sulfate	mg/L	250	<b>16.1</b> B	<b>12</b>	<b>23.5</b>	<b>44.6</b>	<b>38.3</b>	<b>31.6</b>	<b>28.4</b> B	<b>17</b>	<b>15.6</b>	<b>16.2</b>	<b>17.3</b>	<b>16.4</b>
Nitrogen, Nitrate	mg/L-N	10	<b>1.42</b>	<b>1.3</b> B	<b>2.3</b> D	<b>2.31</b> D	<b>2.04</b> D	<b>1.73</b> D	<b>1.62</b>	<b>1.3</b> B	<b>1.2</b> D	<b>0.77</b>	<b>0.67</b> D	<b>0.9</b>
Iron - Dissolved	mg/L	300	0.05 U	0.2 U	<b>0.05</b> B	<b>0.04</b> B	<b>0.02</b> B	<b>0.01</b> B	0.05 U	0.2 U	<b>0.23</b>	<b>0.35</b>	<b>0.01</b> B	<b>0.11</b>
Dissolved Oxygen														
Laboratory	mg/L	NA	<b>10.5</b>	<b>33.6</b>	<b>50.4</b>	<b>12.0</b>	<b>8.4</b>	<b>12.6</b>	<b>10.6</b>	<b>35.6</b>	<b>37.3</b>	<b>1.8</b>	<b>7.0</b>	<b>3.8</b>
Field	mg/L	NA	<b>9.7</b>	<b>13.4</b>	<b>14.0</b>	<b>6.7</b>	<b>7.8</b>	<b>8.0</b>	<b>3.8</b>	<b>3.1</b>	<b>2.8</b>	<b>0.7</b>	<b>8.6</b>	<b>1.5</b>
Temperature														
Field	Celsius	NA	<b>14.4</b>	<b>17.9</b>	<b>11.7</b>	<b>22.2</b>	<b>16.2</b>	<b>15.1</b>	<b>13.3</b>	<b>19.0</b>	<b>15.9</b>	<b>18.9</b>	<b>20.5</b>	<b>15.3</b>

U Not detected

J Concentrations are estimated.

D Dilution required due to high concentration of target analyte(s)

B Analyte was detected in the associated Method Blank

NA Not available

**Detections are in bold text.**

The field dissolved oxygen and temperature are the final readings collected during groundwater sampling.

Table 4  
MNA Parameters in Groundwater

		NY	MW12S (dup)		MW12S					MW12D					
ANALYTE	UNITS	Class GA	5/11/2010	5/11/2010	8/9/2011	4/24/2012	6/20/2013	6/3/2014	5/27/2015	5/11/2010	8/9/2011	4/24/2012	6/20/2013	6/3/2014	5/27/2015
Methane	µg/L	NA	1 U	1 U	0.61	1.8	1 U	1 U	1 U	1 U	0.63	1.6	1 U	1 U	1 U
Carbon Dioxide	µg/L	NA	3500	3400	6400	3530	8800	35200	6200	3500	2300	8150	13200	15800	3100
Sulfate	mg/L	250	28.9	29	37	47.6	39.2	41.2	45	46.8	25	29.3	22.8	20.1	21.2
Nitrogen, Nitrate	mg/L-N	10	2.97	2.97	4 B	3.77	2.68 D	2.12 D	1.62 D	3.38 D	2.4 B	2.59	2.57 D	2.38 D	2.43 D
Iron - Dissolved	mg/L	300	0.05 U	0.05 U	0.2 U	0.2 U	0.04 B	0.02 B	0.01 U	0.05 U	0.2 U	0.2 U	0.09 B	0.01 B	0.01 U
Dissolved Oxygen															
Laboratory	mg/L	NA	11.3	11.3	37.2	27.4	8.9	9.1	13.4	9.9	47.4	35.0	9.9	9.4	6.7
Field	mg/L	NA	10.1	NA	7.5	12.7	3.3	6.5	7.9	9.9	15.8	8.3	8.3	4.8	4.9
Temperature															
Field	Celsius	NA	15.8	NA	20.1	15.0	38.8	20.4	18.2	17.2	18.7	10.5	18.1	20.4	17.0

Table 4  
MNA Parameters in Groundwater

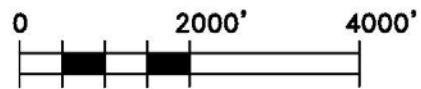
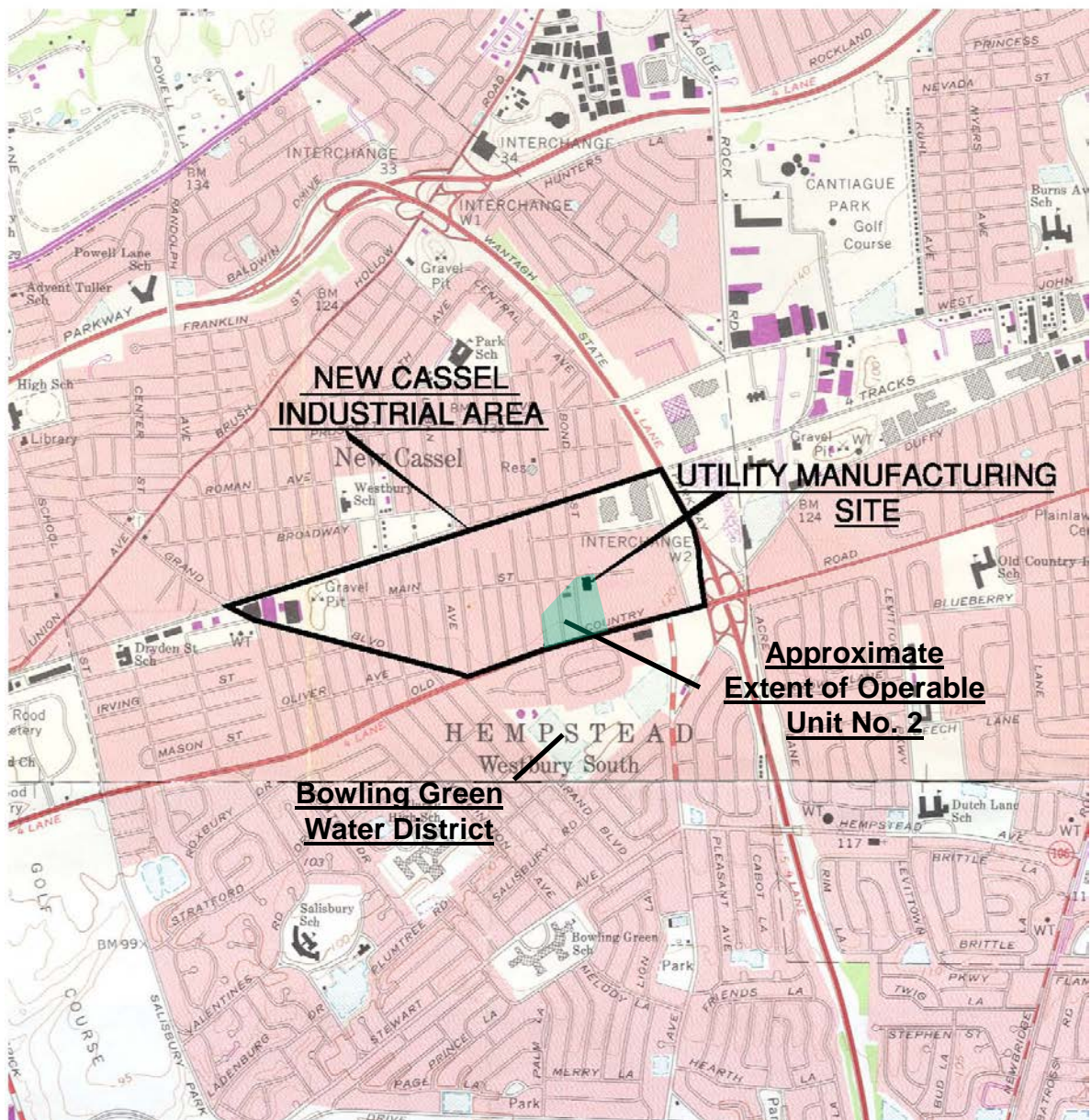
ANALYTE	UNITS	NY Class GA	MW13S						MW13D					
			5/11/2010	8/9/2011	4/24/2012	6/20/2013	6/4/2014	5/28/2015	5/11/2010	8/9/2011	4/24/2012	6/20/2013	6/4/2014	5/28/2015
Methane	µg/L	NA	1 U	0.63	2.0	1 U	1 U	1 U	1 U	0.67	1.7	1 U	1 U	0.3 J
Carbon Dioxide	µg/L	NA	17000	11000	12900	17600	34300	16300	9000	13600	22400	30800	17600	7900
Sulfate	mg/L	250	47.9	28	39.5	31.2	33.2	27.8	12.4	12	16.5	9.94	10.5	10
Nitrogen, Nitrate	mg/L-N	10	3.81 D	4.4 B	5.34	4.44 D	3.31 D	3.03 D	6.39 D	4.6 B	5.7	6.53 D	6.82 D	6 D
Iron - Dissolved	mg/L	300	0.05 U	0.2 U	0.2 U	0.04 B	0.01 B	0.02 B	0.05 U	1.17 U	0.2 U	0.04 B	0.12	0.12
Dissolved Oxygen														
Laboratory	mg/L	NA	12.2	16.9	18.4	9.3	12.2	9.9	9.3	16.0	52.3	5.5	1.0	22.4
Field	mg/L	NA	10.1	7.5	10.7	8.0	8.8	4.8	10.1	4.5	3.3	5.7	0.1	10.5
Temperature														
Field	Celsius	NA	16.7	19.4	11.3	17.8	19.6	17.2	18.3	18.3	15.7	18.9	16.3	17.9

Table 4  
MNA Parameters in Groundwater

ANALYTE	UNITS	NY Class GA	MW1S							MW1D						
			5/12/2010	8/10/2011	4/24/2012	6/20/2013	6/20/2013	6/4/2014	5/28/2015	5/12/2010	8/10/2011	4/24/2012	6/20/2013	6/20/2013	6/4/2014	5/27/2015
Methane	µg/L	NA	1 U	0.7	1.7	1 U	1 U	1 U	1 U	1 U	0.78	1.8	1 U	1 U	1 U	0.3 J
Carbon Dioxide	µg/L	NA	7700	10400	8790	26400	13200	20200	9700	15000	3860	13000	35200	35200	22000	10600
Sulfate	mg/L	250	25.9 B	13	18.6	25.4	44.4	37.1	28.9	24.4 B	16	22.5	20	20	16.1	13.8
Nitrogen, Nitrate	mg/L-N	10	1.85	2.2 B	2.6 D	2.39 D	2.27 D	1.94 D	1.73 D	2.8	2.5 B	2.4 D	1.67 D	1.67 D	1.55 D	1.25
Iron - Dissolved	mg/L	300	0.05 U	0.2 U	0.05 B	0.05 B	0.06 B	0.02 B	0.02 B	0.029 J	0.2 U	0.036 B	0.20	0.20	0.18	0.05 B
Dissolved Oxygen																
Laboratory	mg/L	NA	6.6	25.2	48.4	8.1	11.4	12.1	9.6	4.2	38.0	18.3	2.3	2.3	7.5	11.6
Field	mg/L	NA	6.8	12.2	10.4	7.0	NA	8.2	7.4	0.6	16.8	2.3	1.1	1.1	8.4	9.1
Temperature																
Field	Celsius	NA	15.8	17.9	15.9	19.3	NA	22.8	17.0	15.2	20.8	16.4	17.7	17.7	23.2	19.8

Table 4  
MNA Parameters in Groundwater

ANALYTE	UNITS	NY	NC-12		
		Class GA	6/28/2013	6/4/2014	5/28/2015
Methane	µg/L	NA	1 U	1 U	1 U
Carbon Dioxide	µg/L	NA	<b>26400</b>	<b>36100</b>	<b>18000</b>
Sulfate	mg/L	250	<b>134</b> D	<b>86.1</b> D	<b>40.5</b>
Nitrogen, Nitrate	mg/L-N	10	<b>2.8</b> D	<b>2.89</b> D	<b>3.9</b> D
Iron - Dissolved	mg/L	300	<b>0.11</b>	<b>0.02</b> B	<b>0.01</b> B
Dissolved Oxygen					
Laboratory	mg/L	NA	<b>8.0</b>	<b>8.6</b>	<b>8.9</b>
Field	mg/L	NA	<b>8.08</b>	<b>6.3</b>	<b>7.5</b>
Temperature					
Field	Celsius	NA	<b>18.9</b>	<b>20.7</b>	<b>17.4</b>



APPROX. GRAPHIC SCALE

From ERM (2005):  
USGS Hicksville & Freeport NY Quadrangle, 1979

100 Red Schoolhouse Road, Suite B-1  
Chestnut Ridge, NY 10977-6715

ENVIRONMENTAL CONSULTING ENGINEERS



PROJECT:

**SITE MANAGEMENT**

**Utility Manufacturing/Wonder King, OU2**  
700 – 712 Main Street, Westbury, New York

SITE LOCATION MAP

Project No: 60269807

Figure No: 1

June 24, 2013







## AECOM

Utility Manufacturing/Wonder King  
700 – 712 Main Street  
Westbury, New York

0 20 40 80  
Feet



## Legend

-  Monitoring Wells
-  Indoor Air Sample Structures

Groundwater Sampling Locations

Project No: 60269807

Figure No: 2

June 24, 2013





## AECOM

Utility Manufacturing/Wonder King  
700 – 712 Main Street  
Westbury, New York

0 55 110 220  
Feet

## Legend



Monitoring Wells



Groundwater Contours (ft above mean sea level)



Indoor Air Sample Structures

Groundwater elevations are in NAVD88.

The result for MW-09 was not used in constructing the contours.

The top of casing value available for this well may be incorrect.

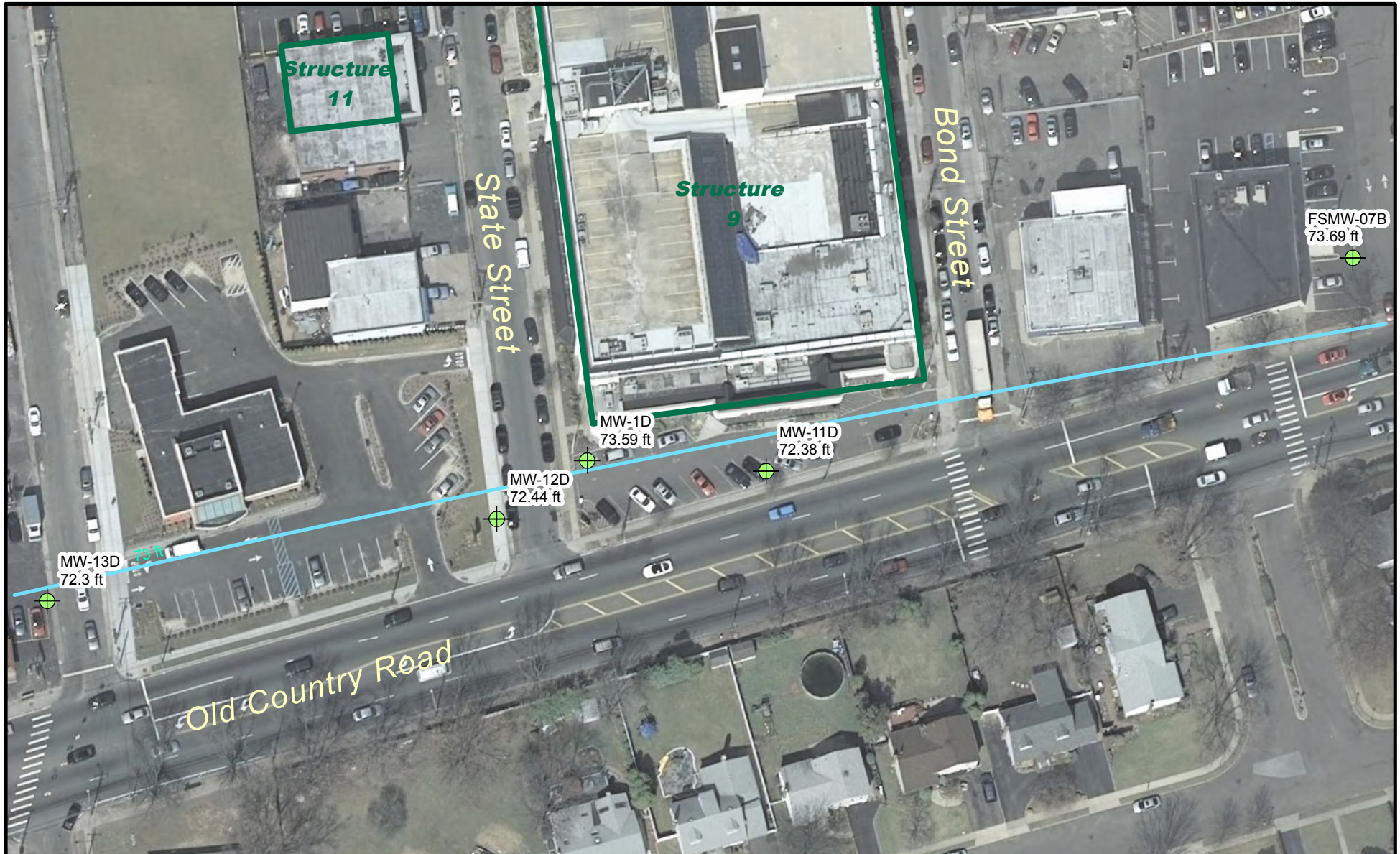
Groundwater Elevations  
Shallow Wells - May 2015

Project No: 60269807

Figure No: 3

10/29/2015








## AECOM

Utility Manufacturing/Wonder King  
700 – 712 Main Street  
Westbury, New York

0 25 50 100  
Feet

## Legend

-  Monitoring Wells
-  Groundwater Contours (ft above mean sea level)
-  Indoor Air Sample Structures

Groundwater elevations are in NAVD88.

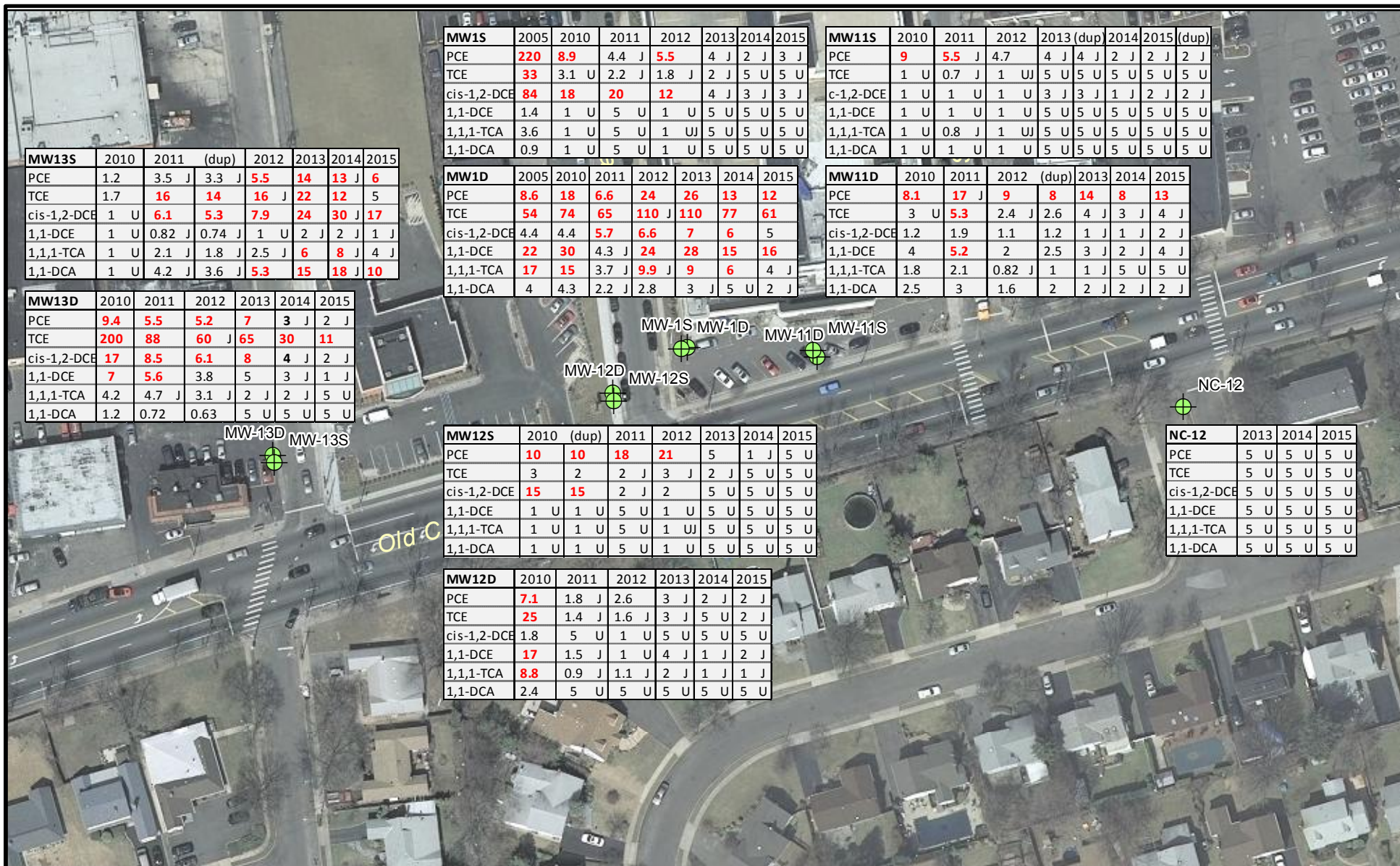
Groundwater Elevations  
Deep Wells - May 2015

Project No: 60269807

Figure No: 4

10/28/2015





## AECOM

Utility Manufacturing/Wonder King  
700 – 712 Main Street  
Westbury, New York

0 20 40 80  
Feet

## Legend

 Monitoring Well

Concentrations exceeding the  
NYS Class GA criteria are in red.  
Units: µg/L

The NYS Class GA criteria for all  
other parameters shown are 5 µg/L.

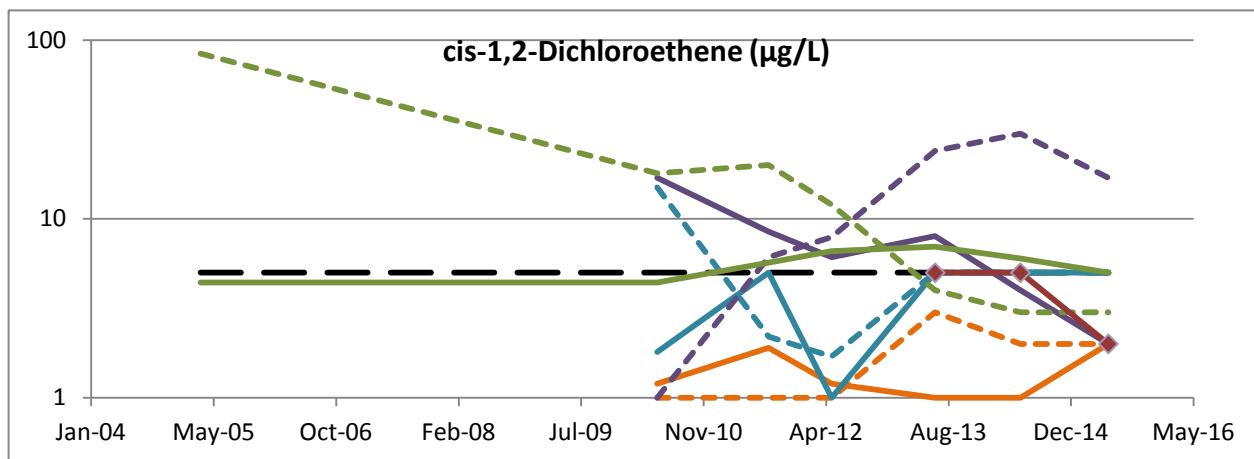
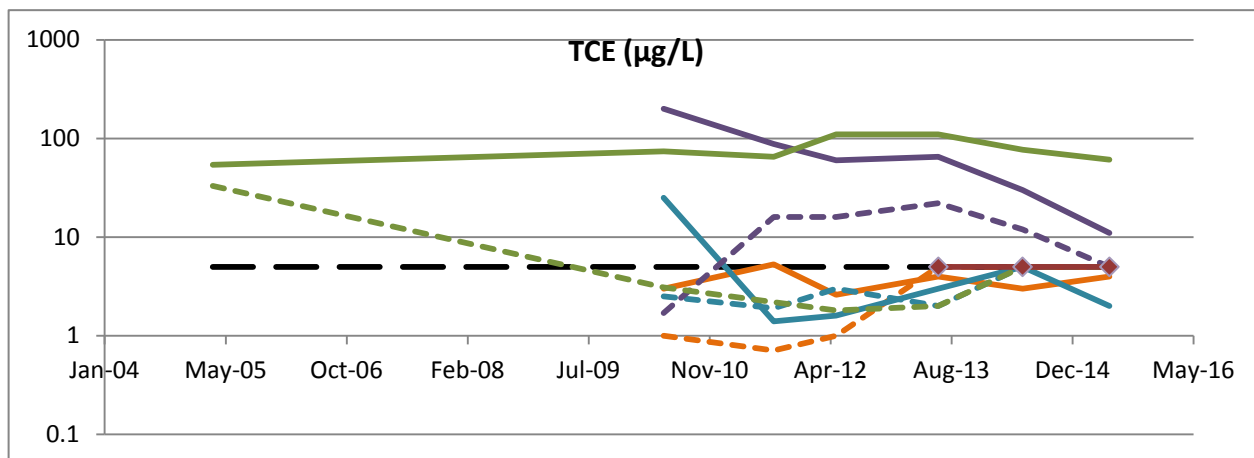
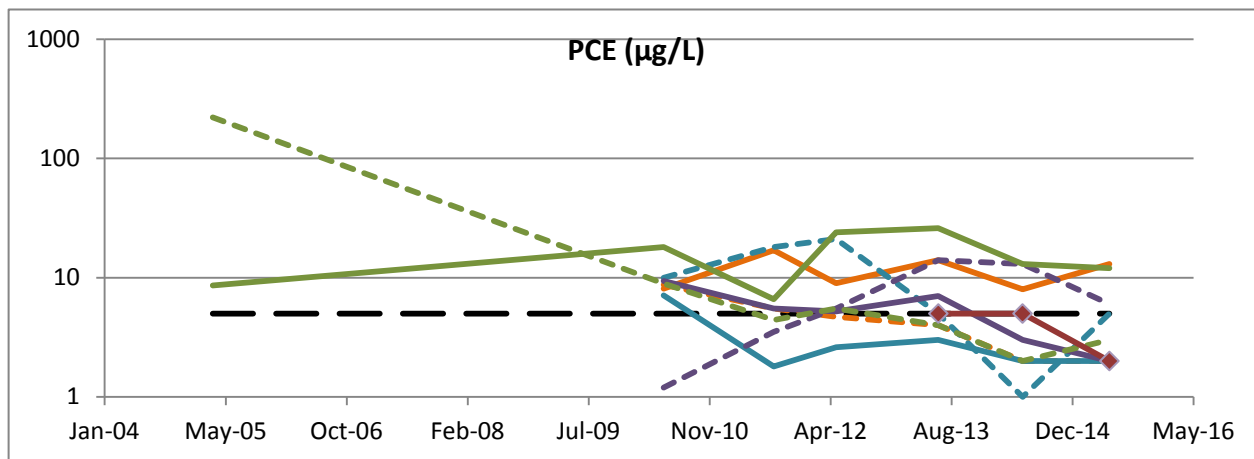
(dup) Environmental duplicate sample

## Groundwater Sampling Results

Project No: 60269807

Figure No: 5

10/29/2015

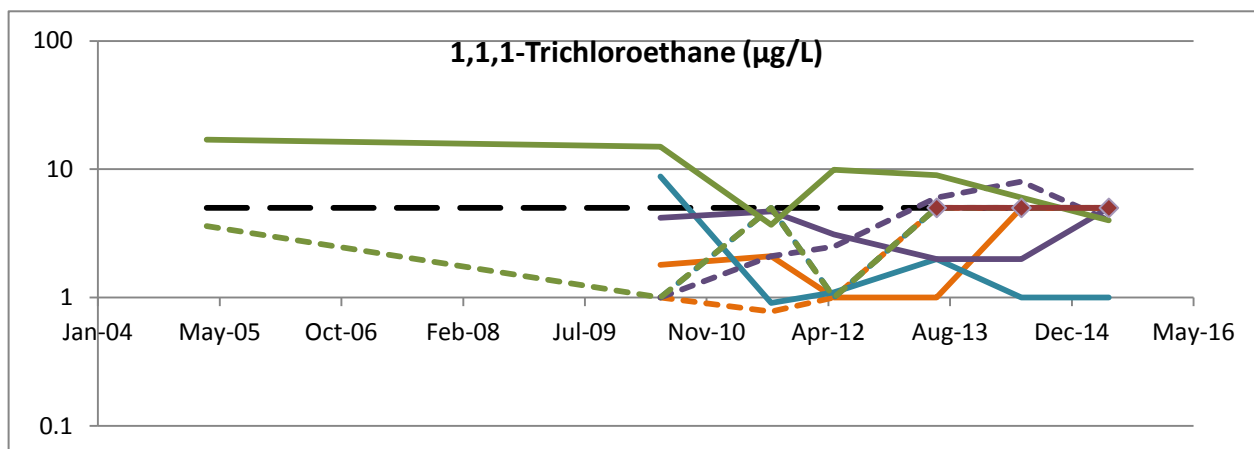
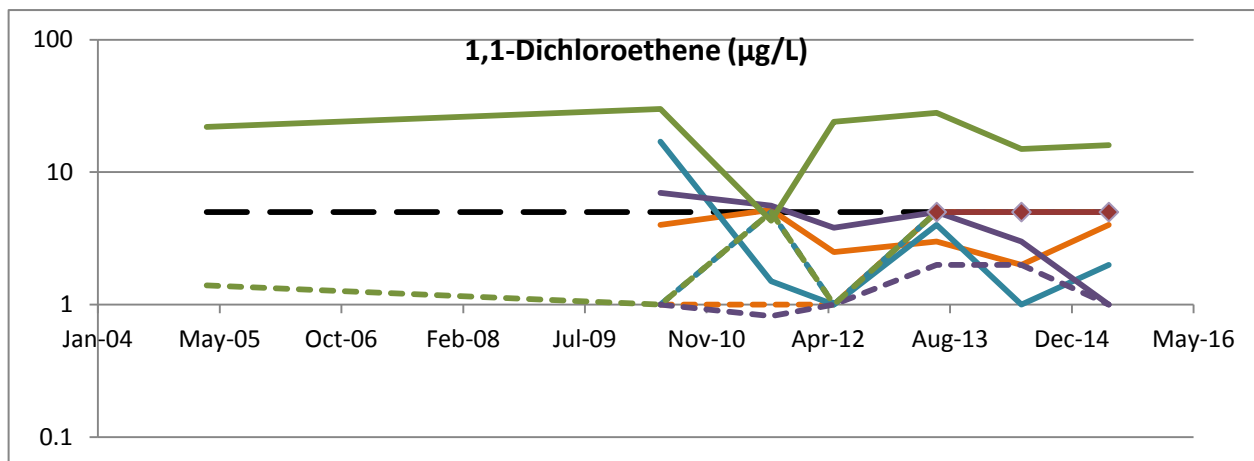


**Figure 6**

**Groundwater VOC Concentrations over Time**

Page 1 of 2

- Standard
- MW11D
- - - MW11S
- MW12D
- - - MW12S
- MW13D
- - - MW13S
- MW1D
- - - MW1S
- NC-12

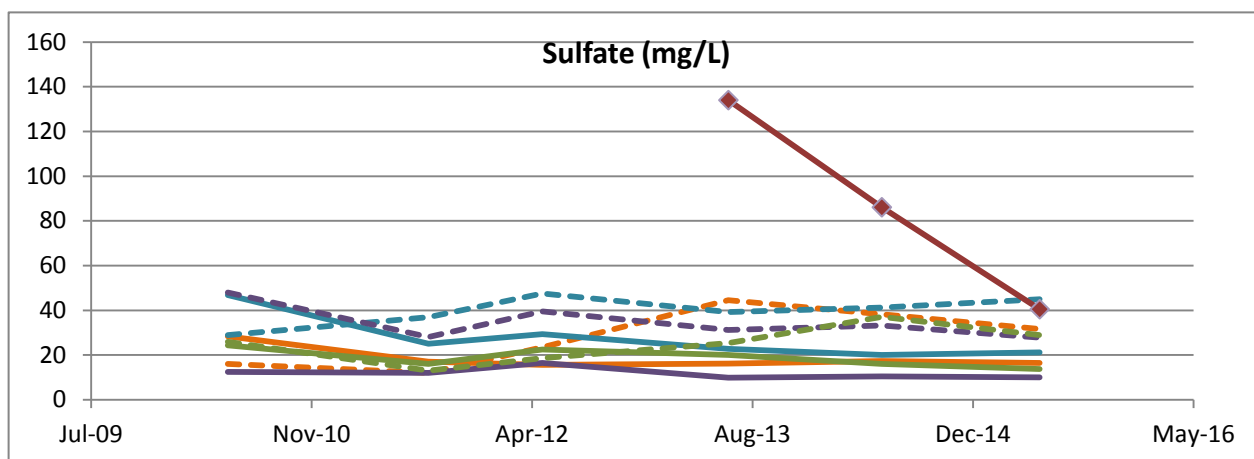
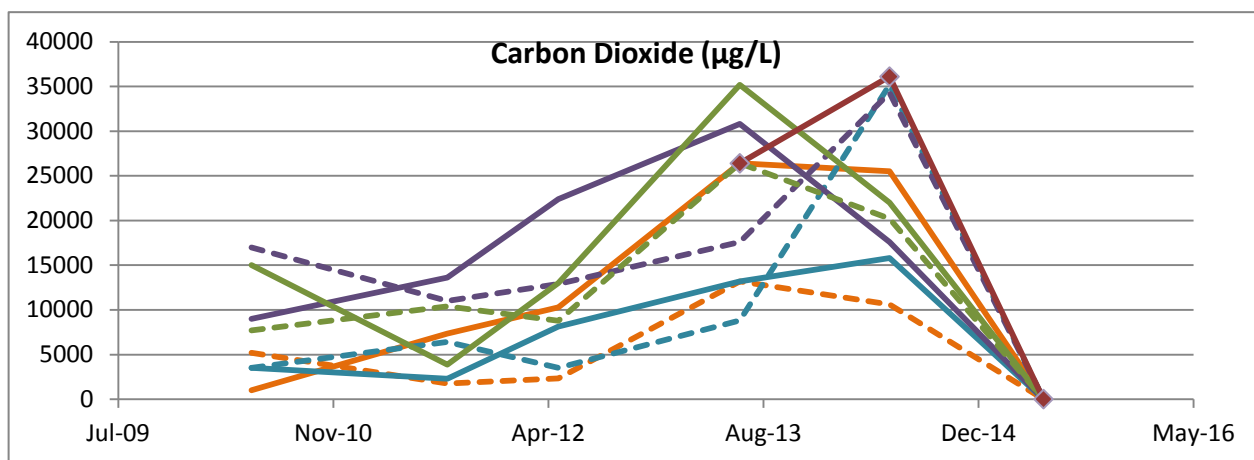
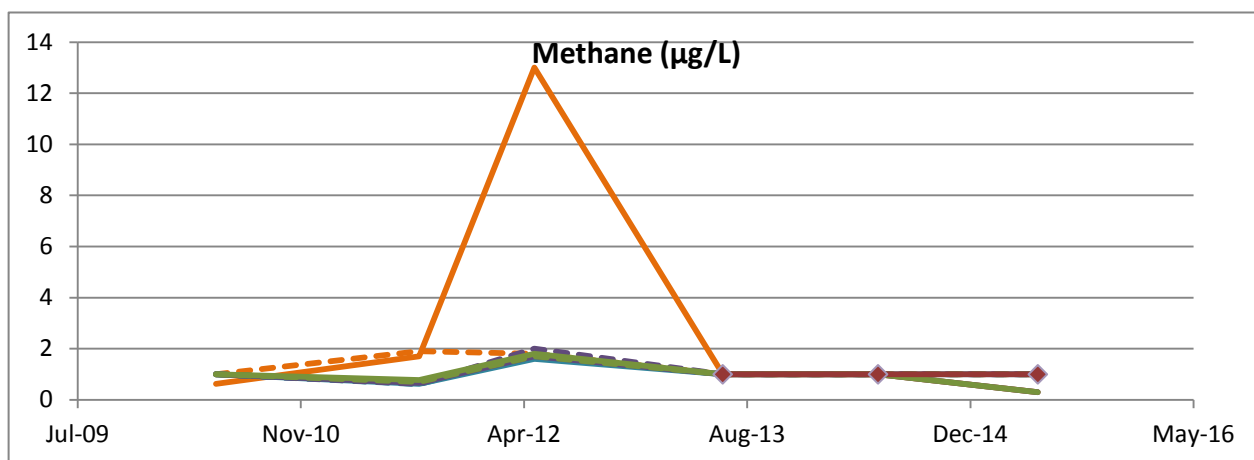


**Figure 6**

**Groundwater VOC Concentrations over Time**

Page 2 of 2

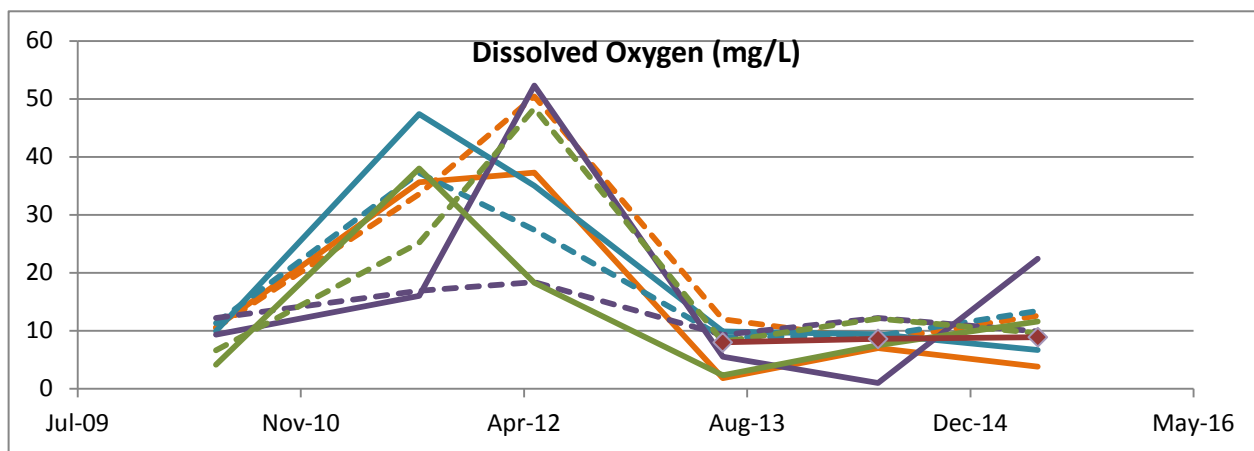
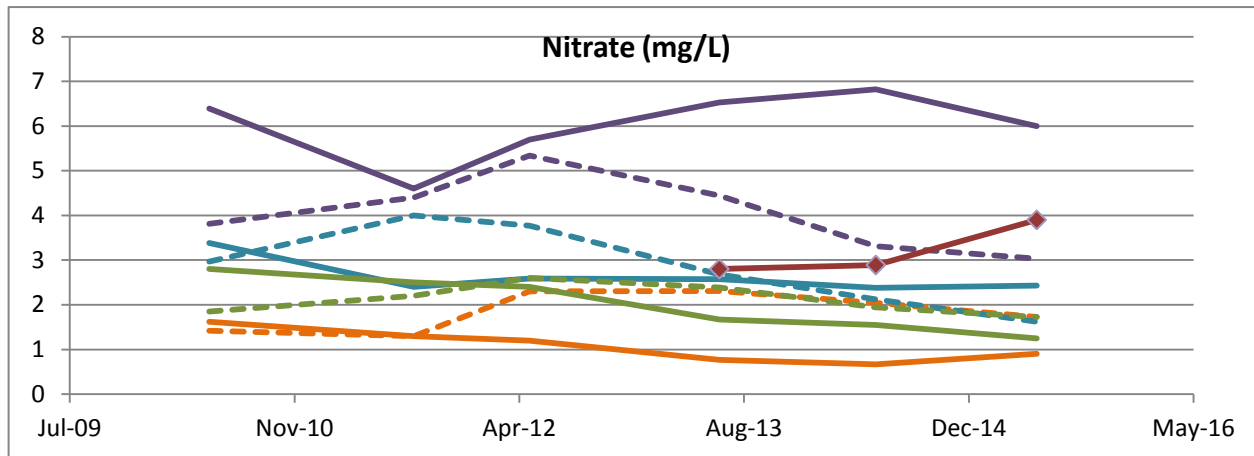
- • — Standard
- MW11D
- - - MW11S
- MW12D
- - - MW12S
- MW13D
- - - MW13S
- MW1D
- - - MW1S
- ◆ — NC-12



**Figure 7**  
**Groundwater MNA Parameter**  
**Concentrations over Time**

Page 1 of 2

- MW11D
- - - MW11S
- MW12D
- - - MW12S
- MW13D
- - - MW13S
- MW1D
- - - MW1S
- ◆ — NC-12



**Figure 7**

**Groundwater MNA Parameter  
Concentrations over Time**

Page 2 of 2

- MW11D
- - - MW11S
- MW12D
- - - MW12S
- MW13D
- - - MW13S
- MW1D
- - - MW1S
- ◆ — NC-12

## **APPENDIX A**

### **Field Forms**

[illegible]



[illegible]



Pump Type:	Bladder pump with dedicated tubing for sampling
Analytical Parameters:	VOCs, methane, carbon dioxide, dissolved oxygen, iron

[illegible]

[illegible]

[illegible]



Pump Type:	Bladder pump with dedicated tubing for sampling
Analytical Parameters:	VOCs, methane, carbon dioxide, dissolved oxygen, iron

[illegible]

[illegible]



Utility Manufacturing Site/Wonder King, New Cassel, NY  
 WA # D007626-16  
 NYSDEC Site: 130043H

### Well Inspection Checklist

<b>Well ID:</b> <u>MW-1S</u>	<b>Date:</b> <u>5/28/2015</u>
<b>Type:</b> <u>Flushmount</u>	
<b>Stickup Height:</b> <u>NA</u>	
<b>As Built Well Depth:</b> <u>90 ft</u>	<b>Stickup Material:</b> <u>NA</u>
<b>Riser Diameter:</b> <u>2 inch</u>	<b>Stickup Diameter:</b> <u>NA</u>
<b>Riser Material:</b> <u>PVC</u>	
<b>Riser Appearance:</b> <u>Ok</u>	<b>Inspector:</b> <u>C Foster (AECOM)</u>
<b>CONDITION</b>	
Signs of Vandalism: No	
Cannot Locate: No	
Locked: Yes	
Inner Cap: Yes	
Protective Casing Loose: No	
Concrete Pad: Ok	
Soil Erosion: No	
Ponded Water: No	
Well Marked: No	
Cannot Identify: No	
Depth to water from TOC: 46.21 ft	
Depth to bottom from TOC: NM	
Does well appear: <u>SILTED UP</u> [No] <u>HARD BOTTOM</u> [No] <u>OTHER: None</u>	
Obstruction in well: No	
PID reading: 0 ppm	
Active pump in well: No	
Comments: None	

Utility Manufacturing Site/Wonder King, New Cassel, NY  
 WA # D007626-16  
 NYSDEC Site: 130043H

### Well Inspection Checklist

<b>Well ID:</b> <u>MW-1D</u>	<b>Date:</b> <u>5/28/2015</u>
<b>Type:</b> <u>Flushmount</u>	
<b>Stickup Height:</b> <u>NA</u>	
<b>As Built Well Depth:</b> <u>130 ft</u>	<b>Stickup Material:</b> <u>NA</u>
<b>Riser Diameter:</b> <u>2 inch</u>	<b>Stickup Diameter:</b> <u>NA</u>
<b>Riser Material:</b> <u>PVC</u>	
<b>Riser Appearance:</b> <u>Ok</u>	<b>Inspector:</b> <u>C Foster (AECOM)</u>
<b>CONDITION</b>	
Signs of Vandalism: No	
Cannot Locate: No	
Locked: Yes	
Inner Cap: Yes	
Protective Casing Loose: No	
Concrete Pad: Ok	
Soil Erosion: No	
Ponded Water: No	
Well Marked: No	
Cannot Identify: No	
Depth to water from TOC: 46.18 ft	
Depth to bottom from TOC: NM	
Does well appear: SILTED UP [No] HARD BOTTOM [No] OTHER: None	
Obstruction in well: No	
PID reading: 0 ppm	
Active pump in well: No	
Comments: None	

Utility Manufacturing Site/Wonder King, New Cassel, NY  
 WA # D007626-16  
 NYSDEC Site: 130043H

### Well Inspection Checklist

<b>Well ID:</b> <u>MW-11S</u>	<b>Date:</b> <u>5/28/2015</u>
<b>Type:</b> <u>Flushmount</u>	
<b>Stickup Height:</b> <u>NA</u>	
<b>As Built Well Depth:</b> <u>95 ft</u>	<b>Stickup Material:</b> <u>NA</u>
<b>Riser Diameter:</b> <u>2 inch</u>	<b>Stickup Diameter:</b> <u>NA</u>
<b>Riser Material:</b> <u>PVC</u>	
<b>Riser Appearance:</b> <u>Ok</u>	<b>Inspector:</b> <u>C Foster (AECOM)</u>
<b>CONDITION</b>	
Signs of Vandalism: No	
Cannot Locate: No	
Locked: Yes	
Inner Cap: Yes	
Protective Casing Loose: No	
Concrete Pad: Ok	
Soil Erosion: No	
Ponded Water: No	
Well Marked: No	
Cannot Identify: No	
Depth to water from TOC: 47.20 ft	
Depth to bottom from TOC: NM	
Does well appear: <u>SILTED UP</u> [No] <u>HARD BOTTOM</u> [No] <u>OTHER: None</u>	
Obstruction in well: No	
PID reading: 0 ppm	
Active pump in well: No	
Comments: None	

Utility Manufacturing Site/Wonder King, New Cassel, NY  
 WA # D007626-16  
 NYSDEC Site: 130043H

### Well Inspection Checklist

<b>Well ID:</b> MW-11D	<b>Date:</b> 5/28/2015
<b>Type:</b> Flushmount	
<b>Stickup Height:</b> NA	
<b>As Built Well Depth:</b> 124 ft	<b>Stickup Material:</b> NA
<b>Riser Diameter:</b> 2 inch	<b>Stickup Diameter:</b> NA
<b>Riser Material:</b> PVC	
<b>Riser Appearance:</b> Ok	<b>Inspector:</b> C Foster (AECOM)
<b>CONDITION</b>	
Signs of Vandalism: No	
Cannot Locate: No	
Locked: Yes	
Inner Cap: Yes	
Protective Casing Loose: No	
Concrete Pad: Ok	
Soil Erosion: No	
Ponded Water: No	
Well Marked: No	
Cannot Identify: No	
Depth to water from TOC: 47.13 ft	
Depth to bottom from TOC: NM	
Does well appear: SILTED UP [No] HARD BOTTOM [No] OTHER: None	
Obstruction in well: No	
PID reading: 0 ppm	
Active pump in well: No	
Comments: None	

Utility Manufacturing Site/Wonder King, New Cassel, NY  
 WA # D007626-16  
 NYSDEC Site: 130043H

### Well Inspection Checklist

<b>Well ID:</b> <u>MW-12S</u>	<b>Date:</b> <u>5/28/2015</u>
<b>Type:</b> <u>Flushmount</u>	
<b>Stickup Height:</b> <u>NA</u>	
<b>As Built Well Depth:</b> <u>95 ft</u>	<b>Stickup Material:</b> <u>NA</u>
<b>Riser Diameter:</b> <u>2 inch</u>	<b>Stickup Diameter:</b> <u>NA</u>
<b>Riser Material:</b> <u>PVC</u>	
<b>Riser Appearance:</b> <u>Ok</u>	<b>Inspector:</b> <u>C Foster (AECOM)</u>
<b>CONDITION</b>	
Signs of Vandalism: No	
Cannot Locate: No	
Locked: Yes	
Inner Cap: Yes	
Protective Casing Loose: No	
Concrete Pad: Ok	
Soil Erosion: No	
Ponded Water: No	
Well Marked: No	
Cannot Identify: No	
Depth to water from TOC: 45.43 ft	
Depth to bottom from TOC: NM	
Does well appear: SILTED UP [No] HARD BOTTOM [No] OTHER: None	
Obstruction in well: No	
PID reading: 0 ppm	
Active pump in well: No	
Comments: None	

Utility Manufacturing Site/Wonder King, New Cassel, NY  
 WA # D007626-16  
 NYSDEC Site: 130043H

### Well Inspection Checklist

<b>Well ID:</b> MW-12D	<b>Date:</b> 5/28/2015
<b>Type:</b> Flushmount	
<b>Stickup Height:</b> NA	
<b>As Built Well Depth:</b> 125 ft	<b>Stickup Material:</b> NA
<b>Riser Diameter:</b> 2 inch	<b>Stickup Diameter:</b> NA
<b>Riser Material:</b> PVC	
<b>Riser Appearance:</b> Ok	<b>Inspector:</b> C Foster (AECOM)
<b>CONDITION</b>	
Signs of Vandalism: No	
Cannot Locate: No	
Locked: Yes	
Inner Cap: Yes	
Protective Casing Loose: No	
Concrete Pad: Ok	
Soil Erosion: No	
Ponded Water: No	
Well Marked: No	
Cannot Identify: No	
Depth to water from TOC: 45.82 ft	
Depth to bottom from TOC: NM	
Does well appear: SILTED UP [No] HARD BOTTOM [No] OTHER: None	
Obstruction in well: No	
PID reading: 0 ppm	
Active pump in well: No	
Comments: None	

Utility Manufacturing Site/Wonder King, New Cassel, NY  
 WA # D007626-16  
 NYSDEC Site: 130043H

### Well Inspection Checklist

<b>Well ID:</b> MW-13S	<b>Date:</b> 5/28/2015
<b>Type:</b> Flushmount	
<b>Stickup Height:</b> NA	
<b>As Built Well Depth:</b> 96 ft	<b>Stickup Material:</b> NA
<b>Riser Diameter:</b> 2 inch	<b>Stickup Diameter:</b> NA
<b>Riser Material:</b> PVC	
<b>Riser Appearance:</b> Ok	<b>Inspector:</b> C Foster (AECOM)
<b>CONDITION</b>	
Signs of Vandalism: No	
Cannot Locate: No	
Locked: Yes	
Inner Cap: Yes	
Protective Casing Loose: No	
Concrete Pad: Ok	
Soil Erosion: No	
Ponded Water: No	
Well Marked: No	
Cannot Identify: No	
Depth to water from TOC: 43.97 ft	
Depth to bottom from TOC: NM	
Does well appear: SILTED UP [No] HARD BOTTOM [No] OTHER: None	
Obstruction in well: No	
PID reading: 0 ppm	
Active pump in well: No	
Comments: None	

Utility Manufacturing Site/Wonder King, New Cassel, NY  
 WA # D007626-16  
 NYSDEC Site: 130043H

### Well Inspection Checklist

<b>Well ID:</b> MW-13D	<b>Date:</b> 5/28/2015
<b>Type:</b> Flushmount	
<b>Stickup Height:</b> NA	
<b>As Built Well Depth:</b> 126 ft	<b>Stickup Material:</b> NA
<b>Riser Diameter:</b> 2 inch	<b>Stickup Diameter:</b> NA
<b>Riser Material:</b> PVC	
<b>Riser Appearance:</b> Ok	<b>Inspector:</b> C Foster (AECOM)
<b>CONDITION</b>	
Signs of Vandalism: No	
Cannot Locate: No	
Locked: Yes	
Inner Cap: Yes	
Protective Casing Loose: No	
Concrete Pad: Ok	
Soil Erosion: No	
Ponded Water: No	
Well Marked: No	
Cannot Identify: No	
Depth to water from TOC: 44.11 ft	
Depth to bottom from TOC: NM	
Does well appear: SILTED UP [No] HARD BOTTOM [No] OTHER: None	
Obstruction in well: No	
PID reading: 0 ppm	
Active pump in well: No	
Comments: None	



Utility Manufacturing Site/Wonder King, New Cassel, NY  
 WA # D007626-16  
 NYSDEC Site: 130043H

### Well Inspection Checklist

<b>Well ID:</b> NC-12	<b>Date:</b> 5/28/2015
<b>Type:</b> Flushmount	
<b>Stickup Height:</b> NA	
<b>As Built Well Depth:</b> 54 ft	<b>Stickup Material:</b> NA
<b>Riser Diameter:</b> 2 inch	<b>Stickup Diameter:</b> NA
<b>Riser Material:</b> PVC	
<b>Riser Appearance:</b> Ok	<b>Inspector:</b> C Foster (AECOM)
<b>CONDITION</b>	
Signs of Vandalism: No	
Cannot Locate: No	
Locked: No	
Inner Cap: Yes	
Protective Casing Loose: No	
Concrete Pad: Ok	
Soil Erosion: No	
Ponded Water: No	
Well Marked: No	
Cannot Identify: No	
Depth to water from TOC: 47.44 ft	
Depth to bottom from TOC: NM	
Does well appear: SILTED UP [No] HARD BOTTOM [No] OTHER: None	
Obstruction in well: No	
PID reading: 0 ppm	
Active pump in well: No	
Comments: None	

## **APPENDIX B**

### **Data Usability Summary Reports**

**DATA USABILITY SUMMARY REPORT**  
**UTILITY MANUFACTURING/WONDER KING, NEW CASSELL, NEW YORK**

Client: AECOM Technical Services, Inc., Chestnut Ridge, New York  
SDG: AECOM238  
Laboratory: Pace Analytical, Melville, New York  
Site: Utility Manufacturing/Wonder King, New Cassell, New York  
Date: July 30, 2015

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	MW-11S	1505J73-001	Water
1MS	MW-11SMS	1505J73-001MS	Water
1MSD	MW-11SMSD	1505J73-001MSD	Water
2	MW-11D	1505J73-002	Water
3	MW-12S	1505J73-003	Water
4	MW-12D	1505J73-004	Water
5	MW-1D	1505J73-005	Water
6	MW-61S	1505J73-006	Water
7	TRIP BLANK	1505J73-007	Water
8	MW-1S	1505L06-001	Water
9	MW-13D	1505L06-002	Water
10	MW-13S	1505L06-003	Water
11	NC-12	1505L06-004	Water
12	TB	1505L06-005	Water
13	STORAGE BLANK	1505L06-006	Water

A Data Usability Summary Review was performed on the analytical data for ten water samples, two aqueous trip blank samples, and one aqueous storage blank sample collected on May 27-28, 2015 by AECOM at the Utility Manufacturing/Wonder King site in New Cassell, New York. The samples were analyzed under Environmental Protection Agency (USEPA) *"Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions"*.

Specific method references are as follows:

Analysis  
VOCs

Method References  
USEPA SW-846 Method 8260B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods and the USEPA Region II Data Review Standard Operating Procedures (SOPs) as follows:

- SOP Number HW-24, Revision 4, September 2014: Validating Volatile Organic Compounds by SW-846 Method 8260B & 8260C;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

### ***Organics***

- Data Completeness
- Holding times and sample preservation
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Method blank and field blank contamination
- Gas Chromatography (GC)/Mass Spectroscopy (MS) tuning
- Initial and continuing calibration summaries
- Compound Quantitation
- Internal standard area and retention time summary forms
- Field Duplicate sample precision

### **Overall Usability Issues:**

There were no rejections of data.

Overall the data is acceptable for the intended purposes as qualified for the following deficiencies.

- cis-1,2-Dichloroethene was qualified as estimated in one sample due to a high MS/MSD recovery.
- Two compounds were qualified as estimated in all samples due to high continuing calibration %D values.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

### **Data Completeness**

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.

### **Volatile Organic Compounds (VOCs)**

### **Holding Times**

- All samples were analyzed within 14 days for preserved water samples.

### Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

### Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The following table presents MS/MSD samples that exhibited percent recoveries (%R) outside the QC limits and/or relative percent differences (RPD) above QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). Results are valid and usable, however possibly biased.

MS/MSD Sample ID	Compound	MS %R/MSD %R/RPD	Qualifier
1	Bromomethane	143%/147%/OK	None - Sample ND
	Trichlorofluoromethane	166%/166%/OK	None - Sample ND
	1,1-Dichloroethene	144%/147%/OK	None - Sample ND
	1,1,1-Trichloroethane	130%/135%/OK	None - Sample ND
	trans-1,2-Dichloroethene	OK/137%/OK	None - ND
	cis-1,2-Dichloroethene	OK/135%/OK	J

### Laboratory Control Samples

- The LCS samples exhibited acceptable recoveries.

### Method Blank

- The method blanks were free of contamination.

### Field Blank

- Field QC samples are summarized below.

Blank ID	Compound	Conc. ug/L	Qualifier	Affected Samples
TRIP BLANK	ND	-	-	-
TB	ND	-	-	-
STORAGE BLANK	ND	-	-	-

### GC/MS Tuning

- All criteria were met.

### Initial Calibration

- The initial calibrations exhibited acceptable %RSD and/or correlation coefficients and mean RRF values.

### Continuing Calibration

- The following table presents compounds that exceeded 30 percent difference (%D) and/or RRF values <0.05 (0.01 for poor performers) in the continuing calibration (CCAL). A low RRF indicates poor instrument sensitivity for these compounds. Positive results for these compounds in the affected samples are considered estimated and qualified (J). Non-detect results for these compounds in the affected samples are rejected (R) and are unusable for project objectives. A high %D may indicate a potential high or low bias. All results for these compounds in affected samples are considered estimated and qualified (J/UJ).

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
06/03/15	Dichlorodifluoromethane	50.6%	J/UJ	All Samples
	Bromomethane	35.2%	J/UJ	

### Compound Quantitation

- All criteria were met.

### Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

### Field Duplicate Sample Precision

- Field duplicate results are summarized below. The precision is acceptable.

VOC				
Compound	MW-11S ug/L	MW-61S ug/L	RPD	Qualifier
1,2-Dichloroethene (total)	2	2	0%	None
cis-1,2-Dichloroethene	2	2	0%	
Tetrachloroethene	2	2	0%	

### Tentatively Identified Compounds (TICs)

- TICs were not reported.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed:

Nancy Weaver

Nancy Weaver  
Senior Chemist

Dated:

7/31/15

### **Data Qualifiers**

- J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ = The analyte was not detected above the sample reporting limit; and the reporting limit is approximate.
- U = The analyte was analyzed for, but was not detected above the sample reporting limit.
- R = The sample results is rejected due to serious deficiencies. The presence or absence of the analyte cannot be verified.





1B  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-118

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID: 1505J73-001A

Sample wt/vol: 5

(g/mL) mL

Lab File ID: 315\G32978

Level: (low/med)

LOW

Date Received: 05/27/15

% Moisture: not dec.

Date Analyzed: 06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_

( $\mu$ L)

Soil Aliquot Volume \_\_\_\_\_

( $\mu$ L)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	( $\mu$ g/L or $\mu$ g/Kg) $\mu$ g/L	Q
75-71-8	Dichlorodifluoromethane	5	<input checked="" type="checkbox"/>
74-87-3	Chloromethane	5	<input type="checkbox"/>
75-01-4	Vinyl chloride	5	<input type="checkbox"/>
74-83-9	Bromomethane	5	<input checked="" type="checkbox"/>
75-00-3	Chloroethane	5	<input type="checkbox"/>
75-69-4	Trichlorofluoromethane	5	<input type="checkbox"/>
75-35-4	1,1-Dichloroethene	5	<input type="checkbox"/>
67-64-1	Acetone	5	<input type="checkbox"/>
75-15-0	Carbon disulfide	5	<input type="checkbox"/>
79-20-9	Methyl Acetate	5	<input type="checkbox"/>
75-09-2	Methylene chloride	5	<input type="checkbox"/>
156-60-5	trans-1,2-Dichloroethene	5	<input type="checkbox"/>
1634-04-4	Methyl tert-butyl ether	5	<input type="checkbox"/>
75-34-3	1,1-Dichloroethane	5	<input type="checkbox"/>
540-59-0	1,2-Dichloroethene (total)	2	<input type="checkbox"/>
156-59-2	cis-1,2-Dichloroethene	2	<input checked="" type="checkbox"/>
78-93-3	2-Butanone	5	<input type="checkbox"/>
67-66-3	Chloroform	5	<input type="checkbox"/>
71-55-6	1,1,1-Trichloroethane	5	<input type="checkbox"/>
110-82-7	Cyclohexane	5	<input type="checkbox"/>
56-23-5	Carbon tetrachloride	5	<input type="checkbox"/>
71-43-2	Benzene	5	<input type="checkbox"/>
107-06-2	1,2-Dichloroethane	5	<input type="checkbox"/>
79-01-6	Trichloroethene	5	<input type="checkbox"/>
108-87-2	Methylcyclohexane	5	<input type="checkbox"/>
78-87-5	1,2-Dichloropropane	5	<input type="checkbox"/>
75-27-4	Bromodichloromethane	5	<input type="checkbox"/>
10061-01-5	cis-1,3-Dichloropropene	5	<input type="checkbox"/>
108-10-1	4-Methyl-2-pentanone	5	<input type="checkbox"/>
108-88-3	Toluene	5	<input type="checkbox"/>
10061-02-6	trans-1,3-Dichloropropene	5	<input type="checkbox"/>
79-00-5	1,1,2-Trichloroethane	5	<input type="checkbox"/>
127-18-4	Tetrachloroethene	2	<input type="checkbox"/>
591-78-6	2-Hexanone	5	<input type="checkbox"/>
124-48-1	Dibromochloromethane	5	<input type="checkbox"/>

MW 7/30/15

1B  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-118

Lab Name: PACE ANALYTICAL Contract: \_\_\_\_\_  
Lab Code: 10478 Case No.: AECOM-N SAS No.: \_\_\_\_\_ SDG No.: AECOM238  
Matrix: (soil/water) WATER Lab Sample ID: 1505J73-001A  
Sample wt/vol: 5 (g/mL) mL Lab File ID: 315\G32978  
Level: (low/med) LOW Date Received: 05/27/15  
% Moisture: not dec. Date Analyzed: 06/03/15  
GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00  
Soil Extract Volume: \_\_\_\_\_ (µL) Soil Aliquot Volume \_\_\_\_\_ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

MW 7/30/15

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-11D

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID: 1505J73-002A

Sample wt/vol: 5

(g/mL) mL

Lab File ID: 315\G32982

Level: (low/med)

LOW

Date Received: 05/27/15

% Moisture: not dec.

Date Analyzed: 06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_

( $\mu$ L)

Soil Aliquot Volume \_\_\_\_\_

( $\mu$ L)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	( $\mu$ g/L or $\mu$ g/Kg) $\mu$ g/L	Q
75-71-8	Dichlorodifluoromethane	5	<input checked="" type="checkbox"/>
74-87-3	Chloromethane	5	<input type="checkbox"/>
75-01-4	Vinyl chloride	5	<input type="checkbox"/>
74-83-9	Bromomethane	5	<input checked="" type="checkbox"/>
75-00-3	Chloroethane	5	<input type="checkbox"/>
75-69-4	Trichlorofluoromethane	5	<input type="checkbox"/>
75-35-4	1,1-Dichloroethene	4	<input type="checkbox"/>
67-64-1	Acetone	5	<input type="checkbox"/>
75-15-0	Carbon disulfide	5	<input type="checkbox"/>
79-20-9	Methyl Acetate	5	<input type="checkbox"/>
75-09-2	Methylene chloride	5	<input type="checkbox"/>
156-60-5	trans-1,2-Dichloroethene	5	<input type="checkbox"/>
1634-04-4	Methyl tert-butyl ether	5	<input type="checkbox"/>
75-34-3	1,1-Dichloroethane	2	<input type="checkbox"/>
540-59-0	1,2-Dichloroethene (total)	2	<input type="checkbox"/>
156-59-2	cis-1,2-Dichloroethene	2	<input type="checkbox"/>
78-93-3	2-Butanone	5	<input type="checkbox"/>
67-66-3	Chloroform	5	<input type="checkbox"/>
71-55-6	1,1,1-Trichloroethane	5	<input type="checkbox"/>
110-82-7	Cyclohexane	5	<input type="checkbox"/>
56-23-5	Carbon tetrachloride	5	<input type="checkbox"/>
71-43-2	Benzene	5	<input type="checkbox"/>
107-06-2	1,2-Dichloroethane	5	<input type="checkbox"/>
79-01-6	Trichloroethene	4	<input type="checkbox"/>
108-87-2	Methylcyclohexane	5	<input type="checkbox"/>
78-87-5	1,2-Dichloropropane	5	<input type="checkbox"/>
75-27-4	Bromodichloromethane	5	<input type="checkbox"/>
10061-01-5	cis-1,3-Dichloropropene	5	<input type="checkbox"/>
108-10-1	4-Methyl-2-pentanone	5	<input type="checkbox"/>
108-88-3	Toluene	5	<input type="checkbox"/>
10061-02-6	trans-1,3-Dichloropropene	5	<input type="checkbox"/>
79-00-5	1,1,2-Trichloroethane	5	<input type="checkbox"/>
127-18-4	Tetrachloroethene	13	<input type="checkbox"/>
591-78-6	2-Hexanone	5	<input type="checkbox"/>
124-48-1	Dibromochloromethane	5	<input type="checkbox"/>

MW 7/30/15

1B  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-11D

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505J73-002A

Sample wt/vol:

5

(g/mL) mL

Lab File ID:

315\G32982

Level: (low/med)

LOW

Date Received:

05/27/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

(μL)

Soil Aliquot Volume

(μL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(μg/L or μg/Kg) <u>μg/L</u>	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-12S

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID: 1505J73-003A

Sample wt/vol: 5

(g/mL) mL

Lab File ID: 315\G32983

Level: (low/med)

LOW

Date Received: 05/27/15

% Moisture: not dec.

Date Analyzed: 06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL)

Soil Aliquot Volume \_\_\_\_\_ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
75-71-8	Dichlorodifluoromethane	5	<input checked="" type="checkbox"/>
74-87-3	Chloromethane	5	<input type="checkbox"/>
75-01-4	Vinyl chloride	5	<input type="checkbox"/>
74-83-9	Bromomethane	5	<input checked="" type="checkbox"/>
75-00-3	Chloroethane	5	<input type="checkbox"/>
75-69-4	Trichlorofluoromethane	5	<input type="checkbox"/>
75-35-4	1,1-Dichloroethene	5	<input type="checkbox"/>
67-64-1	Acetone	5	<input type="checkbox"/>
75-15-0	Carbon disulfide	5	<input type="checkbox"/>
79-20-9	Methyl Acetate	5	<input type="checkbox"/>
75-09-2	Methylene chloride	5	<input type="checkbox"/>
156-60-5	trans-1,2-Dichloroethene	5	<input type="checkbox"/>
1634-04-4	Methyl tert-butyl ether	5	<input type="checkbox"/>
75-34-3	1,1-Dichloroethane	5	<input type="checkbox"/>
540-59-0	1,2-Dichloroethene (total)	5	<input type="checkbox"/>
156-59-2	cis-1,2-Dichloroethene	5	<input type="checkbox"/>
78-93-3	2-Butanone	5	<input type="checkbox"/>
67-66-3	Chloroform	5	<input type="checkbox"/>
71-55-6	1,1,1-Trichloroethane	5	<input type="checkbox"/>
110-82-7	Cyclohexane	5	<input type="checkbox"/>
56-23-5	Carbon tetrachloride	5	<input type="checkbox"/>
71-43-2	Benzene	5	<input type="checkbox"/>
107-06-2	1,2-Dichloroethane	5	<input type="checkbox"/>
79-01-6	Trichloroethene	5	<input type="checkbox"/>
108-87-2	Methylcyclohexane	5	<input type="checkbox"/>
78-87-5	1,2-Dichloropropane	5	<input type="checkbox"/>
75-27-4	Bromodichloromethane	5	<input type="checkbox"/>
10061-01-5	cis-1,3-Dichloropropene	5	<input type="checkbox"/>
108-10-1	4-Methyl-2-pentanone	5	<input type="checkbox"/>
108-88-3	Toluene	5	<input type="checkbox"/>
10061-02-6	trans-1,3-Dichloropropene	5	<input type="checkbox"/>
79-00-5	1,1,2-Trichloroethane	5	<input type="checkbox"/>
127-18-4	Tetrachloroethene	5	<input type="checkbox"/>
591-78-6	2-Hexanone	5	<input type="checkbox"/>
124-48-1	Dibromochloromethane	5	<input type="checkbox"/>

mw 7/30/15

1B  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-12S

3

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505J73-003A

Sample wt/vol:

5

(g/mL) mL

Lab File ID:

315\G32983

Level: (low/med)

LOW

Date Received:

05/27/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

\_\_\_\_\_ (µL)

Soil Aliquot Volume

\_\_\_\_\_ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

MW 7/30/15

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-12D

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID: 1505J73-004A

Sample wt/vol: 5

(g/mL) mL

Lab File ID: 315\G32984

Level: (low/med)

LOW

Date Received: 05/27/15

% Moisture: not dec.

Date Analyzed: 06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL)

Soil Aliquot Volume \_\_\_\_\_ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
75-71-8	Dichlorodifluoromethane	5	✓
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	✓
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	2	J
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl Acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	1	J
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	2	J
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	2	J
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U

W7/30/15



1B

EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-12D

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505J73-004A

Sample wt/vol:

5(g/mL) mL

Lab File ID:

315\G32984

Level: (low/med)

LOW

Date Received:

05/27/15

% Moisture: not dec.

Date Analyzed:

06/03/15GC Column: Rtx-624ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

(μL)

Soil Aliquot Volume

(μL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(μg/L or μg/Kg) μg/L	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

mw 7/30/15

5

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1D

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505J73-005A

Sample wt/vol:

5

(g/mL) mL

Lab File ID:

315\G32986

Level: (low/med)

LOW

Date Received:

05/27/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

(µL)

Soil Aliquot Volume

(µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/kg) µg/L	Q
75-71-8	Dichlorodifluoromethane	5	<input checked="" type="checkbox"/>
74-87-3	Chloromethane	5	<input type="checkbox"/>
75-01-4	Vinyl chloride	5	<input type="checkbox"/>
74-83-9	Bromomethane	5	<input checked="" type="checkbox"/>
75-00-3	Chloroethane	5	<input type="checkbox"/>
75-69-4	Trichlorofluoromethane	5	<input type="checkbox"/>
75-35-4	1,1-Dichloroethene	16	
67-64-1	Acetone	5	<input type="checkbox"/>
75-15-0	Carbon disulfide	5	<input type="checkbox"/>
79-20-9	Methyl Acetate	5	<input type="checkbox"/>
75-09-2	Methylene chloride	5	<input type="checkbox"/>
156-60-5	trans-1,2-Dichloroethene	5	<input type="checkbox"/>
1634-04-4	Methyl tert-butyl ether	5	<input type="checkbox"/>
75-34-3	1,1-Dichloroethane	2	<input type="checkbox"/>
540-59-0	1,2-Dichloroethene (total)	5	
156-59-2	cis-1,2-Dichloroethene	5	
78-93-3	2-Butanone	5	<input type="checkbox"/>
67-66-3	Chloroform	5	<input type="checkbox"/>
71-55-6	1,1,1-Trichloroethane	4	<input type="checkbox"/>
110-82-7	Cyclohexane	5	<input type="checkbox"/>
56-23-5	Carbon tetrachloride	5	<input type="checkbox"/>
71-43-2	Benzene	5	<input type="checkbox"/>
107-06-2	1,2-Dichloroethane	5	<input type="checkbox"/>
79-01-6	Trichloroethene	61	
108-87-2	Methylcyclohexane	5	<input type="checkbox"/>
78-87-5	1,2-Dichloropropane	5	<input type="checkbox"/>
75-27-4	Bromodichloromethane	5	<input type="checkbox"/>
10061-01-5	cis-1,3-Dichloropropene	5	<input type="checkbox"/>
108-10-1	4-Methyl-2-pentanone	5	<input type="checkbox"/>
108-88-3	Toluene	5	<input type="checkbox"/>
10061-02-6	trans-1,3-Dichloropropene	5	<input type="checkbox"/>
79-00-5	1,1,2-Trichloroethane	5	<input type="checkbox"/>
127-18-4	Tetrachloroethene	12	
591-78-6	2-Hexanone	5	<input type="checkbox"/>
124-48-1	Dibromochloromethane	5	<input type="checkbox"/>

4J  
4J

MW 7/30/15

1B

EPA SAMPLE NO. 5

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-1D

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505J73-005A

Sample wt/vol:

5(g/mL) mL

Lab File ID:

315\G32986

Level: (low/med)

LOW

Date Received:

05/27/15

% Moisture: not dec.

Date Analyzed:

06/03/15GC Column: Rtx-624ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

(µL)

Soil Aliquot Volume

(µL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

MW 7/30/15

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-618

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID: 1505J73-006A

Sample wt/vol: 5

(g/mL) mL

Lab File ID: 315\G32985

Level: (low/med)

LOW

Date Received: 05/27/15

% Moisture: not dec.

Date Analyzed: 06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL)

Soil Aliquot Volume \_\_\_\_\_ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
75-71-8	Dichlorodifluoromethane	5	✓
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	✓
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl Acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	2	
156-59-2	cis-1,2-Dichloroethene	2	J
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	2	J
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-618

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505J73-006A

Sample wt/vol:

5(g/mL) mL

Lab File ID:

315\G32985

Level: (low/med)

LOW

Date Received:

05/27/15

% Moisture: not dec.

Date Analyzed:

06/03/15GC Column: Rtx-624ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

(µL)

Soil Aliquot Volume

(µL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>µg/L</u>	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

NW713015

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 7

Trip Blank

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505J73-007A

Sample wt/vol: 5

(g/mL) mL

Lab File ID:

315\G32977

Level: (low/med)

LOW

Date Received:

05/27/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume: \_\_\_\_\_

(µL)

Soil Aliquot Volume \_\_\_\_\_

(µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
75-71-8	Dichlorodifluoromethane	5	✓
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	✓
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl Acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U

UJ

UJ

W 7/30/15

1B

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Trip Blank

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505J73-007A

Sample wt/vol:

5(g/mL) mL

Lab File ID:

315\G32977

Level: (low/med)

LOW

Date Received:

05/27/15

% Moisture: not dec.

Date Analyzed:

06/03/15GC Column: Rtx-624ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

(µL)

Soil Aliquot Volume

(µL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>µg/L</u>	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

m 7/30/15

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1S

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505L06-001A

Sample wt/vol: 5

(g/mL) mL

Lab File ID:

315\G32990

Level: (low/med)

LOW

Date Received:

05/28/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume: \_\_\_\_\_

(µL)

Soil Aliquot Volume \_\_\_\_\_

(µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
75-71-8	Dichlorodifluoromethane	5	✓
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	✓
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl Acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	3	
156-59-2	cis-1,2-Dichloroethene	3	J
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	3	J
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U

uJ  
uJ



1B  
VOLATILE ORGANICS ANALYSIS DATA SHEET

8  
EPA SAMPLE NO.

MW-18

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505L06-001A

Sample wt/vol: 5

(g/mL) mL

Lab File ID:

315\G32990

Level: (low/med)

LOW

Date Received:

05/28/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume: \_\_\_\_\_

( $\mu$ L)

Soil Aliquot Volume \_\_\_\_\_

( $\mu$ L)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	( $\mu$ g/L or $\mu$ g/Kg) <u><math>\mu</math>g/L</u>	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

*MW 7/30/15*

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13D

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID: 1505106-002A

Sample wt/vol: 5

(g/mL) mL

Lab File ID: 315\G32991

Level: (low/med)

LOW

Date Received: 05/28/15

% Moisture: not dec.

Date Analyzed: 06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL)

Soil Aliquot Volume \_\_\_\_\_ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>µg/L</u>	Q
75-71-8	Dichlorodifluoromethane	5	<input checked="" type="checkbox"/> UJ
74-87-3	Chloromethane	5	<input type="checkbox"/> U
75-01-4	Vinyl chloride	5	<input type="checkbox"/> U
74-83-9	Bromomethane	5	<input checked="" type="checkbox"/> UJ
75-00-3	Chloroethane	5	<input type="checkbox"/> U
75-69-4	Trichlorofluoromethane	5	<input type="checkbox"/> U
75-35-4	1,1-Dichloroethene	1	<input type="checkbox"/> J
67-64-1	Acetone	5	<input type="checkbox"/> U
75-15-0	Carbon disulfide	5	<input type="checkbox"/> U
79-20-9	Methyl Acetate	5	<input type="checkbox"/> U
75-09-2	Methylene chloride	5	<input type="checkbox"/> U
156-60-5	trans-1,2-Dichloroethene	5	<input type="checkbox"/> U
1634-04-4	Methyl tert-butyl ether	5	<input type="checkbox"/> U
75-34-3	1,1-Dichloroethane	5	<input type="checkbox"/> U
540-59-0	1,2-Dichloroethene (total)	2	
156-59-2	cis-1,2-Dichloroethene	2	<input type="checkbox"/> J
78-93-3	2-Butanone	5	<input type="checkbox"/> U
67-66-3	Chloroform	5	<input type="checkbox"/> U
71-55-6	1,1,1-Trichloroethane	5	<input type="checkbox"/> U
110-82-7	Cyclohexane	5	<input type="checkbox"/> U
56-23-5	Carbon tetrachloride	5	<input type="checkbox"/> U
71-43-2	Benzene	5	<input type="checkbox"/> U
107-06-2	1,2-Dichloroethane	5	<input type="checkbox"/> U
79-01-6	Trichloroethene	11	
108-87-2	Methylcyclohexane	5	<input type="checkbox"/> U
78-87-5	1,2-Dichloropropane	5	<input type="checkbox"/> U
75-27-4	Bromodichloromethane	5	<input type="checkbox"/> U
10061-01-5	cis-1,3-Dichloropropene	5	<input type="checkbox"/> U
108-10-1	4-Methyl-2-pentanone	5	<input type="checkbox"/> U
108-88-3	Toluene	5	<input type="checkbox"/> U
10061-02-6	trans-1,3-Dichloropropene	5	<input type="checkbox"/> U
79-00-5	1,1,2-Trichloroethane	5	<input type="checkbox"/> U
127-18-4	Tetrachloroethene	2	<input type="checkbox"/> J
591-78-6	2-Hexanone	5	<input type="checkbox"/> U
124-48-1	Dibromochloromethane	5	<input type="checkbox"/> U

1B

EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-13D

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505L06-002A

Sample wt/vol:

5

(g/mL) mL

Lab File ID:

315\G32991

Level: (low/med)

LOW

Date Received:

05/28/15

% Moisture: not dec.

Date Analyzed:

06/03/15GC Column: Rtx-624ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

(µL)

Soil Aliquot Volume

(µL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

mw 7/30/15

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13S

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505L06-003A

Sample wt/vol:

5

(g/mL) mL

Lab File ID:

315\G32992

Level: (low/med)

LOW

Date Received:

05/28/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

( $\mu$ L)

Soil Aliquot Volume

( $\mu$ L)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	( $\mu$ g/L or $\mu$ g/Kg) $\mu$ g/L	Q
75-71-8	Dichlorodifluoromethane	5	<input checked="" type="checkbox"/>
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	<input checked="" type="checkbox"/>
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	1	J
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl Acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	10	
540-59-0	1,2-Dichloroethene (total)	18	
156-59-2	cis-1,2-Dichloroethene	17	
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	4	J
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	6	
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U

UJ  
UJ

MW 7/30/15

1B  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-13S

Lab Name: PACE ANALYTICAL Contract: \_\_\_\_\_

Lab Code: 10478 Case No.: AECOM-N SAS No.: \_\_\_\_\_ SDG No.: AECOM238

Matrix: (soil/water) WATER Lab Sample ID: 1505L06-003A

Sample wt/vol: 5 (g/mL) mL Lab File ID: 315\G32992

Level: (low/med) LOW Date Received: 05/28/15

% Moisture: not dec. Date Analyzed: 06/03/15

GC Column: Rtx-624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL) Soil Aliquot Volume \_\_\_\_\_ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(µg/L or µg/Kg) µg/L	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

mw 7/30/15

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NC-12

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID: 1505L06-004A

Sample wt/vol: 5

(g/mL) mL

Lab File ID: 315\G32989

Level: (low/med)

LOW

Date Received: 05/28/15

% Moisture: not dec.

Date Analyzed: 06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL)

Soil Aliquot Volume \_\_\_\_\_ (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
75-71-8	Dichlorodifluoromethane	5	✓
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	✓
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl Acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	1	J
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U

1B  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

NC-12

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505L06-004A

Sample wt/vol:

5

(g/mL) mL

Lab File ID:

315\G32989

Level: (low/med)

LOW

Date Received:

05/28/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

( $\mu$ L)

Soil Aliquot Volume

( $\mu$ L)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	( $\mu$ g/L or $\mu$ g/Kg) $\mu$ g/L	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

*W 7/30/15*

12

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TB

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505L06-005A

Sample wt/vol:

5

(g/mL) mL

Lab File ID:

315\G32988

Level: (low/med)

LOW

Date Received:

05/28/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

(µL)

Soil Aliquot Volume

(µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>µg/L</u>	Q
75-71-8	Dichlorodifluoromethane	5	✓
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	✓
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl Acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U

UJ  
UJ

AW 7/30/15



1B  
VOLATILE ORGANICS ANALYSIS DATA SHEET

12  
EPA SAMPLE NO.

TB

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505L06-005A

Sample wt/vol: 5

(g/mL) mL

Lab File ID:

315\G32988

Level: (low/med)

LOW

Date Received:

05/28/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume: \_\_\_\_\_

( $\mu$ L)

Soil Aliquot Volume \_\_\_\_\_

( $\mu$ L)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	( $\mu$ g/L or $\mu$ g/Kg) <u><math>\mu</math>g/L</u>	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

W 7/30/15

13

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

STORAGE BLANK

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505L06-006ASample wt/vol: 5(g/mL) mL

Lab File ID:

315\G32987

Level: (low/med)

LOW

Date Received:

05/28/15

% Moisture: not dec.

Date Analyzed:

06/03/15GC Column: Rtx-624ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume: \_\_\_\_\_

(µL)

Soil Aliquot Volume \_\_\_\_\_

(µL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) µg/L	Q
75-71-8	Dichlorodifluoromethane	5	✓
74-87-3	Chloromethane	5	U
75-01-4	Vinyl chloride	5	U
74-83-9	Bromomethane	5	✓
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon disulfide	5	U
79-20-9	Methyl Acetate	5	U
75-09-2	Methylene chloride	5	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl tert-butyl ether	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
156-59-2	cis-1,2-Dichloroethene	5	U
78-93-3	2-Butanone	5	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
56-23-5	Carbon tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
79-01-6	Trichloroethene	5	U
108-87-2	Methylcyclohexane	5	U
78-87-5	1,2-Dichloropropane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-pentanone	5	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
591-78-6	2-Hexanone	5	U
124-48-1	Dibromochloromethane	5	U

UJ

UJ

m 7/30/15

1B  
VOLATILE ORGANICS ANALYSIS DATA SHEET

13  
EPA SAMPLE NO.

STORAGE BLANK

Lab Name: PACE ANALYTICAL

Contract: \_\_\_\_\_

Lab Code: 10478

Case No.: AECOM-N

SAS No.: \_\_\_\_\_

SDG No.: AECOM238

Matrix: (soil/water)

WATER

Lab Sample ID:

1505L06-006A

Sample wt/vol: 5

(g/mL) mL

Lab File ID:

315\G32987

Level: (low/med)

LOW

Date Received:

05/28/15

% Moisture: not dec.

Date Analyzed:

06/03/15

GC Column: Rtx-624

ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume: \_\_\_\_\_

( $\mu$ L)

Soil Aliquot Volume \_\_\_\_\_

( $\mu$ L)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	( $\mu$ g/L or $\mu$ g/Kg) $\mu$ g/L	Q
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	Xylene (total)	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U

11/7/30/15