



Environment

Prepared for:
NYSDEC
Albany, NY

Prepared by:
AECOM
Chestnut Ridge, NY
60269807
August 2017

Annual Long Term Monitoring Report For 2017 Utility Manufacturing/Wonder King (Site No. 130043H)

August 1, 2017

Contents

1.0 Introduction.....	1
1.1 Background	1
1.2 Previous Investigations Conducted at the Utility Manufacturing Site.....	1
1.3 Selected Remedy.....	2
2.0 Field Investigation.....	3
2.1 Groundwater Sampling.....	3
3.0 Laboratory Analytical Results.....	4
3.1 Groundwater Samples	4
3.1.1 VOC Data.....	4
3.1.2 MNA Data.....	5
4.0 Data Validation.....	8
5.0 Conclusions and Recommendations	9
6.0 References	10

List of Appendices

- Appendix A Field Forms
- Appendix B Data Usability Summary Reports

List of Tables

- Table 1 Well Construction Data
- Table 2 Groundwater Elevations
- Table 3 VOCs in Groundwater
- Table 4 MNA Parameters in Groundwater

List of Figures

Figure 1 Site Location Map

Figure 2 Monitoring Well Locations

Figure 3 Groundwater Elevations Shallow Wells – March 2017

Figure 4 Groundwater Elevations Deep Wells – March 2017

Figure 5 Groundwater Sampling Results

Figure 6 Groundwater VOC Concentrations over Time

Figure 7 Groundwater MNA Parameter Concentrations over Time

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 SSD 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 for 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 (SSD) 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 remedy. 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 SSD systems (item 2), property managers for two of the structures (6 and 9 as shown in Figure 3) 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 March 2017. 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: ± 0.1
- conductivity: $\pm 3\%$
- DO: $\pm 10\%$ or less than 5 mg/L
- ORP: ± 10 mV
- 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. 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 March 13, 2017. All wells were sampled between March 13, 2017 and March 15, 2016. 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 6010C), sulfates (EPA 300.0), nitrates (EPA 353.2), carbon dioxide (EPA SM4500CO₂ 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 MW12S, MW12D and NC-12. The concentrations exceed the NYS Class GA criterion of 5 µg/L in three of the nine wells with concentrations of 7.5 µg/L (MW11D and duplicate), 7.6 µg/L (MW13S), and 13.3 µg/L (MW1D);
- Trichloroethene (TCE) was detected in wells MW11D, MW13S, MW13D, MW1S and MW1D. The concentrations exceed the NYS Class GA criterion of 5 µg/L in MW13D (13.2 µg/L and 14.5 µg/L in the duplicate sample) and MW1D (73 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 (18.7 µg/L).
- Trans-1,2-dichloroethene was not detected in any of the wells;
- 1,1-Dichloroethene (1,1-DCE) was detected in MW11D, MW13S, MW13D, and MW1D. The concentration exceeds the NYS Class GA criterion of 5 µg/L in MW1D (14.4 µg/L);
- 1,1,1-Trichloroethane (1,1,1-TCA) was not detected in any of the wells; 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 (9.4 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.

A description of the data collected in 2017 compared to previous sampling rounds 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. There are no exceedances of NY Class GA criteria for MW11S. The last exceedance of NY Class GA criteria for samples from MW11S occurred in 2011 for PCE at 5.5 µg/L. The maximum PCE concentration for MW11D occurred in 2011 at 17 µg/L and has decreased to 7.5 µg/L in 2017. There have been no other VOCs exceeding NY Class GA criteria in samples collected from MW11D.

For wells MW12S and MW12D, the 2015 and 2016 VOC concentrations were below the NY Class GA criteria. There were no VOC detections in samples from MW12S and MW12D in 2017. The last exceedance in MW12S or MW12D occurred in 2012 for PCE.

For wells MW13S and MW13D, the TCE concentration in the deep well is 5 µg/L higher than in the shallow well, and the TCE concentrations in the deep well are greater than twice the NY Class GA criterion. The maximum TCE concentration detected in MW13D occurred in 2005 at 200 µg/L and has decreased to 13 µg/L in 2017. TCE is the only VOC which exceeds the NY Class GA criteria in MW13D. The last exceedances for VOCs in MW13D other than TCE occurred in 2013 for PCE at 7 µg/L and cis-1,2-DCE at 8 µg/L. The maximum TCE concentration detected in MW13S occurred in 2013 at 22 µg/L. The TCE concentration in the shallow well is below the NY Class GA criterion in 2017 decreasing to 4 µg/L from 6 µg/L in 2016. The maximum PCE concentration for MW13S occurred in 2013 at 13 µg/L and has decreased to 8 µg/L in 2017. The maximum cis-1,2-DCE concentration for MW13S occurred in 2014 at 30 µg/L and has decreased to 19 µg/L in 2017. The maximum 1,1-DCA concentration for MW13S occurred in 2014 at 18 µg/L and has decreased to 9 µg/L in 2017.

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 1,1-DCE in MW1D. The concentration of TCE increased between 2015 and 2016 in well MW1D by more than 5 µg/L to 74 µg/L, and was detected at 73 in 2017 µg/L. The maximum TCE concentration occurred in 2012 and 2013 at 100 µg/L in MW1D. The concentrations of PCE and 1,1-DCE in 2017 have not significantly changed compared to the 2016 levels. The maximum PCE concentration occurred in 2013 at 26 µg/L in MW1D and has decreased to 13 µg/L in 2017. The maximum PCE concentration occurred in 2010 at 30 µg/L in MW1D and has decreased to 14 µg/L in 2017. Cis-1,2-DCE and 1,1-TCA have not been detected above the NY Class GA criterion in MW1D since 2014. 1,1-DCA has not been detected above the NY Class GA criterion in any samples collected between 2015 and 2017.

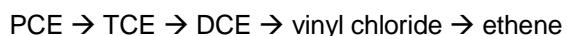
For NC-12, there were no VOC detections in 2017. There have been no VOC detections in any samples collected from NC-12 between 2013 and 2017.

The groundwater concentrations generally appear to be stabilizing over time. All concentrations are within 5 µg/L of the 2016 levels with the exception of PCE in MW11D which decreased to 7.5 µg/L from 14 µg/L in 2016. There were no exceedances of the NY Class GA criteria in MW-11S, MW12S, MW12D, MW1S or NC-12 in 2013, 2014, 2015, 2016 and 2017. 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 generally slightly acidic (pH 5.21 to 6.17), and five of the nine wells sampled have pH values less than pH 6.0. One well (MW-11S) was basic at a pH of 11.18. The pH values observed are outside of 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 21 to 300 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 2.7 to 15.6 mg/L). The availability of dissolved oxygen as an electron acceptor limits reductive dechlorination.
- Nitrate: was detected in all nine wells sampled (0.65 mg/L to 3.3 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 2017.
- 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 three of the nine monitoring wells.
- Sulfate was detected in all nine wells sampled (13.4 mg/L to 166 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 2017.
- 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 March 2017.
- Carbon dioxide: An increase in carbon dioxide may provide an indication of microbial processes. Carbon dioxide was detected in eight of the nine wells with concentrations ranging from 2,100 µg/L to 23,000 µg/L.
- 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 four 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 2017 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 changed 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 March 2017 were reported by Pace Analytical Services, Inc., Melville, New York as one SDG, 7013357. A total of 13 analyses were validated, including two trip blanks, one storage blank, one field duplicate, and nine environmental samples.

7013357: 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 seven samples due to low laboratory control sample recovery.
- Several compounds (acetone, bromomethane, chloromethane, and trichlorofluoromethane) 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 March 2017. 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 2016 levels with the exception of PCE in MW11D which decreased to 7.5 µg/L from 14 µg/L in 2016. There were no exceedances of criteria in MW-11S, MW12S, MW12D, MW1S or NC-12 in 2013, 2014, 2015, 2016 and 2017.
- Groundwater concentrations in the shallow wells have decreased over time such that only cross-gradient well MW13S has detections over the NYS Class GA criteria. Groundwater concentrations in the deep wells MW1D, MW11D and MW13D are above the NYS Class GA criteria for several compounds have not shown any discernible trends in the past three sampling rounds.
- 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 March 2017 samples exceeding the NYS Class GA groundwater criteria.

6.0 References

AECOM, 2007. Supplemental Remedial Investigation Report (Off-Site Soil Vapor Intrusion Site Characterization), Utility Manufacturing/Wonder King, Operable Unit 2, Town of North Hempstead, New York. October.

AECOM, 2011. Final Annual Long Term Monitoring Report, Utility Manufacturing/Wonder King, OU 2, Town of North Hempstead, New York. January.

AECOM, 2012a. Final Annual Long Term Monitoring Report for 2011, Utility Manufacturing/Wonder King, OU 2, Town of North Hempstead, New York. May.

AECOM, 2012b. Final Annual Long Term Monitoring Report for 2012, Utility Manufacturing/Wonder King, OU 2, Town of North Hempstead, New York. August.

AECOM, 2012c. Site Management Plan, Utility Manufacturing/Wonder King, OU 2, Town of North Hempstead, New York. August.

AECOM, 2013. Periodic Review Report Review Period November 27, 2012 to December 14, 2013, Utility Manufacturing/Wonder King (Site No. 130043H), December 30, 2013

Environmental Resources Management (ERM), 2005. Off-Site Remedial Investigation Report, Utility Manufacturing, New Cassel, Town of North Hempstead, Nassau County, NY. December.

New York State Department of Health (NYSDOH), 2003. Fact Sheet: Tetrachloroethene (Perc) In Indoor and Outdoor Air. May.

NYSDOH, 2006. Guidance for Evaluating Soil Vapor Intrusion in the State of New York. October.

New York State Department of Environmental Conservation (NYSDEC), 1994. Technical and Administrative Guidance Memorandum #4046. Determination of Soil Cleanup Objectives and Cleanup Levels. January.

NYSDEC, 2008. Record of Decision Utility Manufacturing/Wonder King Site Operable Unit No. 2 Town of North Hempstead, Nassau County, New York. Site Number 130043H. March.

NYSDEC, 2010. NYSDEC Division of Environmental Remediation DER-10 Technical Guidance for Site Investigation and Remediation. May.

NYSDEC, 2012. Memo Modification to the Record of Decision, Utility Manufacturing/Wonder King Site Operable Unit No. 2 Town of North Hempstead, Nassau County, New York. Site Number 130043H. April.

Table 1
Well Construction Data
Utility Manufacturing/Wonder King

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-03	215,329.38	1,107,025.57	124.13	123.71	62.5
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
Utility Manufacturing/Wonder King

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	Depth to Water 6/27/16	Elevation 6/27/16
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	48.10	71.67
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	48.15	71.67
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	48.98	70.53
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	49.08	70.58
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	48.71	69.55
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	47.38	70.5
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	46.00	70.41
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	45.89	70.43
FSMW-07A	122.7	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	48.67	74.03	50.43	72.27
FSMW-07B	122.73	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	49.04	73.69	51.03	71.7
MW-02	122.49	NM	NM	NM	NM	NM	NM	46.28	76.21	NM	NM	47.93	74.56	50.15	72.34
MW-03	123.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	51.17	72.54
MW-08	122.68	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	48.06	74.62	49.91	72.77
MW-09	121.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	38.51	83.35	38.54	83.32
NC-12	121.1	NM	NM	NM	NM	NM	NM	45.25	75.85	47.6	73.5	47.44	73.66	49.5	71.6
NC-25	119.05	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	44.92	74.13	46.99	72.06
U-1	124.03	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	49.65	74.38	51.52	72.51

Notes:

All elevations and depths are in feet

Vertical datum: North American Vertical Datum of 1988

NM - No measurement

MW11D was inaccessible on June 27, 2016. The value shown for June 2016 is from June 24, 2016.

Table 2
 Groundwater Elevations
 Utility Manufacturing/Wonder King

Well Number	Top of Inner Casing	Depth to Water 3/13/17	Elevation 3/13/17
MW-1D	119.77	46.18	73.59
MW-1S	119.82	46.21	73.61
MW-11D	119.51	47.13	72.38
MW-11S	119.66	47.20	72.46
MW-12D	118.26	45.43	72.83
MW-12S	117.88	45.82	72.06
MW-13D	116.41	44.11	72.3
MW-13S	116.32	43.97	72.35
FSMW-07A	122.7	48.67	74.03
FSMW-07B	122.73	49.04	73.69
MW-02	122.49	47.93	74.56
MW-03	123.71	NM	NM
MW-08	122.68	48.06	74.62
MW-09	121.86	38.51	83.35
NC-12	121.1	NM	NM
NC-25	119.05	44.92	74.13
U-1	124.03	49.65	74.38

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW11S	MW11S	MW11S	MW11S	MW11S	(dup)	MW11S	(dup)	MW11S	MW-11S	MW11D	MW11D
	Class GA	5/12/2010	10/3/2011	4/24/2012	6/20/2013	6/3/2014	6/3/2014	5/27/2015	5/27/2015	6/24/2016	3/15/2017	5/12/2010	10/3/2011
1,1,1-Trichloroethane	5	1 U	0.78 J	1 UJ	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1.8	2.1
1,1,2,2-Tetrachloroethane	5	1 U	1 U	1 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	5	1 U	1 U	1 U	NA	1 U	1 U						
1,1-Dichloroethane	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	2.5	3
1,1-Dichloroethene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	4	5.2
1,2,4-Trichlorobenzene	5	1 U	1 U	1 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	1 U	1 U	1 U
1,2-Dibromo-3-chloropropane	0.04	1 U	1 UJ	1 U	5 UJ	R	R	5 U	5 U	5 U	1 U	1 U	1 UJ
1,2-Dibromoethane (EDB)	5	1 U	1 U	1 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	1 U	1 U	1 U
1,2-Dichlorobenzene	3	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
1,2-Dichloroethane	0.6	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
1,2-Dichloroethene, Total	5	2 U	1 U	NA	3	1.5	1.7	2 J	2	2	3.5	1.2 J	1.9
1,2-Dichloropropane	1	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
1,3-Dichlorobenzene	3	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
1,4-Dichlorobenzene	3	1 U	1 U	1 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
2-Butanone (MEK)	5	5 U	R	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	1 U	5 UJ	R
2-Hexanone	5	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	1 U	5 UJ	5 U
4-Methyl-2-pentanone (MIBK)	5	5 U	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U	1 U	5 UJ	5 U
Acetone	5	5 U	R	R	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	3.4 J	4.8 J
Benzene	1	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Bromodichloromethane	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Bromoform	5	1 U	1 UJ	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 UJ	1 UJ
Bromomethane	5	1 UJ	1 U	1 U	5 UJ	5 U	1 UJ	1 U	1 U				
Carbon disulfide	60	1 U	1 UJ	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 UJ
Carbon Tetrachloride	5	1 U	1 U	1 UJ	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Chlorobenzene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Chlorodibromomethane	NA	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Chloroethane	5	1 U	1 U	1 U	5 UJ	5 U	5 U	5 U	5 U	5 U	5 UJ	1 U	1 U
Chloroform	7	1 U	1 UJ	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 UJ
Chloromethane	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 UJ	1 U	1 U
cis-1,2-Dichloroethene	5	1 U	1 U	1 U	3 J	1 J	2 J	2 J	2 J	2 J	3.5 J	1.2	1.9
cis-1,3-Dichloropropene	0.4	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Cyclohexane	NA	1 U	1 U	1 UJ	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Dichlorodifluoromethane	5	1 U	1 U	1 UJ	5 U	5 U	5 U	5 UJ	5 UJ	5 U	1 U	1 U	1 U
Ethylbenzene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Isopropylbenzene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Methyl Acetate	NA	1 U	1 U	1 UJ	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 UJ	1 U
Methyl tert-Butyl Ether	5	1 U	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW11S	MW11S	MW11S	MW11S	MW11S	(dup)	MW11S	(dup)	MW11S	MW-11S	MW11D	MW11D
	Class GA	5/12/2010	10/3/2011	4/24/2012	6/20/2013	6/3/2014	6/3/2014	5/27/2015	5/27/2015	6/24/2016	3/15/2017	5/12/2010	10/3/2011
Methylcyclohexane	NA	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	1 U	1 U
Methylene Chloride	5	1 U	1 U	1 UJ	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Styrene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Tetrachloroethene (PCE)	5	8.7	5.5 J	4.7	4 J	2 J	2 J	2 J	2 J	4 J	1.8	8.1	17 J
Toluene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	5	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	0.4	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Trichloroethene (TCE)	5	1 U	0.71 J	1 UJ	5 U	5 U	5 U	5 U	5 U	5 U	1 U	3 U	5.3
Trichlorofluoromethane	5	1 U	1 U	1 U	5 UJ	5 U	5 U	5 U	5 U	5 U	1 UJ	1 U	1 U
Vinyl chloride	2	1 U	1 U	1 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U
Xylenes, total	5	2 U	2 U	2 U	5 U	5 U	5 U	5 U	5 U	5 U	1 U	2 U	2 U

U-Not detected

J-Estimated

R-Rejected

Detections are in bold text.

Exceedances are highlighted

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW11D	(dup)	MW11D	MW11D	MW11D	MW11D	MW-11D	MW12S	(dup)	MW12S	MW12S	MW12S
	Class GA	4/24/2012	4/24/2012	6/20/2013	6/3/2014	5/27/2015	6/24/2016	3/15/2017	5/11/2010	5/11/2010	8/9/2011	4/24/2012	6/20/2013
1,1,1-Trichloroethane	5	0.82 J	1	1 J	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 UJ	5 U
1,1,2,2-Tetrachloroethane	5	1 U	1 U	5 U	5 UJ	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
1,1,2-Trichloroethane	1	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
1,1,2-Trichlorotrifluoroethane	5	1 U	1 U	NA	NA	NA	NA	NA	1 U	1 U	5 U	1 U	NA
1,1-Dichloroethane	5	1.6	2	2 J	2 J	2 J	2 J	1.7	1 U	1 U	5 U	1 U	5 U
1,1-Dichloroethene	5	2	2.5	3 J	2 J	4 J	3 J	1.8	1 U	1 U	5 U	1 U	5 U
1,2,4-Trichlorobenzene	5	1 U	1 UJ	5 UJ	5 UJ	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 UJ
1,2-Dibromo-3-chloropropane	0.04	1 U	1 U	5 UJ	R	5 U	5 U	1 U	1 UJ	1 U	5 UJ	1 U	5 UJ
1,2-Dibromoethane (EDB)	5	1 U	1 U	5 U	5 UJ	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
1,2-Dichlorobenzene	3	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
1,2-Dichloroethane	0.6	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
1,2-Dichloroethene, Total	5	NA	NA	1	1.4	2	1	2	15	15	2.2 J	NA	5 U
1,2-Dichloropropane	1	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
1,3-Dichlorobenzene	3	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
1,4-Dichlorobenzene	3	1 U	1 U	5 UJ	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 UJ
2-Butanone (MEK)	5	5 U	R	5 UJ	5 UJ	5 U	5 U	1 U	5 U	5 U	5 UJ	5 U	5 UJ
2-Hexanone	5	5 U	5 U	5 UJ	5 UJ	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 UJ
4-Methyl-2-pentanone (MIBK)	5	5 U	5 U	5 UJ	5 UJ	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 UJ
Acetone	5	R	R	5 UJ	5 U	5 U	5 UJ	5 UJ	5 U	5 U	R	R	5 UJ
Benzene	1	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Bromodichloromethane	5	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Bromoform	5	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Bromomethane	5	1 U	1 U	5 UJ	5 UJ	5 UJ	5 UJ	1 UJ	1 U	1 UJ	5 U	1 U	5 UJ
Carbon disulfide	60	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Carbon Tetrachloride	5	1 UJ	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 UJ	5 U
Chlorobenzene	5	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Chlorodibromomethane	NA	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 UJ	1 U	5 U	1 U	5 U
Chloroethane	5	1 U	1 U	5 UJ	5 U	5 U	5 UJ	1 U	1 U	1 U	5 U	1 U	5 UJ
Chloroform	7	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Chloromethane	5	1 U	1 U	5 U	5 U	5 U	5 U	1 UJ	1 U	1 U	5 U	1 U	5 U
cis-1,2-Dichloroethene	5	1.1	1.2	1 J	1 J	2 J	1 J	2 J	15	15	2.2 J	1.7	5 U
cis-1,3-Dichloropropene	0.4	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Cyclohexane	NA	1 UJ	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 UJ	5 U
Dichlorodifluoromethane	5	1 UJ	1 U	5 U	5 U	5 UJ	5 UJ	1 U	1 UJ	1 U	5 U	1 UJ	5 U
Ethylbenzene	5	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Isopropylbenzene	5	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Methyl Acetate	NA	1 UJ	1 U	5 U	5 U	5 U	5 UJ	1 U	1 U	1 U	5 UJ	1 UJ	5 U
Methyl tert-Butyl Ether	5	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW11D	(dup)	MW11D	MW11D	MW11D	MW11D	MW-11D	MW12S	(dup)	MW12S	MW12S	MW12S
	Class GA	4/24/2012	4/24/2012	6/20/2013	6/3/2014	5/27/2015	6/24/2016	3/15/2017	5/11/2010	5/11/2010	8/9/2011	4/24/2012	6/20/2013
Methylcyclohexane	NA	1 U	1 U	5 U	5 U	5 U	5 U	NA	1 U	1 U	5 U	1 U	5 U
Methylene Chloride	5	1 UJ	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 UJ	5 U
Styrene	5	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Tetrachloroethene (PCE)	5	9	8	14	8	13	14	7.5	10	10	18	21	5
Toluene	5	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
trans-1,2-Dichloroethene	5	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
trans-1,3-Dichloropropene	0.4	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 UJ	1 U	5 U	1 U	5 U
Trichloroethene (TCE)	5	2.4 J	2.6	4 J	3 J	4 J	5	4.1	2.5	2.4	1.9 J	3 J	2 J
Trichlorofluoromethane	5	1 U	1 U	5 UJ	5 U	5 U	5 U	1 UJ	1 UJ	1 U	5 U	1 U	5 UJ
Vinyl chloride	2	1 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	1 U	5 U	1 U	5 U
Xylenes, total	5	2 U	2 U	5 U	5 U	5 U	5 U	1 U	2 U	2 U	5 U	2 U	5 U

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW12S	MW12S	MW12S	MW-12S	MW12D	MW12D	MW12D	MW12D	MW12D	MW12D	MW12D	MW12D
	Class GA	6/3/2014	5/27/2015	6/27/2016	3/13/2017	5/11/2010	8/9/2011	4/24/2012	6/20/2013	6/3/2014	5/27/2015	6/27/2016	3/13/2017
1,1,1-Trichloroethane	5	5 U	5 U	5 U	1 U	8.8	0.91 J	1.1 J	2 J	1 J	1 J	1 J	1 U
1,1,2,2-Tetrachloroethane	5	5 UJ	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 UJ	5 U	5 U	1 U
1,1,2-Trichloroethane	1	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
1,1,2-Trichlorotrifluoroethane	5	NA	NA	NA	NA	2.2	5 U	1 U	NA	NA	NA	NA	NA
1,1-Dichloroethane	5	5 U	5 U	5 U	1 U	2.4	5 U	1 U	5 U	5 U	5 U	5 U	1 U
1,1-Dichloroethene	5	5 U	5 U	5 U	1 U	17	1.5 J	1 U	4 J	1 J	2 J	2 J	1 U
1,2,4-Trichlorobenzene	5	5 UJ	5 U	5 U	1 U	1 U	5 U	1 U	5 UJ	5 UJ	5 U	5 U	1 U
1,2-Dibromo-3-chloropropane	0.04	R	5 U	5 U	1 U	1 U	5 UJ	1 U	5 UJ	R	5 U	5 U	1 U
1,2-Dibromoethane (EDB)	5	5 UJ	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 UJ	5 U	5 U	1 U
1,2-Dichlorobenzene	3	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
1,2-Dichloroethane	0.6	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
1,2-Dichloroethene, Total	5	5 U	5 U	5 U	2 U	1.8 J	5 U	NA	5 U	5 U	5 U	5 U	2 U
1,2-Dichloropropane	1	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
1,3-Dichlorobenzene	3	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
1,4-Dichlorobenzene	3	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 UJ	5 U	5 U	5 U	1 U
2-Butanone (MEK)	5	5 UJ	5 U	5 U	1 U	5 U	5 UJ	5 U	5 UJ	5 U	5 U	5 U	1 U
2-Hexanone	5	5 UJ	5 U	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	1 U
4-Methyl-2-pentanone (MIBK)	5	5 UJ	5 U	5 U	1 U	5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	1 U
Acetone	5	5 U	5 U	5 UJ	5 UJ	5 U	R	R	5 UJ	5 U	5 U	5 UJ	5 UJ
Benzene	1	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Bromodichloromethane	5	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Bromoform	5	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Bromomethane	5	5 UJ	5 UJ	5 UJ	1 UJ	1 UJ	5 U	1 U	5 UJ	5 UJ	5 UJ	5 UJ	1 UU
Carbon disulfide	60	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Carbon Tetrachloride	5	5 U	5 U	5 U	1 U	1 U	5 U	1 UJ	5 U	5 U	5 U	5 U	1 U
Chlorobenzene	5	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Chlorodibromomethane	NA	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Chloroethane	5	5 U	5 U	5 UJ	1 U	1 U	5 U	1 U	5 UJ	5 U	5 U	5 UJ	1 U
Chloroform	7	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Chloromethane	5	5 U	5 U	5 U	1 UJ	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 UU
cis-1,2-Dichloroethene	5	5 U	5 U	5 U	1 U	1.8	5 U	1 U	5 U	5 U	5 U	5 U	1 U
cis-1,3-Dichloropropene	0.4	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Cyclohexane	NA	5 U	5 U	5 U	1 U	1 U	5 U	1 UJ	5 U	5 U	5 U	5 U	1 U
Dichlorodifluoromethane	5	5 U	5 UJ	5 UJ	1 U	1 U	5 U	1 UJ	5 U	5 U	5 UJ	5 UJ	1 U
Ethylbenzene	5	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Isopropylbenzene	5	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Methyl Acetate	NA	5 U	5 U	5 UJ	1 U	1 U	5 UJ	1 UJ	5 U	5 U	5 U	5 UJ	1 U
Methyl tert-Butyl Ether	5	5 U	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	1 U

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW12S	MW12S	MW12S	MW-12S	MW12D	MW12D	MW12D	MW12D	MW12D	MW12D	MW12D	MW12D
	Class GA	6/3/2014	5/27/2015	6/27/2016	3/13/2017	5/11/2010	8/9/2011	4/24/2012	6/20/2013	6/3/2014	5/27/2015	6/27/2016	3/13/2017
Methylcyclohexane	NA	5 U	5 U	5 U	NA	1 U	5 U	1 U	5 U	5 U	5 U	5 U	NA
Methylene Chloride	5	5 U	5 U	5 U	1 U	1 U	5 U	1 UJ	5 U	5 U	5 U	5 U	1 U
Styrene	5	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Tetrachloroethene (PCE)	5	1 J	5 U	5 U	1 U	7.1	1.8 J	2.6	3 J	2 J	2 J	2 J	1 U
Toluene	5	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
trans-1,2-Dichloroethene	5	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Trichloroethene (TCE)	5	5 U	5 U	5 U	1 U	25	1.4 J	1.6 J	3 J	5 U	2 J	2 J	1 U
Trichlorofluoromethane	5	5 U	5 U	5 U	1 UJ	1 U	5 U	1 U	5 UJ	5 U	5 U	5 U	1 UJ
Vinyl chloride	2	5 U	5 U	5 U	1 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U
Xylenes, total	5	5 U	5 U	5 U	1 U	2 U	5 U	2 U	5 U	5 U	5 U	5 U	1 U

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW13S	MW13S	(dup)	MW13S	MW13S	MW13S	MW13S	(dup)	MW-13S	MW13D	MW13D	
	Class GA	5/11/2010	8/9/2011	8/9/2011	4/24/2012	6/20/2013	6/4/2014	5/28/2015	6/24/2016	6/24/2016	3/13/2017	5/11/2010	8/9/2011
1,1,1-Trichloroethane	5	1 U	2.1 J	1.8 J	2.5 J	6	8 J	4 J	5	4 J	1 U	4.2	4.7 J
1,1,2,2-Tetrachloroethane	5	1 U	5 U	5 U	1 U	5 U	5 UJ	5 U	5 U	5 U	1 U	1 U	5 U
1,1,2-Trichloroethane	1	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
1,1,2-Trichlorotrifluoroethane	5	1 U	5 U	5 U	1 U	NA	NA	NA	NA	NA	NA	1.2	5 U
1,1-Dichloroethane	5	1 U	4.2 J	3.6 J	5.3	15	18 J	10	9	9	9.4	1.2	0.72 J
1,1-Dichloroethene	5	1 U	0.82 J	0.74 J	1 U	2 J	2 J	1 J	1 J	1 J	1.2	7	5.6
1,2,4-Trichlorobenzene	5	1 U	5 U	5 U	1 U	5 UJ	5 UJ	5 U	5 U	5 U	1 U	1 U	5 U
1,2-Dibromo-3-chloropropane	0.04	1 UJ	5 UJ	5 UJ	1 U	5 UJ	R	5 U	5 U	5 U	1 U	1 UJ	5 UU
1,2-Dibromoethane (EDB)	5	1 U	5 U	5 U	1 U	5 U	5 UJ	5 U	5 U	5 U	1 U	1 U	5 U
1,2-Dichlorobenzene	3	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
1,2-Dichloroethane	0.6	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	0.58 J	5 U
1,2-Dichloroethene, Total	5	0.74 J	6.1	5.3	NA	24	31 J	18	20	19	18.7	17	8.5
1,2-Dichloropropane	1	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
1,3-Dichlorobenzene	3	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
1,4-Dichlorobenzene	3	1 U	5 U	5 U	1 U	5 UJ	5 U	5 U	5 U	5 U	1 U	1 U	5 U
2-Butanone (MEK)	5	5 U	5 UJ	5 UJ	5 U	5 UJ	5 UJ	5 U	5 U	5 U	1 U	5 U	5 UU
2-Hexanone	5	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	1 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	5	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	5 U	1 U	5 U	5 U
Acetone	5	5 U	R	R	R	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	R
Benzene	1	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Bromodichloromethane	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Bromoform	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Bromomethane	5	1 U	5 U	5 U	1 U	5 UJ	2 J	5 UJ	5 U	5 U	1 UJ	1 U	5 U
Carbon disulfide	60	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Carbon Tetrachloride	5	1 U	5 U	5 U	1 UJ	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Chlorobenzene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Chlorodibromomethane	NA	1 UJ	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 UJ	5 U
Chloroethane	5	1 U	5 U	5 U	1 U	5 UJ	5 U	5 U	5 U	5 UJ	1 U	1 U	5 U
Chloroform	7	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Chloromethane	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 UJ	1 U	5 U
cis-1,2-Dichloroethylene	5	1 U	6.1	5.3	7.9	24	30 J	17	19	18	18.7 J	17	8.5
cis-1,3-Dichloropropene	0.4	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Cyclohexane	NA	1 U	5 U	5 U	1 UJ	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Dichlorodifluoromethane	5	1 UJ	5 U	5 U	1 UJ	5 U	5 U	5 UJ	5 U	5 U	1 U	1 UJ	5 U
Ethylbenzene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Isopropylbenzene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U
Methyl Acetate	NA	1 U	5 UJ	5 UJ	1 UJ	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 UU
Methyl tert-Butyl Ether	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW13S	MW13S	(dup)	MW13S	MW13S	MW13S	MW13S	(dup)	MW-13S	MW13D	MW13D	
	Class GA	5/11/2010	8/9/2011	8/9/2011	4/24/2012	6/20/2013	6/4/2014	5/28/2015	6/24/2016	6/24/2016	3/13/2017	5/11/2010	8/9/2011
Methylcyclohexane	NA	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	NA	1 U	5 U	
Methylene Chloride	5	1 U	5 U	5 U	1 UJ	5 U	5 U	5 U	5 U	1 U	1 U	5 U	
Styrene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U	
Tetrachloroethene (PCE)	5	1.2	3.5 J	3.3 J	5.5	14	13 J	6	10	10	7.6	9.4	5.5
Toluene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U	
trans-1,2-Dichloroethene	5	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U	
trans-1,3-Dichloropropene	0.4	1 UJ	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	1 UJ	5 U	
Trichloroethene (TCE)	5	1.7	16	14	16 J	22	12	5	6	6	4.1	200	88
Trichlorofluoromethane	5	1 UJ	5 U	5 U	1 U	5 UJ	5 U	5 U	5 U	1 UJ	1 UJ	5 U	
Vinyl chloride	2	1 U	5 U	5 U	1 U	5 U	5 U	5 U	5 U	1 U	1 U	5 U	
Xylenes, total	5	2 U	5 U	5 U	2 U	5 U	5 U	5 U	5 U	1 U	2 U	5 U	

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW13D	MW13D	MW13D	MW13D	MW13D	MW-13D	(dup)	MW1S	MW1S	MW1S	MW1S	MW1S
	Class GA	4/24/2012	6/20/2013	6/4/2014	5/28/2015	6/24/2016	3/13/2017	3/13/2017	4/5/2005	5/12/2010	8/10/2011	4/24/2012	6/20/2013
1,1,1-Trichloroethane	5	3.1 J	2 J	2 J	5 U	5 U	1 U	1 U	3.6	1 U	5 U	1 UJ	5 U
1,1,2,2-Tetrachloroethane	5	1 U	5 U	5 UJ	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
1,1,2-Trichloroethane	1	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
1,1,2-Trichlorotrifluoroethane	5	1 U	NA	NA	NA	NA	NA	NA	0.5 U	1 U	5 U	1 U	NA
1,1-Dichloroethane	5	0.63 J	5 U	5 U	5 U	5 U	1 U	1 U	0.9	1 U	5 U	1 U	5 U
1,1-Dichloroethene	5	3.8	5	3 J	1 J	1 J	1.5	1.8	1.4	1 U	5 U	1 U	5 U
1,2,4-Trichlorobenzene	5	1 U	5 UJ	5 UJ	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 UJ
1,2-Dibromo-3-chloropropane	0.04	1 U	5 UJ	R	5 U	5 U	1 U	1 U	0.5 U	1 U	5 UJ	1 U	5 UJ
1,2-Dibromoethane (EDB)	5	1 U	5 U	5 UJ	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
1,2-Dichlorobenzene	3	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
1,2-Dichloroethane	0.6	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
1,2-Dichloroethene, Total	5	NA	8	3.6	2	1	2.2	2 U	NA	18	20	NA	4
1,2-Dichloropropane	1	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
1,3-Dichlorobenzene	3	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
1,4-Dichlorobenzene	3	1 U	5 UJ	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 UJ
2-Butanone (MEK)	5	5 U	5 UJ	5 UJ	5 U	5 U	1 U	1 U	5 U	5 UJ	5 UJ	5 U	5 UJ
2-Hexanone	5	5 U	5 UJ	5 UJ	5 U	5 U	1 U	1 U	5 U	5 UJ	5 U	5 U	5 UJ
4-Methyl-2-pentanone (MIBK)	5	5 U	5 UJ	5 UJ	5 U	5 U	1 U	1 U	5 U	5 UJ	5 U	5 U	5 UJ
Acetone	5	R	5 UJ	5 U	5 U	5 UJ	5 UJ	5 UJ	5 U	5 J	R	R	5 UJ
Benzene	1	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Bromodichloromethane	5	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Bromoform	5	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 UJ	5 U	1 U	5 U
Bromomethane	5	1 U	5 UJ	5 UJ	5 UJ	5 U	1 UJ	1 UJ	0.5 U	1 U	5 U	1 U	5 UJ
Carbon disulfide	60	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Carbon Tetrachloride	5	1 UJ	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 UJ	5 U
Chlorobenzene	5	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Chlorodibromomethane	NA	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Chloroethane	5	1 U	5 UJ	5 U	5 U	5 UJ	1 U	1 U	0.5 U	1 U	5 U	1 U	5 UJ
Chloroform	7	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Chloromethane	5	1 U	5 U	5 U	5 U	5 U	1 UJ	1 UJ	0.5 U	1 U	5 U	1 U	5 U
cis-1,2-Dichloroethylene	5	6.1	8	4 J	2 J	1 J	2.2 J	2 J	84	18	20	12	4 J
cis-1,3-Dichloropropene	0.4	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Cyclohexane	NA	1 UJ	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 UJ	5 U
Dichlorodifluoromethane	5	1 UJ	5 U	5 U	5 UJ	5 U	1 U	1 U	0.5 U	1 U	5 U	1 UJ	5 U
Ethylbenzene	5	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Isopropylbenzene	5	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Methyl Acetate	NA	1 UJ	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 UJ	5 UJ	1 UJ	5 U
Methyl tert-Butyl Ether	5	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.97	1 U	5 U	1 U	5 U

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW13D	MW13D	MW13D	MW13D	MW13D	MW-13D	(dup)	MW1S	MW1S	MW1S	MW1S	MW1S
	Class GA	4/24/2012	6/20/2013	6/4/2014	5/28/2015	6/24/2016	3/13/2017	3/13/2017	4/5/2005	5/12/2010	8/10/2011	4/24/2012	6/20/2013
Methylcyclohexane	NA	1 U	5 U	5 U	5 U	5 U	NA	NA	0.5 U	1 U	5 U	1 U	5 U
Methylene Chloride	5	1 UJ	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 UJ	5 U
Styrene	5	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Tetrachloroethene (PCE)	5	5.2	7	3 J	2 J	3 J	2.4	2.4	220	8.9	4.4 J	5.5	4 J
Toluene	5	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
trans-1,2-Dichloroethene	5	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.76	1 U	5 U	1 U	5 U
trans-1,3-Dichloropropene	0.4	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Trichloroethene (TCE)	5	60 J	65	30	11	11	14.5	13.2	33	3.1 U	2.2 J	1.8 J	2 J
Trichlorofluoromethane	5	1 U	5 UJ	5 U	5 U	5 U	1 UJ	1 UJ	0.5 U	1 U	5 U	1 U	5 UJ
Vinyl chloride	2	1 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	1 U	5 U	1 U	5 U
Xylenes, total	5	2 U	5 U	5 U	5 U	5 U	1 U	1 U	0.5 U	2 U	5 U	2 U	5 U

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW1S	MW1S	MW1S	MW-1S	MW1D	MW1D	MW1D	MW1D	MW1D	MW1D	MW1D	MW1D	MW1D
	Class GA	6/3/2014	5/28/2015	6/23/2016	3/15/2017	4/5/2005	5/12/2010	8/10/2011	4/24/2012	6/20/2013	6/3/2014	5/27/2015	6/23/2016	
1,1,1-Trichloroethane	5	5 U	5 U	5 U	1 U	17	15	3.7 J	9.9 J	9	6	4 J	4 J	
1,1,2,2-Tetrachloroethane	5	5 UJ	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 UJ	5 U	5 U	
1,1,2-Trichloroethane	1	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
1,1,2-Trichlorotrifluoroethane	5	NA	NA	NA		1.7	3.5	5 U	1 U	NA	NA	NA	NA	
1,1-Dichloroethane	5	5 U	5 U	5 U	1 U	4	4.3	2.2 J	2.8	3 J	5 U	2 J	1 J	
1,1-Dichloroethene	5	5 U	5 U	5 U	1 U	22	30	4.3 J	24	28	15	16	16	
1,2,4-Trichlorobenzene	5	5 UJ	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 UJ	5 UJ	5 U	5 U	
1,2-Dibromo-3-chloropropane	0.04	R	5 U	5 U	1 U	0.5 U	1 U	5 UJ	1 U	5 UJ	R	5 U	5 U	
1,2-Dibromoethane (EDB)	5	5 UJ	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 UJ	5 U	5 U	
1,2-Dichlorobenzene	3	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
1,2-Dichloroethane	0.6	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
1,2-Dichloroethene, Total	5	2.8	3	3	1.1 J	NA	4.4	5.7	NA	7	5.9	5	4	
1,2-Dichloropropane	1	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
1,3-Dichlorobenzene	3	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
1,4-Dichlorobenzene	3	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 UJ	5 U	5 U	5 U	
2-Butanone (MEK)	5	5 UJ	5 U	5 U	1 U	5 U	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U	5 U	
2-Hexanone	5	5 UJ	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	
4-Methyl-2-pentanone (MIBK)	5	5 UJ	5 U	5 U	1 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U	5 U	
Acetone	5	5 U	5 U	5 UJ	5 UJ	5 U	5 U	R	R	5 UJ	5 U	5 U	5 UJ	
Benzene	1	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
Bromodichloromethane	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
Bromoform	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
Bromomethane	5	5 UJ	5 UJ	5 UJ	1 UJ	0.5 U	1 UJ	5 U	1 U	5 UJ	5 UJ	5 UJ	5 UJ	
Carbon disulfide	60	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
Carbon Tetrachloride	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 U	5 U	
Chlorobenzene	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
Chlorodibromomethane	NA	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
Chloroethane	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 UJ	5 U	5 U	5 U	
Chloroform	7	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
Chloromethane	5	5 U	5 U	5 U	1 UJ	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
cis-1,2-Dichloroethene	5	3 J	3 J	3 J	1.1 J	4.4	4.4	5.7	6.6	7	6	5	4 J	
cis-1,3-Dichloropropene	0.4	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
Cyclohexane	NA	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 U	5 U	
Dichlorodifluoromethane	5	5 U	5 UJ	5 U	1 U	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 UJ	5 U	
Ethylbenzene	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
Isopropylbenzene	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	
Methyl Acetate	NA	5 U	5 U	5 U	1 U	0.5 U	1 U	5 UJ	1 UJ	5 U	5 U	5 U	5 U	
Methyl tert-Butyl Ether	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U	

Table 3

VOCs in Groundwater

Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW1S	MW1S	MW1S	MW-1S	MW1D	MW1D	MW1D	MW1D	MW1D	MW1D	MW1D	MW1D
	Class GA	6/3/2014	5/28/2015	6/23/2016	3/15/2017	4/5/2005	5/12/2010	8/10/2011	4/24/2012	6/20/2013	6/3/2014	5/27/2015	6/23/2016
Methylcyclohexane	NA	5 U	5 U	5 UJ	NA	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 UJ
Methylene Chloride	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 UJ	5 U	5 U	5 U	5 U
Styrene	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U
Tetrachloroethene (PCE)	5	2 J	3 J	2 J	1.1	8.6	18	6.6	24	26	13	12	15
Toluene	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	5	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	0.4	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U
Trichloroethene (TCE)	5	5 U	5 U	5 U	2.3	54	74	65	110 J	110	77	61	74
Trichlorofluoromethane	5	5 U	5 U	5 U	1 UJ	0.5 U	1 U	5 U	1 U	5 UJ	5 U	5 U	5 U
Vinyl chloride	2	5 U	5 U	5 U	1 U	0.5 U	1 U	5 U	1 U	5 U	5 U	5 U	5 U
Xylenes, total	5	5 U	5 U	5 U	1 U	0.5 U	2 U	5 U	2 U	5 U	5 U	5 U	5 U

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW-1D	NC-12	NC-12	NC-12	NC-12	NC-12
	Class GA	3/15/2017	6/20/2013	6/3/2014	5/28/2015	6/24/2016	3/15/2017
1,1,1-Trichloroethane	5	1 U	5 U	5 U	5 U	5 U	1 U
1,1,2,2-Tetrachloroethane	5	1 U	5 U	5 UJ	5 U	5 U	1 U
1,1,2-Trichloroethane	1	1 U	5 U	5 U	5 U	5 U	1 U
1,1,2-Trichlorotrifluoroethane	5	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	5	1.4	5 U	5 U	5 U	5 U	1 U
1,1-Dichloroethene	5	14.4	5 U	5 U	5 U	5 U	1 U
1,2,4-Trichlorobenzene	5	1 U	5 UJ	5 UJ	5 U	5 U	1 U
1,2-Dibromo-3-chloropropane	0.04	1 U	5 UJ	R	5 U	5 U	1 U
1,2-Dibromoethane (EDB)	5	1 U	5 U	5 UJ	5 U	5 U	1 U
1,2-Dichlorobenzene	3	1 U	5 U	5 U	5 U	5 U	1 U
1,2-Dichloroethane	0.6	1 U	5 U	5 U	5 U	5 U	1 U
1,2-Dichloroethene, Total	5	5.2	5 U	5 U	5 U	5 U	2 U
1,2-Dichloropropane	1	1 U	5 U	5 U	5 U	5 U	1 U
1,3-Dichlorobenzene	3	1 U	5 U	5 U	5 U	5 U	1 U
1,4-Dichlorobenzene	3	1 U	5 U	5 U	5 U	5 U	1 U
2-Butanone (MEK)	5	1 U	5 UJ	5 UJ	5 U	5 U	1 U
2-Hexanone	5	1 U	5 UJ	5 UJ	5 U	5 U	1 U
4-Methyl-2-pentanone (MIBK)	5	1 U	5 U	5 UJ	5 U	5 U	1 U
Acetone	5	5 UJ	5 UJ	5 U	5 U	5 UJ	5 UJ
Benzene	1	1 U	5 U	5 U	5 U	5 U	1 U
Bromodichloromethane	5	1 U	5 U	5 U	5 U	5 U	1 U
Bromoform	5	1 U	5 U	5 U	5 U	5 U	1 U
Bromomethane	5	1 UJ	5 UJ	5 UJ	5 UJ	5 U	1 UJ
Carbon disulfide	60	1 U	5 UJ	5 U	5 U	5 U	1 U
Carbon Tetrachloride	5	1 U	5 U	5 U	5 U	5 U	1 U
Chlorobenzene	5	1 U	5 U	5 U	5 U	5 U	1 U
Chlorodibromomethane	NA	1 U	5 UJ	5 U	5 U	5 U	1 U
Chloroethane	5	1 U	5 UJ	5 U	5 U	5 UJ	1 U
Chloroform	7	1 U	5 U	5 U	1 J	5 U	1 U
Chloromethane	5	1 UJ	5 U	5 U	5 U	5 U	1 UJ
cis-1,2-Dichloroethene	5	5.2 J	5 U	5 U	5 U	5 U	1 U
cis-1,3-Dichloropropene	0.4	1 U	5 U	5 U	5 U	5 U	1 U
Cyclohexane	NA	1 U	5 UJ	5 U	5 U	5 U	1 U
Dichlorodifluoromethane	5	1 U	5 U	5 U	5 UJ	5 U	1 U
Ethylbenzene	5	1 U	5 U	5 U	5 U	5 U	1 U
Isopropylbenzene	5	1 U	5 U	5 U	5 U	5 U	1 U
Methyl Acetate	NA	1 U	5 UJ	5 U	5 U	5 U	1 U
Methyl tert-Butyl Ether	5	1 U	5 U	5 U	5 U	5 U	1 U

Table 3
VOCs in Groundwater
Utility Manufacturing/Wonder King

Units: µg/L	NYS	MW-1D	NC-12	NC-12	NC-12	NC-12	NC-12
	Class GA	3/15/2017	6/20/2013	6/3/2014	5/28/2015	6/24/2016	3/15/2017
Methylcyclohexane	NA	NA	5 UJ	5 U	5 U	5 U	NA
Methylene Chloride	5	1 U	5 U	5 U	5 U	5 U	1 U
Styrene	5	1 U	5 U	5 U	5 U	5 U	1 U
Tetrachloroethene (PCE)	5	13.3	5 U	5 U	5 U	5 U	1 U
Toluene	5	1 U	5 U	5 U	5 U	5 U	1 U
trans-1,2-Dichloroethene	5	1 U	5 U	5 U	5 U	5 U	1 U
trans-1,3-Dichloropropene	0.4	1 U	5 U	5 U	5 U	5 U	1 U
Trichloroethene (TCE)	5	73	5 U	5 U	5 U	5 U	1 U
Trichlorofluoromethane	5	1 UJ	5 UJ	5 U	5 U	5 U	1 UJ
Vinyl chloride	2	1 U	5 U	5 U	5 U	5 U	1 U
Xylenes, total	5	1 U	5 U	5 U	5 U	5 U	1 U

Table 4
MNA Parameters in Groundwater
Utility Manufacturing/Wonder King

ANALYTE	UNITS	NY Class GA	MW11S								MW11D							
			5/12/10	10/3/11	4/24/12	6/20/13	6/3/14	5/27/15	6/24/16	3/15/17	5/12/10	10/3/11	4/24/12	6/20/13	6/3/14	5/27/15		
Methane	µg/L	NA	1 U	1.9	1.8	1 U	1 U	1 U	1 U	1 U	0.63 J	1.7	13	1 U	1 U	0.3 J		
Carbon Dioxide	µg/L	NA	5200	1750	2340	13200	10600	1800	35500	1000 U	1000	7350	10300	26400	25500	7000		
Sulfate	mg/L	250	16.1 B	12	23.5	44.6	38.3	31.6	40.6	47.9	28.4 B	17	15.6	16.2	17.3	16.4		
Nitrogen, Nitrate	mg/L-N	10	1.42	1.3 B	2.3 D	2.31 D	2.04 D	1.73 D	1.58	2.1	1.62	1.3 B	1.2 D	0.77	0.67 D	0.9		
Iron - Dissolved	mg/L	300	0.05 U	0.2 U	0.05 B	0.04 B	0.02 B	0.01 B	0.10 U	0.08 J	0.05 U	0.2 U	0.23	0.35	0.01 B	0.11		
Dissolved Oxygen																		
Laboratory	mg/L	NA	10.5	33.6	50.4	12.0	8.4	12.6	9.5	8.8	10.6	35.6	37.3	1.8	7.0	3.8		
Field	mg/L	NA	9.7	13.4	14.0	6.7	7.8	8.0	14.7	10.2	3.8	3.1	2.8	0.7	8.6	1.5		
Temperature																		
Field	Celsius	NA	14.4	17.9	11.7	22.2	16.2	15.1	17.9	11.5	13.3	19.0	15.9	18.9	20.5	15.3		

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
Utility Manufacturing/Wonder King

ANALYTE	UNITS	NY Class GA	MW11D		MW12S (dup)				MW12S					MW12D	
			6/24/16	3/15/17	5/11/10	5/11/10	8/9/11	4/24/12	6/20/13	6/3/14	5/27/15	6/27/16	3/13/17	5/11/10	8/9/11
Methane	µg/L	NA	1 U	1 U	1 U	1 U	0.61	1.8	1 U	1 U	1 U	1 U	1 U	1 U	0.63
Carbon Dioxide	µg/L	NA	8000	2100	3500	3400	6400	3530	8800	35200	6200	16400	11700	3500	2300
Sulfate	mg/L	250	13.5	13.4	28.9	29	37	47.6	39.2	41.2	45	30.7	27.4	46.8	25
Nitrogen, Nitrate	mg/L-N	10	0.88	0.65	2.97	2.97	4 B	3.77	2.68 D	2.12 D	1.62 D	1.45 D	1.5	3.38 D	2.4 B
Iron - Dissolved	mg/L	300	0.12	0.15	0.05 U	0.05 U	0.2 U	0.2 U	0.04 B	0.02 B	0.01 U	0.10 U	0.10 U	0.05 U	0.2 U
Dissolved Oxygen															
Laboratory	mg/L	NA	2.8	13.6	11.3	11.3	37.2	27.4	8.9	9.1	13.4	8.0	9.4	9.9	47.4
Field	mg/L	NA	1.8	9.1	10.1	NA	7.5	12.7	3.3	6.5	7.9	17.4	10.0	9.9	15.8
Temperature															
Field	Celsius	NA	20.4	10.8	15.8	NA	20.1	15.0	38.8	20.4	18.2	20.1	11.2	17.2	18.7

Table 4
MNA Parameters in Groundwater
Utility Manufacturing/Wonder King

ANALYTE	UNITS	NY Class GA	MW12D							MW13S						
			4/24/12	6/20/13	6/3/14	5/27/15	6/27/16	3/13/17	5/11/10	8/9/11	4/24/12	6/20/13	6/4/14	5/28/15	6/24/16	3/13/17
Methane	µg/L	NA	1.6	1 U	1 U	1 U	1 U	1 U	1 U	0.63	2.0	1 U	1 U	1 U	1 U	1 U
Carbon Dioxide	µg/L	NA	8150	13200	15800	3100	20300	8500	17000	11000	12900	17600	34300	16300	33900	19800
Sulfate	mg/L	250	29.3	22.8	20.1	21.2	22.3	30.6	47.9	28	39.5	31.2	33.2	27.8	28.5	39.8
Nitrogen, Nitrate	mg/L-N	10	2.59	2.57 D	2.38 D	2.43 D	2.32 D	2.6	3.81 D	4.4 B	5.34	4.44 D	3.31 D	3.03 D	3.14 D	3.3
Iron - Dissolved	mg/L	300	0.2 U	0.09 B	0.01 B	0.01 U	0.10 U	0.10 U	0.05 U	0.2 U	0.2 U	0.04 B	0.01 B	0.02 B	0.10 U	0.10 U
Dissolved Oxygen																
Laboratory	mg/L	NA	35.0	9.9	9.4	6.7	9.2	15.6	12.2	16.9	18.4	9.3	12.2	9.9	8.4	8.2
Field	mg/L	NA	8.3	8.3	4.8	4.9	5.1	10.6	10.1	7.5	10.7	8.0	8.8	4.8	5.5	8.9
Temperature																
Field	Celsius	NA	10.5	18.1	20.4	17.0	20.8	12.5	16.7	19.4	11.3	17.8	19.6	17.2	21.3	13.1

Table 4
MNA Parameters in Groundwater
Utility Manufacturing/Wonder King

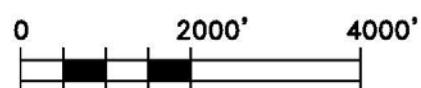
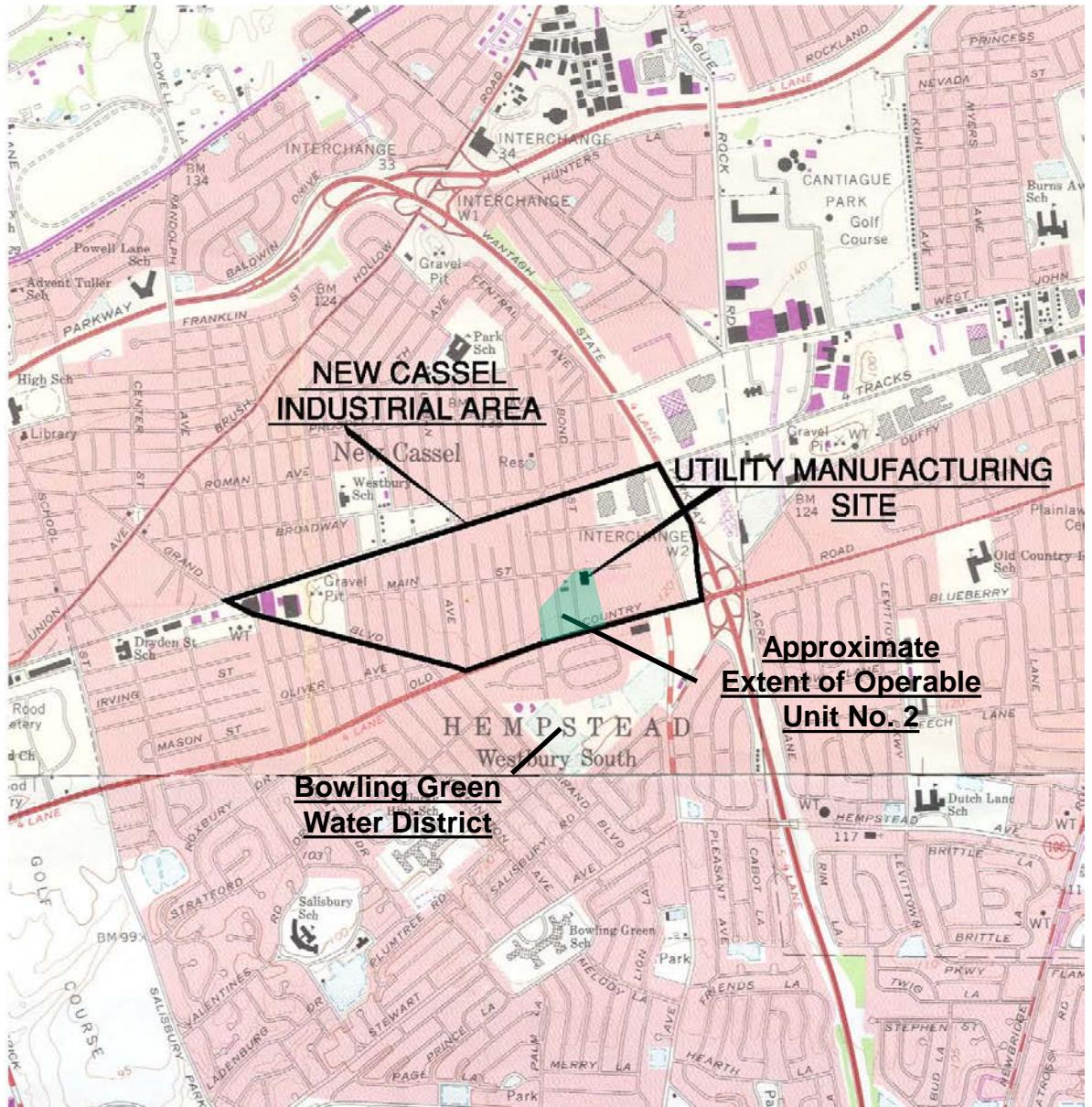
ANALYTE	UNITS	NY Class GA	MW13D								MW1S							
			5/11/10	8/9/11	4/24/12	6/20/13	6/4/14	5/28/15	6/24/16	3/13/17	5/12/10	8/10/11	4/24/12	6/20/13	6/20/13	6/4/14		
Methane	µg/L	NA	1 U	0.67	1.7	1 U	1 U	0.3 J	1 U	1 U	1 U	0.7	1.7	1 U	1 U	1 U	1 U	
Carbon Dioxide	µg/L	NA	9000	13600	22400	30800	17600	7900	46700	23000	7700	10400	8790	26400	13200	20200		
Sulfate	mg/L	250	12.4	12	16.5	9.94	10.5	10	11.8	14.6	25.9 B	13	18.6	25.4	44.4	37.1		
Nitrogen, Nitrate	mg/L-N	10	6.39 D	4.6 B	5.7	6.53 D	6.82 D	6 D	6.44 D	1.3	1.85	2.2 B	2.6 D	2.39 D	2.27 D	1.94 D		
Iron - Dissolved	mg/L	300	0.05 U	1.17 U	0.2 U	0.04 B	0.12	0.12	0.10 U	0.01 J	0.05 U	0.2 U	0.05 B	0.05 B	0.06 B	0.02 B		
Dissolved Oxygen																		
Laboratory	mg/L	NA	9.3	16.0	52.3	5.5	1.0	22.4	1.7	2.7	6.6	25.2	48.4	8.1	11.4	12.1		
Field	mg/L	NA	10.1	4.5	3.3	5.7	0.1	10.5	4.3	0.1	6.8	12.2	10.4	7.0	NA	8.2		
Temperature																		
Field	Celsius	NA	18.3	18.3	15.7	18.9	16.3	17.9	22.7	13.6	15.8	17.9	15.9	19.3	NA	22.8		

Table 4
MNA Parameters in Groundwater
Utility Manufacturing/Wonder King

ANALYTE	UNITS	NY Class GA	MW1S				MW1D									NC-12	
			5/28/15	6/23/16	3/15/17		5/12/10	8/10/11	4/24/12	6/20/13	6/20/13	6/4/14	5/27/15	6/23/16	3/15/17	6/28/13	6/4/14
Methane	µg/L	NA	1 U	1 U	1 U		1 U	0.78	1.8	1 U	1 U	1 U	0.3 J	1 U	1 U	1 U	1 U
Carbon Dioxide	µg/L	NA	9700	2400	12400		15000	3860	13000	35200	35200	22000	10600	3400	####	26400	36100
Sulfate	mg/L	250	28.9	24.5	31.8		24.4 B	16	22.5	20	20	16.1	13.8	17	20.2	134 D	86.1 D
Nitrogen, Nitrate	mg/L-N	10	1.73 D	3.14 D	2.7		2.8	2.5 B	2.4 D	1.67 D	1.67 D	1.55 D	1.25	2.12 D	1.6	2.8 D	2.89 D
Iron - Dissolved	mg/L	300	0.02 B	0.10 U	0.10 U		0.029 J	0.2 U	0.036 B	0.20	0.20	0.18	0.05 B	0.16	0.01 J	0.11	0.02 B
Dissolved Oxygen																	
Laboratory	mg/L	NA	9.6	9.2	8.1		4.2	38.0	18.3	2.3	2.3	7.5	11.6	4.0	5.7	8.0	8.6
Field	mg/L	NA	7.4	14.6	5.6		0.6	16.8	2.3	1.1	1.1	8.4	9.1	2.0	7.0	8.08	6.3
Temperature																	
Field	Celsius	NA	17.0	18.4	12.8		15.2	20.8	16.4	17.7	17.7	23.2	19.8	18.6	10.2	18.9	20.7

Table 4
 MNA Parameters in Groundwater
 Utility Manufacturing/Wonder King

ANALYTE	UNITS	NY Class GA	NC-12		
			5/28/15	6/24/16	3/15/17
Methane	µg/L	NA	1 U	1 U	1 U
Carbon Dioxide	µg/L	NA	18000	57300	13900
Sulfate	mg/L	250	40.5	83.7 D	166
Nitrogen, Nitrate	mg/L-N	10	3.9 D	4.01 D	2.4
Iron - Dissolved	mg/L	300	0.01 B	0.10 U	0.10 U
Dissolved Oxygen					
Laboratory	mg/L	NA	8.9	9.3	9.8
Field	mg/L	NA	7.5	10.9	7.3
Temperature					
Field	Celsius	NA	17.4	21.8	12.5



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

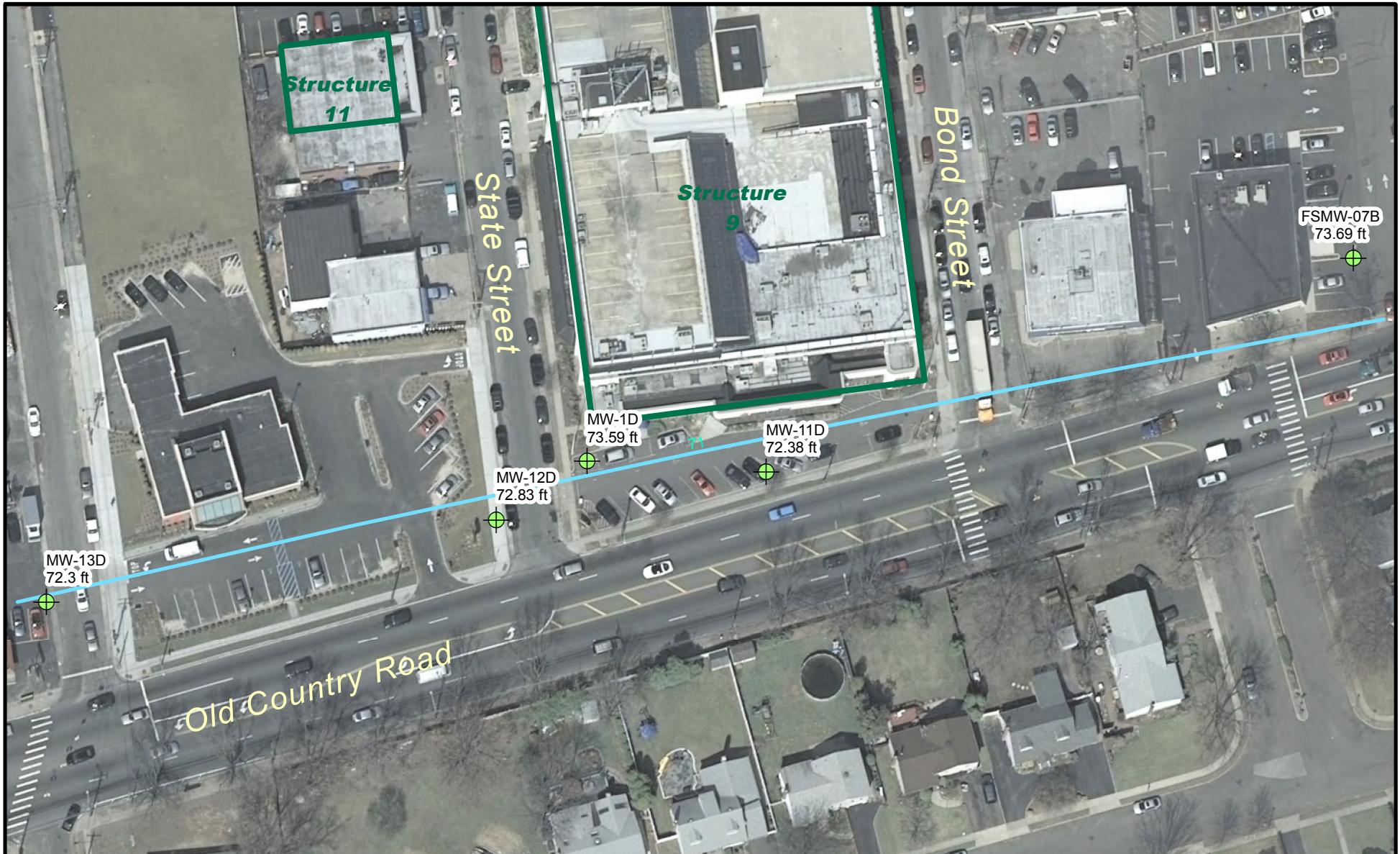
Legend

- 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 - March 2017

Project No: 60269807
Figure No: 3
6/21/2017



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

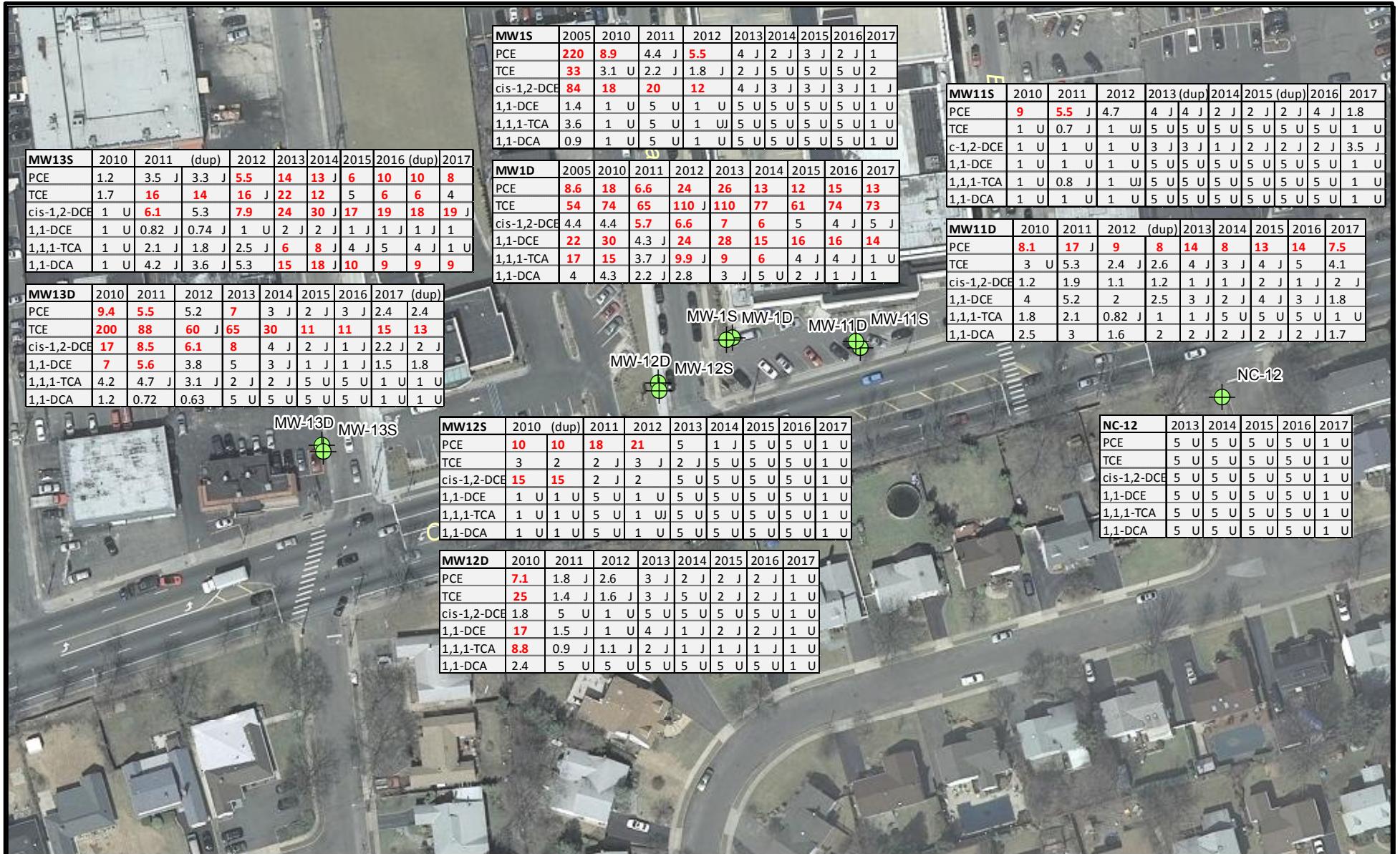
Groundwater elevations are in NAVD88.

Groundwater Elevations
Deep Wells - March 2017

Project No: 60269807

Figure No: 4

6/20/2017



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

6/21/2017

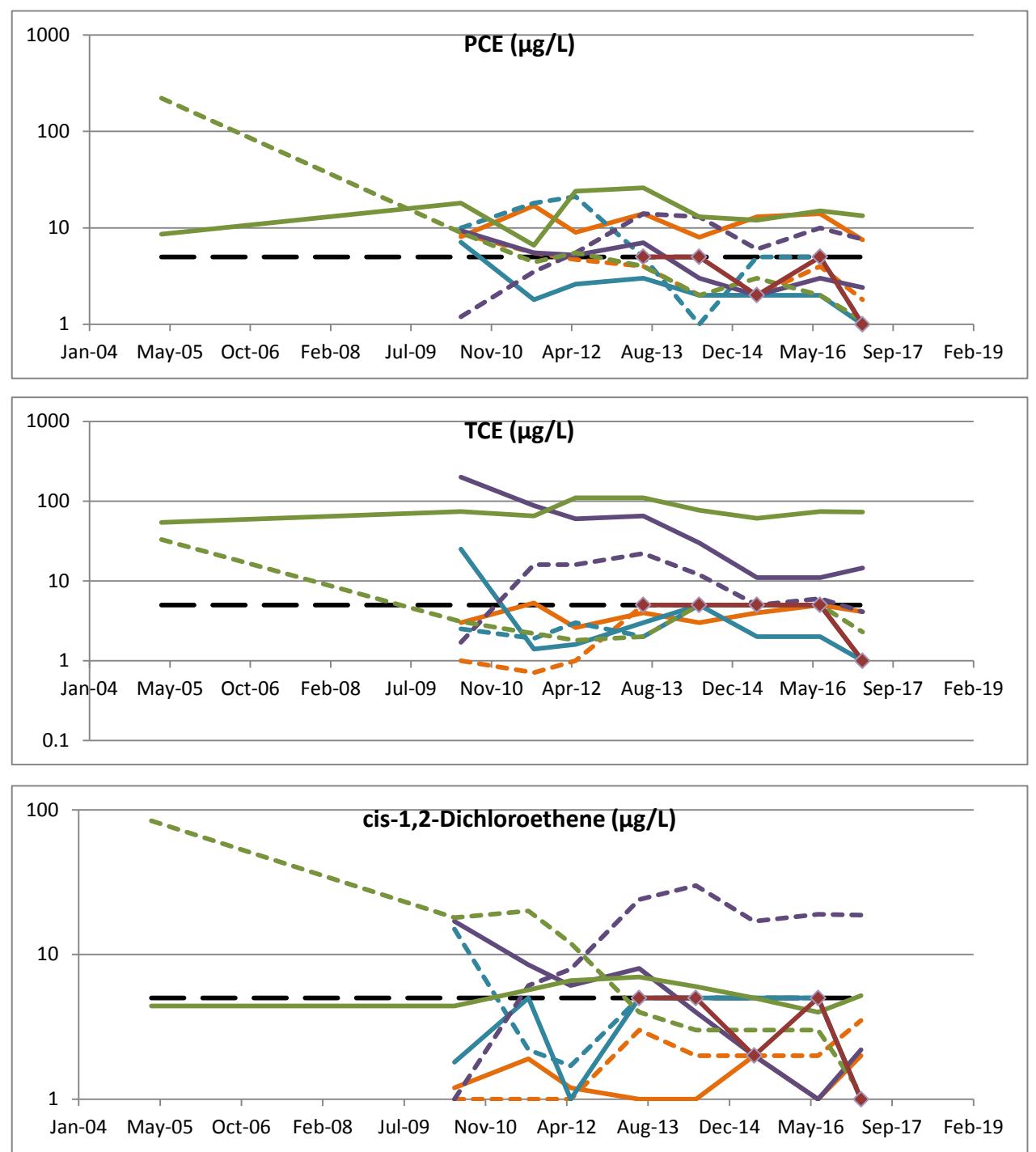


Figure 6
Groundwater VOC Concentrations over Time

Page 1 of 2

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

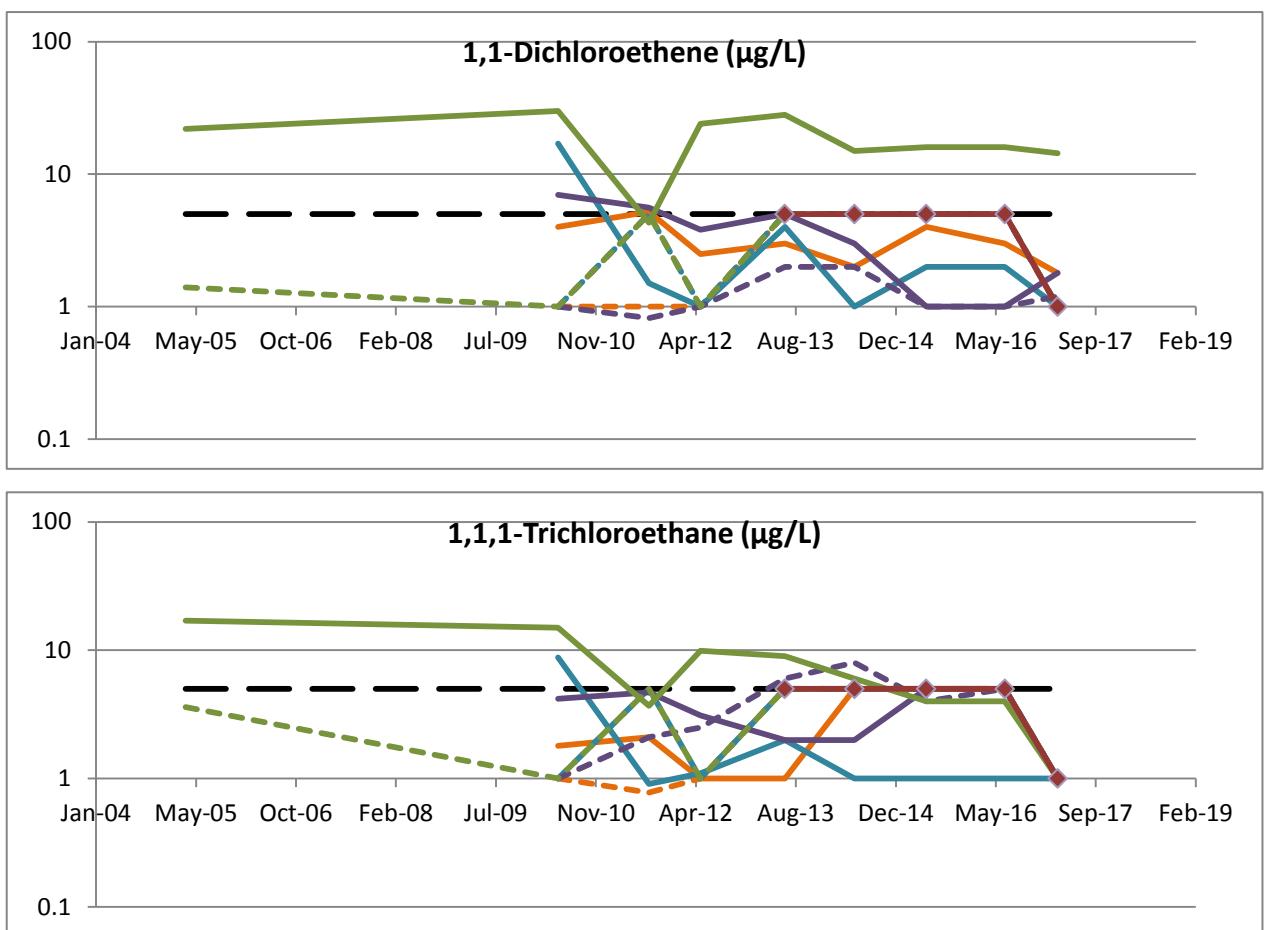


Figure 6
Groundwater VOC Concentrations over Time

Page 2 of 2

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

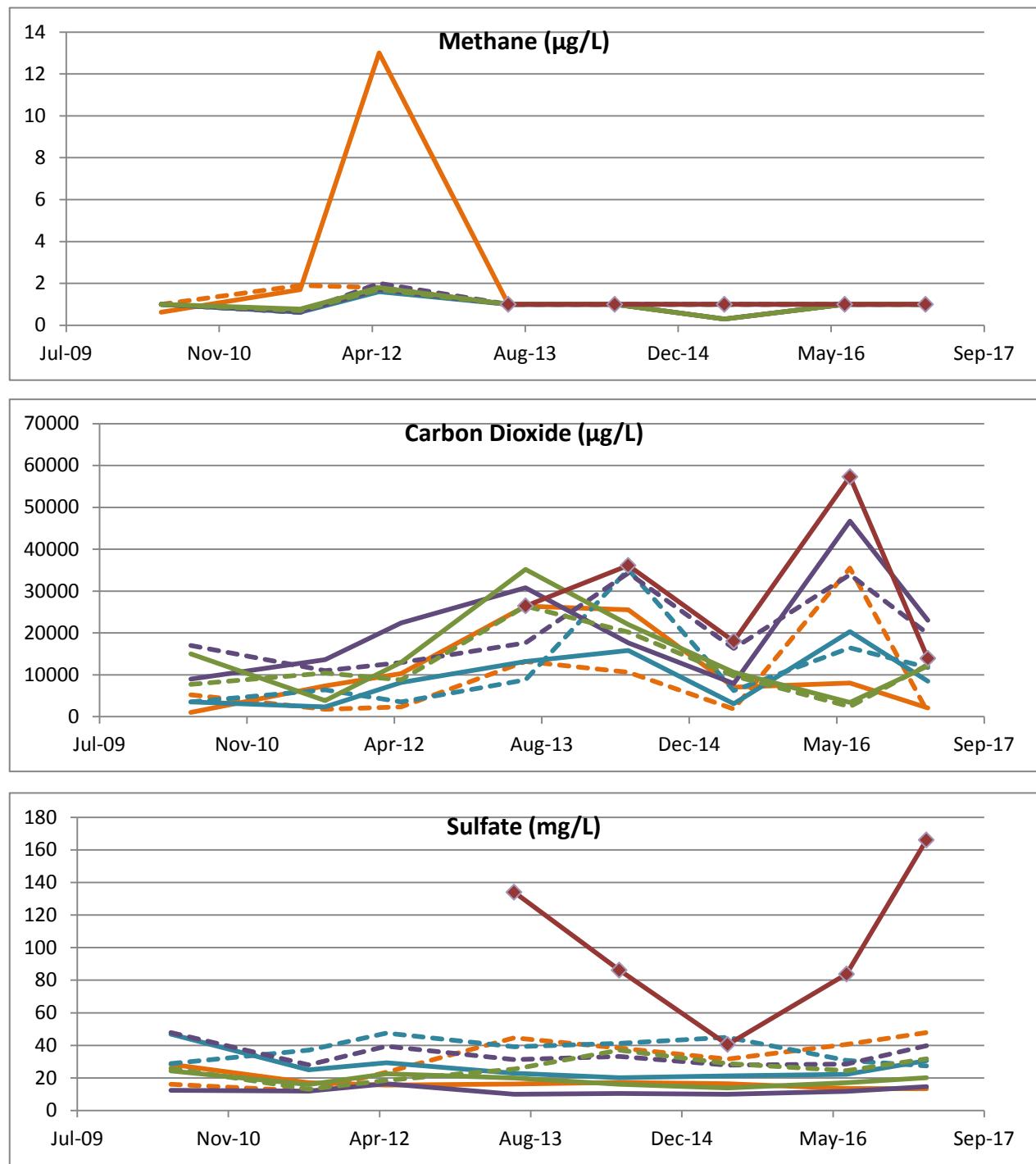


Figure 7
Groundwater MNA Parameter Concentrations over Time
 Page 1 of 2

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

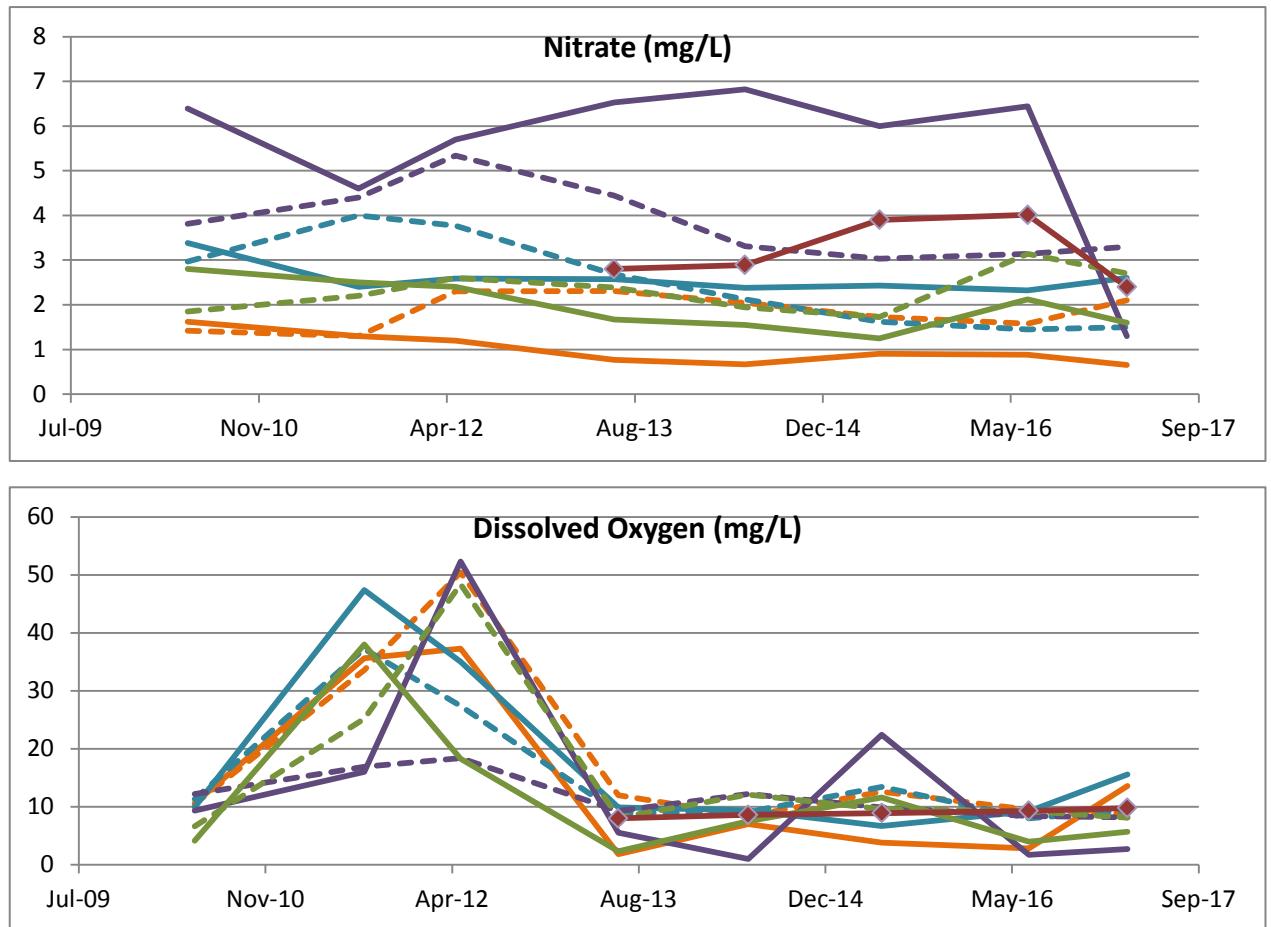


Figure 7

Groundwater MNA Parameter Concentrations over Time

Page 2 of 2

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

APPENDIX A

Field Forms



WELL NO. MW-1D



WELL NO. MW-1S



WELL NO. MW-11D



WELL NO. MW-11S



WELL NO. MW-12D



WELL NO. MW-12S



WELL NO. MW-13D



WELL NO. MW-13S



WELL NO. NC-12

Utility Manufacturing Site/Wonder King, New Cassel, NY

WA # D007626-16

NYSDEC Site: 130043H

Well Inspection Checklist

Well ID: MW-1S	Date: 3/15/2017
Type: Flushmount	
Stickup Height: NA	
As Built Well Depth: 90 ft	Stickup Material: NA
Riser Diameter: 2 inch	Stickup Diameter: NA
Riser Material: PVC	
Riser Appearance: Ok	Inspector: C Foster (AECOM)
CONDITION	
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: Yes	
Cannot Identify: No	
Depth to water from TOC: 49.50 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: One bolt only, bent; replaced all three.	

Utility Manufacturing Site/Wonder King, New Cassel, NY

WA # D007626-16

NYSDEC Site: 130043H

Well Inspection Checklist

Well ID: MW-1D	Date: 3/15/2017
Type: Flushmount	
Stickup Height: NA	
As Built Well Depth: 130 ft	Stickup Material: NA
Riser Diameter: 2 inch	Stickup Diameter: NA
Riser Material: PVC	
Riser Appearance: Ok	Inspector: C Foster (AECOM)
CONDITION	
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: 50.42 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: Only one bolt - other two holes were broken. Bolt was bent so it was replaced.	

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

Well Inspection Checklist

Well ID: MW-11S	Date: 3/15/2017
Type: Flushmount	
Stickup Height: NA	
As Built Well Depth: 95 ft	Stickup Material: NA
Riser Diameter: 2 inch	Stickup Diameter: NA
Riser Material: PVC	
Riser Appearance: Ok	Inspector: C Foster (AECOM)
CONDITION	
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: 51.37 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: Replaced the tubing	

Utility Manufacturing Site/Wonder King, New Cassel, NY

WA # D007626-16

NYSDEC Site: 130043H

Well Inspection Checklist

Well ID:	MW-11D	Date:	3/15/2017
Type:	Flushmount		
Stickup Height:	NA		
As Built Well Depth:	124 ft	Stickup Material:	NA
Riser Diameter:	2 inch	Stickup Diameter:	NA
Riser Material:	PVC		
Riser Appearance:	Ok	Inspector:	C Foster (AECOM)
CONDITION			
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: 51.45 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: Replaced bolt, one bolt had no hole in casing, so well left with only one working bolt.			

Utility Manufacturing Site/Wonder King, New Cassel, NY

WA # D007626-16

NYSDEC Site: 130043H

Well Inspection Checklist

Well ID: MW-12S	Date: 3/13/2017
Type: Flushmount	
Stickup Height: NA	
As Built Well Depth: 95 ft	Stickup Material: NA
Riser Diameter: 2 inch	Stickup Diameter: NA
Riser Material: PVC	
Riser Appearance: Ok	Inspector: C Foster (AECOM)
CONDITION	
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: Yes	
Cannot Identify: No	
Depth to water from TOC: 49.82 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

Well ID: MW-12D	Date: 3/13/2017
Type: Flushmount	
Stickup Height: NA	
As Built Well Depth: 125 ft	Stickup Material: NA
Riser Diameter: 2 inch	Stickup Diameter: NA
Riser Material: PVC	
Riser Appearance: Ok	Inspector: C Foster (AECOM)
CONDITION	
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: Yes	
Cannot Identify: No	
Depth to water from TOC: 50.25 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

Well ID: MW-13S	Date: 3/13/2017
Type: Flushmount	
Stickup Height: NA	
As Built Well Depth: 96 ft	Stickup Material: NA
Riser Diameter: 2 inch	Stickup Diameter: NA
Riser Material: PVC	
Riser Appearance: Ok	Inspector: C Foster (AECOM)
CONDITION	
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: 48.35 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: Missing bolt, tubing had to be cut because of a hole, replaced bolt and tubing	

Utility Manufacturing Site/Wonder King, New Cassel, NY

WA # D007626-16

NYSDEC Site: 130043H

Well Inspection Checklist

Well ID: MW-13D	Date: 3/13/2017
Type: Flushmount	
Stickup Height: NA	
As Built Well Depth: 126 ft	Stickup Material: NA
Riser Diameter: 2 inch	Stickup Diameter: NA
Riser Material: PVC	
Riser Appearance: Ok	Inspector: C Foster (AECOM)
CONDITION	
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: 48.50 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: One bolt missing, but casing has a broken bolt receptor so it cannot be replaced	

Utility Manufacturing Site/Wonder King, New Cassel, NY

WA # D007626-16

NYSDEC Site: 130043H

Well Inspection Checklist

Well ID:	NC-12	Date:	3/15/2017
Type:	Flushmount		
Stickup Height:	NA		
As Built Well Depth:	54 ft	Stickup Material:	NA
Riser Diameter:	2 inch	Stickup Diameter:	NA
Riser Material:	PVC		
Riser Appearance:	Ok	Inspector:	C Foster (AECOM)
CONDITION			
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: 51.84 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: 7013357
Laboratory: Pace Analytical, Melville, New York
Site: Utility Manufacturing/Wonder King, New Cassell, New York
Date: May 3, 2017

EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	MW-13S	7013357001	Water
2	MW-13D	7013357002	Water
3	MW-63D	7013357003	Water
4	MW-12S	7013357004	Water
5	MW-12D	7013357005	Water
6	TB-1	7013357006	Water
7	STORAGE BLANK	7013357007	Water
8	MW-1S	7013357008	Water
9	MW-1D	7013357009	Water
10	MW-10S	7013357010	Water
11	MW-10D	7013357011	Water
12	NC-12	7013357012	Water
13	TB-2	7013357013	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 March 13, 2017 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:

<u>Analysis</u>	<u>Method References</u>
VOCs	USEPA SW-846 Method 8260C

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 seven samples due to a low LCS recovery.
- Four 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

- MS/MSD samples were not analyzed.

Laboratory Control Samples

- The following table presents LCS percent recoveries (%R) outside the 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.

LCS ID	Compound	%R	Qualifier	Affected Samples
86093LCS	Chloromethane	35%	None	See CCAL
	cis-1,2-Dichloroethene	134%	J	1-3, 8-11

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
TB-1	Methylene Chloride	2.3	None	All Samples ND
STORAGE BLANK	Methylene Chloride	1.9	None	All Samples ND
TB-2	None - 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
03/22/17	Acetone	37.2%	J/UJ	All Samples
	Bromomethane	32.9%	J/UJ	
	Chloromethane	52.4%	J/UJ	
	Trichlorofluoromethane	34.8%	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.

Compound	VOC			
	MW-13D ug/L	MW-63D ug/L	RPD	Qualifier
1,2-Dichloroethene (total)	2.2	2.0U	NC	None
1,1-Dichloroethene	1.5	1.8	18%	
cis-1,2-Dichloroethene	2.2	2.0	10%	
Tetrachloroethene	2.4	2.4	0%	
Trichloroethene	14.5	13.2	9%	

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: 5/4/17

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.

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

MW-13S

Lab Name: Pace Analytical - New York

Date Received: 03/13/2017 17:25

Date Extracted: 03/22/2017 21:04

Date Analyzed: 03/22/2017 21:04

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Contract: Utility Manufacturing

Matrix: Water SDG No.: 7013357

Lab Sample ID: 7013357001

Lab File ID: 032217.B\A95854.D

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	✓ UJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	✓ UJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	✓ UJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	9.4	
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	18.7	
75-35-4	1,1-Dichloroethene	1.2	
156-59-2	cis-1,2-Dichloroethene	18.7	J
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

NW 5/3/17

85 of 803

03/31/2017 12:21

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

MW-13S

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing

Date Received: 03/13/2017 17:25

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 21:04

Lab Sample ID: 7013357001

Date Analyzed: 03/22/2017 21:04

Lab File ID: 032217.B\A95854.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	7.6	
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	4.1	
75-69-4	Trichlorofluoromethane	<1.0	
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

MW-13S-17

86 of 803

03/31/2017 12:21

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

MW-13D

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing 2

Date Received: 03/13/2017 17:25

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 20:44

Lab Sample ID: 7013357002

Date Analyzed: 03/22/2017 20:44

Lab File ID: 032217.B\A95853.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	X UJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	X UJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	X UJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	<1.0	U
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	2.2	
75-35-4	1,1-Dichloroethene	1.5	
156-59-2	cis-1,2-Dichloroethene	2.2	J
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

MW-13D

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing

✓

Date Received: 03/13/2017 17:25

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 20:44

Lab Sample ID: 7013357002

Date Analyzed: 03/22/2017 20:44

Lab File ID: 032217.B\A95853.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	2.4	
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	14.5	
75-69-4	Trichlorofluoromethane	<1.0	X uJ
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

new 5/31/17

99 of 803

03/31/2017 12:21

MSV - FORM | VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

MW-63D

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing 3

Date Received: 03/13/2017 17:25

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 20:24

Lab Sample ID: 7013357003

Date Analyzed: 03/22/2017 20:24

Lab File ID: 032217.B\A95852.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	x uJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	x uJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	x uJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	<1.0	U
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	<2.0	U
75-35-4	1,1-Dichloroethene	1.8	
156-59-2	cis-1,2-Dichloroethene	2.0	J
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

new 5/31/17

03/31/2017 12:21

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-63D

Lab Name: Pace Analytical - New York _____ Contract: Utility Manufacturing _____ 3
 Date Received: 03/13/2017 17:25 _____ Matrix: Water SDG No.: 7013357 _____
 Date Extracted: 03/22/2017 20:24 _____ Lab Sample ID: 7013357003 _____
 Date Analyzed: 03/22/2017 20:24 _____ Lab File ID: 032217_B\A95852.D _____
 Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1 Instrument: 70MSV1 Percent Moisture: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	2.4	
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	13.2	
75-69-4	Trichlorofluoromethane	<1.0	Y UJ
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-12S

Lab Name: Pace Analytical - New York

Date Received: 03/13/2017 17:25

Date Extracted: 03/22/2017 20:03

Date Analyzed: 03/22/2017 20:03

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Contract: Utility Manufacturing

Matrix: Water SDG No.: 7013357

Lab Sample ID: 7013357004

Lab File ID: 032217.B\A95851.D

Instrument: 70MSV1 Percent Moisture:

4

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	BS uJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	BS uJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	BS uJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	<1.0	U
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	<2.0	U
75-35-4	1,1-Dichloroethene	<1.0	U
156-59-2	cis-1,2-Dichloroethene	<1.0	U
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

new 5/31/17

03/31/2017 12:21

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-12S

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing

4

Date Received: 03/13/2017 17:25

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 20:03

Lab Sample ID: 7013357004

Date Analyzed: 03/22/2017 20:03

Lab File ID: 032217.B\A95851.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	<1.0	U
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	<1.0	U
75-69-4	Trichlorofluoromethane	<1.0	Y UJ
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

new 5/3/17

123 of 803

03/31/2017 12:21

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

MW-12D

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing

5

Date Received: 03/13/2017 17:25

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 19:43

Lab Sample ID: 7013357005

Date Analyzed: 03/22/2017 19:43

Lab File ID: 032217.BVA95850.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	✓ uJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	✓ uJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	✓ uJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	<1.0	U
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	<2.0	U
75-35-4	1,1-Dichloroethene	<1.0	U
156-59-2	cis-1,2-Dichloroethene	<1.0	U
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

new 5/31/17

03/31/2017 12:28

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-12D

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing 5

Date Received: 03/13/2017 17:25

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 19:43

Lab Sample ID: 7013357005

Date Analyzed: 03/22/2017 19:43

Lab File ID: 032217.B\A95850.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	<1.0	U
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	<1.0	U
75-69-4	Trichlorofluoromethane	<1.0	X UJ
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

3/22/2017

131 of 803

03/31/2017 12:28

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TB-1

Lab Name: Pace Analytical - New York
 Date Received: 03/13/2017 17:25
 Date Extracted: 03/22/2017 17:42
 Date Analyzed: 03/22/2017 17:42
 Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1
 Contract: Utility Manufacturing 6
 Matrix: Water SDG No.: 7013357
 Lab Sample ID: 7013357006
 Lab File ID: 032217.B\A95844.D
 Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	X uJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	X uJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	X uJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	<1.0	U
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	<2.0	U
75-35-4	1,1-Dichloroethene	<1.0	U
156-59-2	cis-1,2-Dichloroethene	<1.0	U
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	2.3	
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

new S131.7

138 of 803

03/31/2017 12:21

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

TB-1

Lab Name: Pace Analytical - New York Contract: Utility Manufacturing 4
 Date Received: 03/13/2017 17:25 Matrix: Water SDG No.: 7013357
 Date Extracted: 03/22/2017 17:42 Lab Sample ID: 7013357006
 Date Analyzed: 03/22/2017 17:42 Lab File ID: 032217.B\A95844.D
 Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1 Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	<1.0	U
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	<1.0	U
75-69-4	Trichlorofluoromethane	<1.0	X UJ
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

new 5/31/17

139 of 803

03/31/2017 12:21

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

STORAGE BLANK

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing

7

Date Received: 03/13/2017 17:25

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 17:21

Lab Sample ID: 7013357007

Date Analyzed: 03/22/2017 17:21

Lab File ID: 032217.B\A95843.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	X UJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	X UJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	X UJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	<1.0	U
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	<2.0	U
75-35-4	1,1-Dichloroethene	<1.0	U
156-59-2	cis-1,2-Dichloroethene	<1.0	U
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	1.9	
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

NW 5131.7

03/31/2017 12:29

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

STORAGE BLANK

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing X

Date Received: 03/13/2017 17:25

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 17:21

Lab Sample ID: 7013357007

Date Analyzed: 03/22/2017 17:21

Lab File ID: 032217.B\A95843.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	<1.0	U
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	<1.0	U
75-69-4	Trichlorofluoromethane	<1.0	X UJ
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

NWS13117

03/31/2017 12:29

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-1S

Lab Name: Pace Analytical - New York	Contract: Utility Manufacturing 8			
Date Received: 03/15/2017 15:59	Matrix: Water SDG No.: 7013357			
Date Extracted: 03/22/2017 19:23	Lab Sample ID: 7013357008			
Date Analyzed: 03/22/2017 19:23	Lab File ID: 032217.B\A95849.D			
Initial wt/vol: 5 mL	Final wt/vol: 5 mL	Dilution: 1	Instrument: 70MSV1	Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	<i>J uJ</i>
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	<i>J uJ</i>
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	<i>J uJ</i>
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	<1.0	U
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	1.1	J
75-35-4	1,1-Dichloroethene	<1.0	U
156-59-2	cis-1,2-Dichloroethene	1.1	<i>J</i>
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

NW 51317

156 of 803

03/31/2017 12:21

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-1S

Lab Name: Pace Analytical - New York _____ Contract: Utility Manufacturing _____ 9
 Date Received: 03/15/2017 15:59 _____ Matrix: Water SDG No.: 7013357 _____
 Date Extracted: 03/22/2017 19:23 _____ Lab Sample ID: 7013357008 _____
 Date Analyzed: 03/22/2017 19:23 _____ Lab File ID: 032217.B\A95849.D _____
 Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1 Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	1.1	
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	2.3	
75-69-4	Trichlorofluoromethane	<1.0	✓ uJ
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

mwsl3117

157 of 803

03/31/2017 12:21

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

MW-1D

Lab Name: Pace Analytical - New York Contract: Utility Manufacturing 9
 Date Received: 03/15/2017 15:59 Matrix: Water SDG No.: 7013357
 Date Extracted: 03/22/2017 19:03 Lab Sample ID: 7013357009
 Date Analyzed: 03/22/2017 19:03 Lab File ID: 032217.B\A95848.D
 Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1 Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	KUJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	KUJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	KUJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	1.4	
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	5.2	
75-35-4	1,1-Dichloroethene	14.4	
156-59-2	cis-1,2-Dichloroethene	5.2	J
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

pw 5131.7

167 of 803

03/31/2017 12:21

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

MW-1D

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing 9

Date Received: 03/15/2017 15:59

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 19:03

Lab Sample ID: 7013357009

Date Analyzed: 03/22/2017 19:03

Lab File ID: 032217.B\A95848.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	13.3	
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	73.0	
75-69-4	Trichlorofluoromethane	<1.0	XUS
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

new 5/31/17

168 of 803

03/31/2017 12:21

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-10S

Lab Name: Pace Analytical - New York Contract: Utility Manufacturing 10
 Date Received: 03/15/2017 15:59 Matrix: Water SDG No.: 7013357
 Date Extracted: 03/22/2017 18:42 Lab Sample ID: 7013357010
 Date Analyzed: 03/22/2017 18:42 Lab File ID: 032217.B\A95847.D
 Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1 Instrument: 70MSV1 Percent Moisture:

CAS NO	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	3.4	X J
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	X uJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	X uJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	<1.0	U
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	3.5	
75-35-4	1,1-Dichloroethene	<1.0	U
156-59-2	cis-1,2-Dichloroethene	3.5	J
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

MSV1317

181 of 803

03/31/2017 12:28

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-10S

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing 10

Date Received: 03/15/2017 15:59

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 18:42

Lab Sample ID: 7013357010

Date Analyzed: 03/22/2017 18:42

Lab File ID: 032217.B\A95847.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	1.8	
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	<1.0	U
75-69-4	Trichlorofluoromethane	<1.0	X UJ
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-10D

Lab Name: Pace Analytical - New York

Date Received: 03/15/2017 15:59

Date Extracted: 03/22/2017 18:22

Date Analyzed: 03/22/2017 18:22

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Contract: Utility Manufacturing

Matrix: Water SDG No.: 7013357

Lab Sample ID: 7013357011

Lab File ID: 032217.B\A95846.D

Instrument: 70MSV1 Percent Moisture:

11

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	X uJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	X uJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	X uJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	1.7	
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	2.0	
75-35-4	1,1-Dichloroethene	1.8	
156-59-2	cis-1,2-Dichloroethene	2.0	J
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

new SI 3117

03/31/2017 12:29

SAMPLE NO.

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-10D

Lab Name: Pace Analytical - New York Contract: Utility Manufacturing 11
 Date Received: 03/15/2017 15:59 Matrix: Water SDG No.: 7013357
 Date Extracted: 03/22/2017 18:22 Lab Sample ID: 7013357011
 Date Analyzed: 03/22/2017 18:22 Lab File ID: 032217.B\A95846.D
 Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1 Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	7.5	
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	4.1	
75-69-4	Trichlorofluoromethane	<1.0	<u>x uj</u>
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

MSV - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

NC-12

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing

12

Date Received: 03/15/2017 15:59

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 18:02

Lab Sample ID: 7013357012

Date Analyzed: 03/22/2017 18:02

Lab File ID: 032217.B\A95845.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	X UJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	X UJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	X UJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	<1.0	U
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	<2.0	U
75-35-4	1,1-Dichloroethene	<1.0	U
156-59-2	cis-1,2-Dichloroethene	<1.0	U
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

NC-12

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing 12

Date Received: 03/15/2017 15:59

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 18:02

Lab Sample ID: 7013357012

Date Analyzed: 03/22/2017 18:02

Lab File ID: 032217.BIA95845.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	<1.0	U
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	<1.0	U
75-69-4	Trichlorofluoromethane	<1.0	XUS
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

SAMPLE NO.

MSV - FORM I VOA-1

VOLATILE ORGANICS ANALYSIS DATA SHEET

TB-2

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing 13

Date Received: 03/15/2017 15:59

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 17:01

Lab Sample ID: 7013357013

Date Analyzed: 03/22/2017 17:01

Lab File ID: 032217.B\A95842.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
67-64-1	Acetone	<5.0	X uJ
71-43-2	Benzene	<1.0	U
75-27-4	Bromodichloromethane	<1.0	U
75-25-2	Bromoform	<1.0	U
74-83-9	Bromomethane	<1.0	X uJ
78-93-3	2-Butanone (MEK)	<1.0	U
75-15-0	Carbon disulfide	<1.0	U
56-23-5	Carbon tetrachloride	<1.0	U
108-90-7	Chlorobenzene	<1.0	U
75-00-3	Chloroethane	<1.0	U
67-66-3	Chloroform	<1.0	U
74-87-3	Chloromethane	<1.0	X uJ
110-82-7	Cyclohexane	<1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	<1.0	U
124-48-1	Dibromochloromethane	<1.0	U
106-93-4	1,2-Dibromoethane (EDB)	<1.0	U
95-50-1	1,2-Dichlorobenzene	<1.0	U
541-73-1	1,3-Dichlorobenzene	<1.0	U
106-46-7	1,4-Dichlorobenzene	<1.0	U
75-71-8	Dichlorodifluoromethane	<1.0	U
75-34-3	1,1-Dichloroethane	<1.0	U
107-06-2	1,2-Dichloroethane	<1.0	U
540-59-0	1,2-Dichloroethene (Total)	<2.0	U
75-35-4	1,1-Dichloroethene	<1.0	U
156-59-2	cis-1,2-Dichloroethene	<1.0	U
156-60-5	trans-1,2-Dichloroethene	<1.0	U
78-87-5	1,2-Dichloropropane	<1.0	U
10061-01-5	cis-1,3-Dichloropropene	<1.0	U
10061-02-6	trans-1,3-Dichloropropene	<1.0	U
100-41-4	Ethylbenzene	<1.0	U
591-78-6	2-Hexanone	<1.0	U
98-82-8	Isopropylbenzene (Cumene)	<1.0	U
79-20-9	Methyl acetate	<1.0	U
75-09-2	Methylene Chloride	<1.0	U
108-10-1	4-Methyl-2-pentanone (MIBK)	<1.0	U
1634-04-4	Methyl-tert-butyl ether	<1.0	U
100-42-5	Styrene	<1.0	U

new S131.7

213 of 803

03/31/2017 12:30

SAMPLE NO.

MSV - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

TB-2

Lab Name: Pace Analytical - New York

Contract: Utility Manufacturing

13

Date Received: 03/15/2017 15:59

Matrix: Water SDG No.: 7013357

Date Extracted: 03/22/2017 17:01

Lab Sample ID: 7013357013

Date Analyzed: 03/22/2017 17:01

Lab File ID: 032217.B\A95842.D

Initial wt/vol: 5 mL Final wt/vol: 5 mL Dilution: 1

Instrument: 70MSV1 Percent Moisture:

CAS NO.	COMPOUND	CONCENTRATION UNITS: ug/L	Q
79-34-5	1,1,2,2-Tetrachloroethane	<1.0	U
127-18-4	Tetrachloroethene	<1.0	U
108-88-3	Toluene	<1.0	U
120-82-1	1,2,4-Trichlorobenzene	<1.0	U
71-55-6	1,1,1-Trichloroethane	<1.0	U
79-00-5	1,1,2-Trichloroethane	<1.0	U
79-01-6	Trichloroethene	<1.0	U
75-69-4	Trichlorofluoromethane	<1.0	104J
75-01-4	Vinyl chloride	<1.0	U
1330-20-7	Xylene (Total)	<1.0	U

new 5/31/17
214 of 803

03/31/2017 12:30