Hazardous Waste Section

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17

Your Name:	Mary Siedlecki
EPA ID:	NCD088560032
Facility Name:	Ashland Raleigh Former Distribution Facility
Document Group:	Groundwater (GW)
Document Type:	Groundwater Monitoring Report (GMR)
Description:	March 2016 Annual Groundwater Monitoring Report
Date of Doc:	6/8/2016
Author of Doc:	Ryan Gerber of Arcadis

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NCD088560032

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ENVIRONMENT

Subject:
March 2016 Annual Groundwater Monitoring Report, Former Ashland Distribution Company Facility, Raleigh, North Carolina
USEPA ID: 088 560 032

Date:
June 8, 2016

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ARCADIS G&M of North Carolina, Inc.

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Dear Ms. Siedlecki:

Arcadis G&M of North Carolina, Inc. (Arcadis) is pleased to submit the results from the March 2016 annual groundwater sampling event at the former Ashland Inc. (Ashland) chemical distribution facility (the Site) in Raleigh, North Carolina. The groundwater sampling activities discussed in this report were conducted in accordance with the 2013 Sampling and Analysis Plan (SAP) prepared by Antea Group, Inc. (Antea 2013) unless otherwise noted. The field work for this sampling event was performed by Antea under the direction of Arcadis, and included a groundwater-level gauging event and the collection of groundwater samples from four on-Site and fifteen off-Site monitoring wells. A layout of the Site with the monitoring well network and surface water sampling locations is presented as **Figure 1**.

Arcadis submitted the final Corrective Measures Study (CMS) Report for the Site to the North Carolina Department of Environmental Quality (NCDEQ) on June 19, 2012 recommending institutional controls (ICs) and monitored natural attenuation (MNA) of Site constituents of potential concern (COPCs) as the preferred final remedy for the Site (ARCADIS 2012). This is the fourth annual groundwater monitoring report since approval of the CMS on September 14, 2012 (NCDEQ 2012).

GROUNDWATER MONITORING ACTIVITIES

Groundwater-Level Measurements

Antea conducted a comprehensive groundwater-level gauging event at the Site on March 28, 2016. During this gauging event, Antea collected depth-to-groundwater measurements from 19 monitoring wells using a properly decontaminated electronic water-level indicator probe. **Table 1** contains a summary of the depth-to-groundwater measurements and the calculated groundwater surface elevation for each well.

A potentiometric surface map based on the groundwater elevation data from the shallow wells is presented as **Figure 2**. The potentiometric contours indicated a general groundwater flow direction toward the south-southeast, which was consistent with historical data for the Site. The average horizontal hydraulic gradient in the shallow aquifer zone at the Site and downgradient areas was 0.014 foot per foot (ft/ft) based on groundwater elevation differences between monitoring wells MW-7 and MW-23.

Arcadis calculated historical vertical gradients across the Site based on gauging data collected during the past 8 years to evaluate the propensity of the groundwater (and thus groundwater constituents) to migrate into deeper aquifer zones (**Table 2**). The data includes four double and/or triple well nests from gauging events during the March 2009 through March 2016 time period. Of the data summarized on this table, 42 of the 47 (~89%) individual vertical gradient results were in an upward direction. These data indicate that the Site and the downgradient properties are located predominantly in a discharge zone of the regional aquifer system, and therefore, COPCs are not expected to migrate at significant concentrations into the deeper bedrock zones below the Site.

Groundwater Sample Collection

Antea conducted a groundwater sampling event at the Site from March 28, 2016 through March 29, 2016. During this event, groundwater samples were collected from four on-Site monitoring wells (MW-1, MW-3, MW-3D, and MW-7) and from fifteen off-Site monitoring wells (MW-5, MW-8R, MW-8DR, MW-12D, MW-14OB, MW-14TZ, MW-16OB, MW-18BR, MW-22, MW-23, MW-23D, MW-23BR, MW-24, MW-25 and MW-26 [see **Figure 1**]). Wells located within the swampy area near Walnut Creek (MW-23, MW-23D, MW-23BR, MW-24, and MW-26) were sampled using passive diffusion bag (PDB) samplers to avoid the need to haul sampling equipment to the well head in the event that the swamp was flooded. PDBs were deployed within the wells at the approximate center of the screened interval approximately 2 weeks prior to the sampling event. The PDBs equilibrated with groundwater over the 2-week period, and during sampling, the PDB was removed from the well and contents of the PDB were decanted into the laboratory sample bottles. All other wells were purged and sampled using dedicated QED® bladder pumps or a submersible Monsoon pump, utilizing low-flow sampling techniques to ensure representative groundwater samples and to minimize purge water volumes.

The groundwater samples were collected immediately upon completion of the well purging activities, containerized in laboratory-provided containers, placed on ice in an insulated cooler, and shipped via express courier to TestAmerica Laboratories, Inc. (TestAmerica) in Savannah, Georgia for analysis. All samples were analyzed for volatile organic compounds (VOCs) by U.S. Environmental Protection Agency

(USEPA) Method 8260B. A duplicate sample, an equipment blank, a field blank, and a trip blank also were submitted for VOC analyses.

Temperature, pH, dissolved oxygen (DO), specific conductivity, oxidation-reduction potential (ORP), and turbidity field readings were measured periodically in the groundwater purged from each monitoring well to confirm that these parameters stabilized prior to collecting a sample. Groundwater from wells containing the PDBs was not purged prior to sampling, but the groundwater parameters were measured in the water remaining within the PDB after sample collection. The field readings were collected using a Hanna 8929 multiparameter meter with a flow-through cell to assist with evaluating the quality of the samples, as well as evaluating the extent of ongoing natural attenuation.

Surface Water Sample Collection

Antea collected samples from the upstream, midstream, and downstream surface water locations (SWS-1, SWS-2, and SWS-3, respectively) on March 28, 2016 to evaluate surface water concentrations in Walnut Creek (see **Figure 1**).

GROUNDWATER SAMPLE RESULTS

The results of all field analyses are summarized in **Table 3**. Values of pH in monitoring wells ranged from 3.44 to 8.99 standard units (SU). Conductivity values ranged from 0.001 and 0.943 millisiemens per centimeter (mS/cm). DO readings ranged between 0.58 to 8.52 milligrams per liter (mg/L). ORP readings ranged between -234 and 521 millivolts (mV), with most readings above 0 mV. The lowest ORP reading was obtained from monitoring well MW-18BR, screened in the bedrock aquifer zone, indicating that anaerobic conditions likely predominated at this location.

A complete summary of the groundwater analytical data for the March 2016 sampling event is provided in **Table 3**, and copies of the laboratory analytical reports are included in **Appendix A**. The following COPCs were detected at concentrations greater than the North Carolina Administrative Code (NCAC) 2L Groundwater Standards: carbon tetrachloride; 1,1-dichloroethane (1,1-DCA); 1,1-dichloroethene (1,1-DCE); cis-1,2-dichloroethene (cis-DCE); tetrachloroethene (PCE); 1,1,1-trichloroethane (1,1,1-TCA); trichloroethene (TCE); and vinyl chloride (VC). Additionally, benzene was detected at concentrations above its NCAC 2L Groundwater Standard; however, this constituent was detected only in downgradient wells and likely originates from the nearby former Dumas Oil facility.

PCE concentrations detected in samples collected from shallow and deep aquifer zones (partially weathered rock) are presented on **Figures 3A** and **3B**, respectively. PCE concentrations in groundwater along the geologic cross section through the approximate centerline of the plume are depicted on **Figure 4**. Charts showing the concentration trends for PCE, TCE, and cis-DCE over time in monitoring wells MW-1, MW-3, MW-5, MW-8R, MW-8DR, MW-12D, MW18BR, MW-23, MW-23D, MW-23BR, and MW-26 are presented in **Figures 5** through **15**, respectively.

Generally, PCE concentrations near the source area (MW-1, MW-3, and MW-5) have had moderate fluctuations as a result of seasonality and historic corrective actions, but have not exhibited long-term significant decreasing concentration trends over time. However, sample results from monitor well MW-3

have shown some moderate attenuation of COPCs since 2012. Concentrations of COPCs in monitor well MW-5 decreased significantly from 2008 to 2010, but returned to historic average concentrations in 2011 (**Figure 7**). This temporary concentration decrease was likely due to historically low groundwater table elevations observed in this area during that period.

Monitoring wells MW-8R and MW-8DR are located immediately downgradient of the Site and have had attenuation of COPCs since 2008 (**Figure 8** and **Figure 9**, respectively). MW-8R had slightly increasing concentration trends during the first 4 years (i.e., from 2005 to 2009) of operating the air sparge (AS) and soil vapor extraction (SVE) remedial technology at the Site and downgradient areas. PCE concentrations in monitor wells MW-8R and MW-8DR have generally decreased since deactivation of the AS/SVE system. This trend reversal is likely due to site groundwater becoming more reducing (i.e., less aerobic) following the deactivation of the AS/SVE system, increasing the natural biodegradation rates of the COPCs.

Concentrations of COPCs in monitoring well MW-12D have generally decreased over time at a relatively steady rate since 1997. PCE and TCE concentrations temporarily increased in MW-12D during 2012 and 2013, but have shown significant attenuation since that time (**Figure 10**).

Concentrations of PCE and TCE in monitoring well MW-18BR decreased to relatively low levels from 2008 to 2011 but then increased from 2013 to 2014. These concentrations have subsequently returned to relatively low levels during the March 2015 and 2016 sampling events (**Figure 11**).

Concentrations of PCE and TCE in downgradient monitoring well MW-23 have decreased significantly since the monitoring well was installed in 2010 (**Figure 12**). Conversely, concentrations of PCE in monitoring well MW-23D increased from 2010 until 2014, but have been decreasing during the 2015 and 2016 sampling events (**Figure 13**). These wells will be evaluated further during future sampling events to assess any potential significant long-term trends.

Lastly, in downgradient wells MW-23BR and MW-26, PCE and TCE concentrations have decreased significantly since the March 2011 sampling event (**Figure 14** and **Figure 15**). Monitoring well MW-26, the farthest downgradient well, also has had an increase in cis-DCE and VC (degradation daughter products of PCE and TCE) since March 2011, indicating that reductive dechlorination of COPCs is proceeding within the swampy area. During the March 2016 sampling event, PCE was not detected in the sample in MW-26. These data indicated that the majority of PCE in groundwater appeared to be attenuating prior to discharge into Walnut Creek.

Site-specific Groundwater-to-Surface Water Screening Values (GSWSVs) were developed in the CMS (ARCADIS 2012) to evaluate groundwater COPC concentrations in downgradient “sentinel” wells (i.e., MW-23, MW-23D, MW-23BR, MW-24, MW-25, and MW-26) located in the swampy area adjacent to Walnut Creek. The GSWSVs were developed to identify groundwater concentrations that could adversely affect surface water concentrations in Walnut Creek. During the March 2016 monitoring event, COPC concentrations in all sentinel wells were less than the GSWSVs. As such, groundwater concentrations remain protective of surface water in Walnut Creek, and more frequent surface water sampling is not warranted.

SURFACE WATER SAMPLE RESULTS

The March 2016 surface water analytical results, along with historic surface water data, are included in **Table 4,** and are compared to the NCAC 2B surface water standards and to Site-specific Surface Water Risk Screening Values (SWRSVs) developed during the CMS (ARCADIS 2012). The SWRSVs were developed to evaluate COPC concentrations in surface water in Walnut Creek that are protective of human health and the environment. No VOCs were detected in the three surface water samples collected during the March 2016 sampling event. Historically, there have been no COPCs detected in surface water at concentrations greater than their respective NCAC 2B surface water standards or SWRSVs during any of the surface water sampling events since 1997. These surface water data indicated that COPCs in groundwater were not discharging to Walnut Creek at rates that resulted in unacceptable risks to human health or the environment.

CONCLUSIONS

During the March 2016 monitoring event, groundwater samples were collected from 19 monitoring wells for laboratory analysis. COPCs exceeding the NCAC 2L Groundwater Standards as a result of Ashland's former activities included carbon tetrachloride; 1,1-DCA; 1,1-DCE, cis-DCE; PCE; TCE; 1,1,1-TCA; and VC. Concentrations of COPCs in most monitoring wells on or near the former Ashland facility have fluctuated historically with no significant trends; however, in some mid- to downgradient wells, COPC concentrations have generally decreased over time. Combinations of multiple attenuation processes are likely contributing to reduced COPC concentrations in the downgradient areas including:

- Reductions in mass transport to groundwater from sources that are becoming more depleted over time; and
- Reductive conditions in the swamp and downgradient areas have promoted *in situ* biodegradation processes in the shallow, deep, and bedrock aquifer zones.

Degradation products TCE and cis-DCE were present in most of the on- and off-Site wells and VC was present in a few downgradient monitor wells, indicating that continued natural attenuation of PCE is occurring through anaerobic reductive dechlorination and/or co-metabolic processes. Most notably, the most downgradient monitoring well, MW-26, has had generally increasing trends for degradation products cis-DCE and VC since March 2011 in combination with significant decreases of PCE and TCE. Degradation products in this downgradient well were approximately 100 times higher in molar concentration than their parent compounds indicating that reductive dechlorination has proceeded very effectively in downgradient portions of the plume. In addition to the presence of dechlorination daughter products, several other lines of evidence detailed in the Monitored Natural Attenuation Evaluation Report (ARCADIS 2011) indicated that favorable conditions existed for reductive dechlorination of COPCs in groundwater.

The historically upward vertical gradients and near surface groundwater levels indicate that Walnut Creek and the adjacent swampy area are discharge areas for groundwater. No COPCs were detected at concentrations greater than applicable screening levels in the samples collected from Walnut Creek;

therefore, there do not appear to be unacceptable risks to human health or the environment as a result of COPCs in surface water.

This is the fourth annual groundwater monitoring report that Arcadis has prepared for the Site since approval of the 2012 CMS. In accordance with the CMS (ARCADIS 2012) and the SAP (Antea 2013) annual groundwater and surface water monitoring is planned at the Site until 2017, at which time, a transition to biennial monitoring will occur. This monitoring program will be evaluated during the next 5-year review with the NCDEQ during 2017. By providing our signatures below, we certify that, to the best of our knowledge and after thorough investigation, the information contained in or accompanying this certification is true, accurate, and complete. Please let us know if you request any clarification of the information provided.

Sincerely,

Arcadis G&M of North Carolina, Inc.

Ryan M. Gerber, PE
Project Engineer

Donald R. Malone, PE
Principal Engineer/Program Manager

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Trey Richardson – Ashland, Inc.

Enclosures:

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Figure 15. MW-26 Primary Constituent Concentrations Over Time

Appendices

Appendix A. Laboratory Analytical Data Reports

References:

Antea, 2013. Sample and Analysis Plan, Ashland Raleigh, 1415 South Bloodworth Street, Raleigh, North Carolina. January 31.

ARCADIS, 2011. Monitored Natural Attenuation Evaluation Report, Former Ashland Inc. Chemical Distribution Facility, Raleigh, North Carolina. November.

ARCADIS, 2012. Corrective Measures Study (Revision 1), Former Ashland Inc. Chemical Distribution Facility, Raleigh, North Carolina. June 19.

NCDEQ, 2012. Letter to Ashland Inc., Re: Corrective Measures Study Report, Former Ashland Distribution Facility, September 14.

TABLES

Table 1. Summary of Groundwater Potentiometric Surface Elevations
March 2016 Annual Groundwater Monitoring Event, Former Ashland Inc. Facility, Raleigh, North Carolina

Monitor Well	Total Depth (ft bls)	TOC Elevation (ft msl)	Depth to Groundwater (ft btoc)	Date Gauged	Groundwater Elevation (ft msl)
MW-1	30.4	260.56	21.50	3/28/2016	239.06
MW-2	30.4	256.98	NM	NM	NM
MW-2D	75.5	257.64	NM	NM	NM
MW-3	35.4	260.44	25.81	3/28/2016	234.63
MW-3D	72.3	260.92	26.20	3/28/2016	234.72
MW-4	30.4	256.25	NM	NM	NM
MW-5	30.2	257.41	18.77	3/28/2016	238.64
MW-7	30.4	259.95	21.08	3/28/2016	238.87
MW-7D	69.7	260.09	NM	NM	NM
MW-8R	27.7	252.92	20.75	3/28/2016	232.17
MW-8DR	59.3	252.89	20.25	3/28/2016	232.64
MW-9D	66.0	251.65	NM	NM	NM
MW-11DR	54.7	250.33	NM	NM	NM
MW-12D	34.5	244.45	13.49	3/28/2016	230.96
MW-12TZ	59.0	246.94	NM	NM	NM
MW-12BR	170.0	248.40	NM	NM	NM
MW-13D	75.1	260.22	NM	NM	NM
MW-14OB	21.0	225.71	5.12	3/28/2016	220.59
MW-14TZ	35.0	226.80	6.20	3/28/2016	220.60
MW-16OB	21.0	237.85	13.61	3/28/2016	224.24
MW-16BR	85.0	243.52	NM	NM	NM
MW-17OB	16.0	224.30	NM	NM	NM
MW-17TZ	50.0	225.65	NM	NM	NM
MW-18TZ	35.0	229.98	NM	NM	NM
MW-18BR	85.0	239.40	15.26	3/28/2016	224.14
MW-19	17.0	232.89	NM	NM	NM
MW-20	20.0	223.85	NM	NM	NM
MW-20D	45.0	222.38	NM	NM	NM
MW-20BR	83.0	222.08	NM	NM	NM
MW-21	25.0	238.75	NM	NM	NM
MW-22	25.0	232.47	9.36	3/28/2016	223.11
MW-22D	43.0	232.57	NM	NM	NM
MW-22BR	108.0	232.65	NM	NM	NM
MW-23	21.0	222.33	2.85	3/28/2016	219.48
MW-23D	61.0	221.77	2.05	3/28/2016	219.72
MW-23BR	84.0	222.00	2.02	3/28/2016	219.98
MW-24	21.0	222.91	3.54	3/28/2016	219.37
MW-25	23.0	221.85	2.56	3/28/2016	219.29
MW-26	23.0	222.28	4.10	3/28/2016	218.18

Notes:

ft	Feet
ft bls	Feet below land surface.
ft msl	Feet above mean sea level.
ft btoc	Feet below top of casing.
NM	Not measured.

Table 2. Summary of Historical Vertical Gradients Calculated from Site Monitoring Wells (2009 - 2016)
Former Ashland Inc. Facility, Raleigh, North Carolina

Monitor Well	Well Screen Mid-Point (ft bls)	TOC Elevation (ft msl)	Dates:	3/24/2009	9/1/2009	3/23/2010	9/27/2010	3/21/2011	9/27/2011	3/12/2012	3/18/2013	3/26/2014	3/17/2015	3/28/2016
				Groundwater Elevations (ft msl) and Resultant Vertical Gradient (ft/ft)										
Upgradient Wells (North of Farmers Street)														
MW-3	28.5	260.44		231.79	231.61	233.04	231.54	231.05	230.17	230.69	231.23	232.20	233.67	234.63
MW-3D	66.0	260.92		231.95	231.71	233.14	231.61	231.15	230.44	230.79	231.32	232.30	233.75	234.72
	Vertical Gradient at MW-3/MW-3D Well Pair:			0.0043	0.0027	0.0027	0.0019	0.0027	0.0072	0.0027	0.0024	0.0027	0.0021	0.0024
Wells in Transitional Area of the Site (Between Farmers Street and Swamp)														
MW-8R/MW-8[a]	22.0	252.92		229.56	229.42	230.87	229.30	229.08	228.70	228.70	229.24	230.09	230.33	232.17
MW-8DR/MW-8D[a]	49.0	252.89		230.00	229.91	231.86	229.75	229.50	228.86	229.10	229.62	230.52	231.76	232.64
	Vertical Gradient at MW-8R/MW-8DR Well Pair:			0.0163	0.0181	0.0367	0.0167	0.0156	0.0059	0.0148	0.0141	0.0159	0.0530	0.0174
Downgradient Wells (Immediately upgradient of or within the Swamp near Walnut Creek)														
MW-14OB	16.0	225.71		219.90	218.99	220.13	219.39	219.43	219.36	219.55	219.69	220.13	220.86	220.59
MW-14TZ	34.0	226.80		219.98	219.03	220.13	219.31	220.91	219.37	219.62	219.72	220.17	220.92	220.60
	Vertical Gradient at MW-14OB/MW-14TZ Well Pair:			0.0044	0.0022	0.0000	(0.0044)	0.0822	0.0006	0.0039	0.0017	0.0022	0.0033	0.0006
MW-23	16.0	222.33		NA	NA	NA	219.99	219.62	219.62	NM	218.99	219.22	219.73	219.48
MW-23D	56.0	221.77		NA	NA	NA	219.68	218.92	219.10	NM	219.22	219.43	219.97	219.72
MW-23BR	79.0	222.00		NA	NA	NA	219.78	219.78	219.65	NM	216.95	219.72	220.30	219.98
	Vertical Gradient at MW-23/MW-23D Well Pair:			NA	NA	NA	(0.0078)	(0.0175)	(0.0130)	NA	0.0057	0.0053	0.0060	0.0060
	Vertical Gradient at MW-23D/MW-23BR Well Pair:			NA	NA	NA	0.0043	0.0374	0.0239	NA	(0.0987)	0.0126	0.0143	0.0113

Notes:

ft	Feet
ft msl	Feet above mean sea level.
ft bls	Feet below land surface.
(0.0010)	Vertical Gradient (feet per foot) with negative value representing downward vertical gradient.
0.0086	Vertical Gradient (feet per foot) with positive value representing upward vertical gradient.
NA	Not available.
NM	Not Measured

a Replacement wells MW-8R and MW-8DR were installed in August 2008 to replace damaged wells MW-8 and MW-8D, respectively. The data from these original and replacements wells were included as one dataset.

Table 3. Summary of Groundwater Analytical Results

March 2016 Annual Groundwater Monitoring Event, Former Ashland Inc. Facility, Raleigh, North Carolina

Sample Location: Lab Sample ID: Date Sampled:	NCAC 2L Standard[a]	Calculated Site-Specific GSWSVs[b]	MW-1 680-123585-22 3/29/2016	MW-3 680-123585-20 3/29/2016	MW-3D 680-123585-19 3/29/2016	MW-5 680-123585-21 3/29/2016	MW-7 680-123585-24 3/29/2016	MW-8R 680-123585-12 3/29/2016	MW-8DR 680-123585-14 3/29/2016
Field Parameters									
Temperature (°C)	NE	NA	18.95	20.60	18.82	20.39	20.12	18.35	16.99
pH (standard units)	6.5 - 8.5	NA	4.43	5.02	6.38	4.06	5.42	4.79	6.14
Dissolved Oxygen (mg/L)	NE	NA	8.52	6.70	1.22	7.69	6.79	2.72	1.40
Conductivity (mS/cm)	NE	NA	0.127	0.451	0.551	0.469	0.943	0.265	0.690
Oxidation-Reduction Potential (mV)	NE	NA	308.2	298.1	94.7	363.0	155.0	357.7	228.3
Turbidity (NTU)	NE	NA	6.0	8.3	13.7	32.1	189	65.9	6.8
VOCs (USEPA Method 8260B) (µg/L)									
Benzene	1	NE	< 50	< 25	< 10	< 500	< 50	< 5.0	< 200 [<100]
Carbon Tetrachloride	0.3	NE	< 50	< 25	< 10	< 500	< 50	< 5.0	< 200 [<100]
Chloroform	70	NE	< 50	< 25	< 10	< 500	< 50	< 5.0	< 200 [<100]
1,1-Dichloroethane	6	NE	< 50	< 25	< 10	< 500	**200**	< 5.0	< 200 [<100]
1,1-Dichloroethene	350	NE	**220**	**60**	**43**	< 500	**400**	**16**	< 200 [<100]
cis-1,2-Dichloroethene	70	NE	**440**	**510**	**88**	< 500	**4,900**	**110**	**410 [380]**
Tetrachloroethene	0.7	16,467	**5,700**	**2,400**	**530**	**42,000**	**12,000**	**340**	**11,000 [14,000]**
1,1,1-Trichloroethane	200	NE	**460**	**36**	< 10	< 500	**1,200**	< 5.0	< 200 [<100]
Trichloroethene	3	149,700	**530**	**400**	**190**	**2,300**	**2,400**	**85**	**550 [610]**
Vinyl Chloride	0.03	11,976	< 50	< 25	< 10	< 500	< 50	< 5.0	< 200 [<100]

Notes:

Only detected constituents are presented.

a Title 15A North Carolina Administrative Code (NCAC) Subchapter 2L Groundwater Quality Standards.

b The Groundwater to Surface Water Screening Values (GSWSV) apply only to sentinal wells (MW-23 through MW-26) (ARCADIS 2012).

Value exceeds the NCAC 2L Standard.

Bold Constituent was detected above the laboratory reporting limit.

< Compound was not detected; reporting limit presented.

°C Degrees Celcius.

mg/L Milligrams per liter.

mS/cm Microsiemens per centimeter.

mV Millivolts.

NA Not applicable.

OR ORP value was reading "Out of Range" on the water parameter probe.

NE Not Established.

UB Constituent was qualified as non-detect due to associated contamination in blank sample

NTU Nephelometric Turbidity Units.

µg/L Micrograms per liter.

VOCs Volatile Organic Compounds

[ ] Brackets indicate duplicate sample concentration

Table 3. Summary of Groundwater Analytical Results

March 2016 Annual Groundwater Monitoring Event, Former Ashland Inc. Facility, Raleigh, North Carolina

Sample Location: Lab Sample ID: Date Sampled:	NCAC 2L Standard[a]	Calculated Site-Specific GSWSVs[b]	MW-12D 680-123585-15 3/29/2016	MW-14OB 680-123585-10 3/28/2016	MW-14TZ 680-123585-11 3/28/2016	MW-16OB 680-123585-18 3/29/2016	MW-18BR 680-123585-17 3/29/2016	MW-22 680-123585-16 3/29/2016
Field Parameters								
Temperature (°C)	NE	NA	17.66	18.29	17.21	18.14	18.79	19.41
pH (standard units)	6.5 - 8.5	NA	6.46	5.08	6.60	5.03	8.99	4.64
Dissolved Oxygen (mg/L)	NE	NA	2.04	1.17	6.39	4.72	1.43	1.65
Conductivity (mS/cm)	NE	NA	0.179	0.281	0.607	0.111	0.563	0.146
Oxidation-Reduction Potential (mV)	NE	NA	137.0	521.2	300.1	173.4	-234.4	398.3
Turbidity (NTU)	NE	NA	183	83.6	51.9	403	11.0	43.0
VOCs (USEPA Method 8260B) (µg/L)								
Benzene	1	NE	< 5.0	**22**	< 20	< 1.0	< 10	< 1.0
Carbon Tetrachloride	0.3	NE	< 5.0	**21**	< 20	< 1.0	< 10	< 1.0
Chloroform	70	NE	< 5.0	< 20	< 20	< 1.0	< 10	< 1.0
1,1-Dichloroethane	6	NE	< 5.0	< 20	< 20	< 1.0	< 10	< 1.0
1,1-Dichloroethene	350	NE	< 5.0	**110**	< 20	< 1.0	**23**	< 1.0
cis-1,2-Dichloroethene	70	NE	**47**	**400**	**27**	< 1.0	**12**	< 1.0
Tetrachloroethene	0.7	16,467	**200**	**2,500**	**1,000**	**18**	**640**	< 1.0
1,1,1-Trichloroethane	200	NE	< 5.0	< 20	< 20	< 1.0	< 10	< 1.0
Trichloroethene	3	149,700	**71**	**660**	**200**	**1.3**	**310**	< 1.0
Vinyl Chloride	0.03	11,976	< 5.0	< 20	< 20	< 1.0	< 10	< 1.0

Notes:

Only detected constituents are presented.

a Title 15A North Carolina Administrative Code (NCAC) Subchapter 2L Groundwater Quality Standards.

b The Groundwater to Surface Water Screening Values (GSWSV) apply only to sentinal wells (MW-23 through MW-26) (ARCADIS 2012).

Value exceeds the NCAC 2L Standard.

Bold Constituent was detected above the laboratory reporting limit.

< Compound was not detected; reporting limit presented.

°C Degrees Celcius.

mg/L Milligrams per liter.

mS/cm Microsiemens per centimeter.

mV Millivolts.

NA Not applicable.

OR ORP value was reading "Out of Range" on the water parameter probe.

NE Not Established.

UB Constituent was qualified as non-detect due to associated contamination in blank sample

NTU Nephelometric Turbidity Units.

µg/L Micrograms per liter.

VOCs Volatile Organic Compounds

[ ] Brackets indicate duplicate sample concentration

Table 3. Summary of Groundwater Analytical Results

March 2016 Annual Groundwater Monitoring Event, Former Ashland Inc. Facility, Raleigh, North Carolina

Sample Location: Lab Sample ID: Date Sampled:	NCAC 2L Standard[a]	Calculated Site-Specific GSWSVs[b]	MW-23[c] 680-123585-3 3/28/2016	MW-23D[c] 680-123585-4 3/28/2016	MW-23BR[c] 680-123585-5 3/28/2016	MW-24[c] 680-123585-1 3/28/2016	MW-25 680-123585-9 3/28/2016	MW-26[c] 680-123585-2 3/28/2016
Field Parameters								
Temperature (°C)	NE	NA	19.84	19.94	20.08	20.42	18.52	21.56
pH (standard units)	6.5 - 8.5	NA	3.44	3.44	3.87	4.52	4.98	3.52
Dissolved Oxygen (mg/L)	NE	NA	1.27	1.55	1.40	1.23	1.17	0.58
Conductivity (mS/cm)	NE	NA	0.011	0.010	0.001	0.034	0.198	0.014
Oxidation-Reduction Potential (mV)	NE	NA	355.4	363.4	331.4	256.7	305.3	340.2
Turbidity (NTU)	NE	NA	0.0	0.0	0.0	0.0	373	0.0
VOCs (USEPA Method 8260B) (µg/L)								
Benzene	1	NE	**6.2**	< 20	< 2.0	**13**	< 1.0	**5.7**
Carbon Tetrachloride	0.3	NE	< 2.0	**28**	**2.4**	< 5.0	< 1.0	< 2.0
Chloroform	70	NE	< 2.0	< 20	< 2.0	< 5.0	**1.1**	< 2.0
1,1-Dichloroethane	6	NE	< 2.0	< 20	< 2.0	< 5.0	< 1.0	< 2.0
1,1-Dichloroethene	350	NE	**17**	**63**	**16**	**44**	< 1.0	**16**
cis-1,2-Dichloroethene	70	NE	**520**	**68**	**5.5**	**740**	< 1.0	**390**
Tetrachloroethene	0.7	16,467	**29**	**1,600**	**43**	**170**	**5.2**	< 2.0
1,1,1-Trichloroethane	200	NE	< 2.0	< 20	< 2.0	< 5.0	< 1.0	< 2.0
Trichloroethene	3	149,700	**27**	**660**	**120**	**130**	**1.6**	**3.1**
Vinyl Chloride	0.03	11,976	**58**	< 20	< 2.0	**67**	< 1.0	**140**

Notes:

Only detected constituents are presented.

a Title 15A North Carolina Administrative Code (NCAC) Subchapter 2L Groundwater Quality Standards.

b The Groundwater to Surface Water Screening Values (GSWSV) apply only to sentinal wells (MW-23 through MW-26) (ARCADIS 2012).

c Groundwater sample was collected using a passive diffusion bag (PDB) sampler.

Value exceeds the NCAC 2L Standard.

Bold Constituent was detected above the laboratory reporting limit.

< Compound was not detected; reporting limit presented.

°C Degrees Celcius.

mg/L Milligrams per liter.

mS/cm Microsiemens per centimeter.

mV Millivolts.

NA Not applicable.

OR ORP value was reading "Out of Range" on the water parameter probe.

NE Not Established.

UB Constituent was qualified as non-detect due to associated contamination in blank sample

NTU Nephelometric Turbidity Units.

µg/L Micrograms per liter.

VOCs Volatile Organic Compounds

[ ] Brackets indicate duplicate sample concentration

Table 4. Summary of Current and Historical Surface Water Analytical Results
Ashland Inc., Raleigh, North Carolina

			Upstream of Groundwater Discharge into Walnut Creek																
		Sample Location:	W.C. Upstream	Upstream	Upstream	Upstream	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1
		Date Sampled:	11/12/1997[1]	9/25/1998[2]	10/23/1998[2]	10/4/1999[2]	9/18/2008	9/3/2009	9/28/2010	4/20/2011	4/20/2011	4/20/2011	4/20/2011	9/28/2011	3/18/2013	9/27/2013	3/28/2014	3/19/2015	3/28/2016
Volatile Organics (USEPA Method 8260B) (µg/L)	NCAC 2B Standard[a]	Calculated Site-Specific SWRSVs[b]																	
cis-1,2-Dichloroethene	NE	3,300	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	3.3	7.0	<5	<1.0	<1.0	**2.7**	**2.3**	<1.0	**1.1**	<1.0	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	**2.3**	<1.0
Toluene	11	NE	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	30	25	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

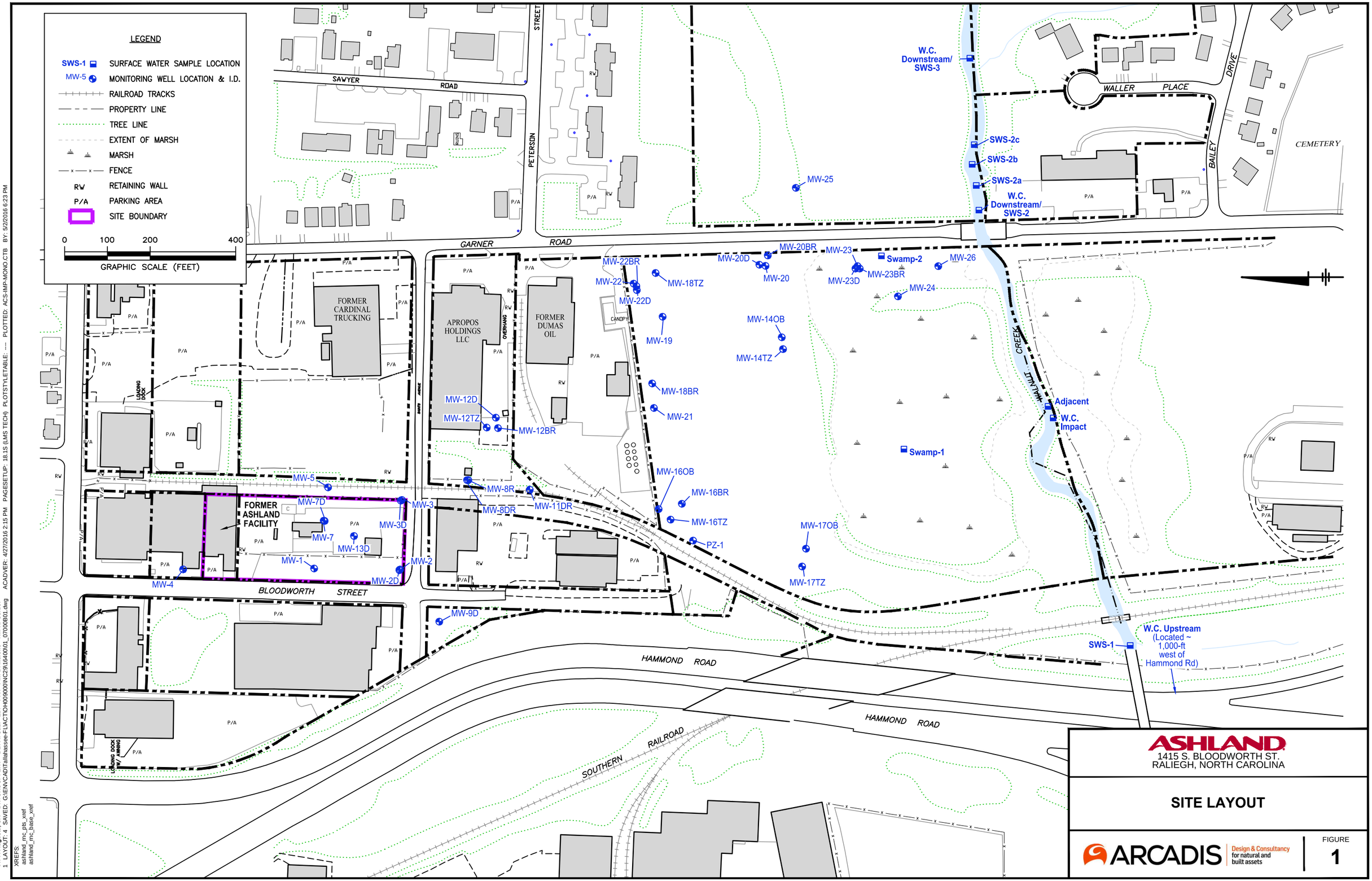
			Upstream of Groundwater Discharge into Walnut Creek				Midstream of Groundwater Discharge into Walnut Creek												
		Sample Location:	W.C. Impact	Adjacent	Adjacent	Adjacent	SWS-2	SWS-2	SWS-2	SWS-2	SWS-2A	SWS-2B	SWS-2C	SWS-2	SWS-2	SWS-2	SWS-2	SWS-2	SWS-2
		Date Sampled:	11/12/1997	9/25/1998[2]	10/23/1998[2]	10/4/1999[2]	9/18/2008	9/3/2009	9/28/2010	4/20/2011	4/20/2011	4/20/2011	4/20/2011	9/28/2011	3/18/2013	9/27/2013	3/28/2014	3/19/2015	3/28/2016
Volatile Organics (USEPA Method 8260B) (µg/L)	NCAC 2B Standard[a]	Calculated Site-Specific SWRSVs[b]																	
cis-1,2-Dichloroethene	NE	3,300	<5	<1.0	<1.0	<1.0	<1.0	**1.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.5**	**1.0**	<1.0	**1.1**	<1.0
Tetrachloroethene	3.3	7.0	<5	**1.8**	**1.4**	**3.0**	**1.5**	**2.2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.0**	<1.0	**2.5**	**1.8**	<1.0
Toluene	11	NE	<5	<1.0	<1.0	**1.2**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	30	25	<5	<1.0	<1.0	**1.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

			Downstream of Groundwater Discharge into Walnut Creek																
		Sample Location:	W.C. Downstream	Downgradient	Downgradient	Downgradient	SWS-3	SWS-3	SWS-3	SWS-3	SWS-3	SWS-3	SWS-3	SWS-3	SWS-3	SWS-3	SWS-3	SWS-3	SWS-3
		Date Sampled:	11/12/1997	9/25/1998[2]	10/23/1998[2]	10/4/1999[2]	9/18/2008	9/3/2009	9/28/2010	4/20/2011	4/20/2011	4/20/2011	9/28/2011	3/13/2012	3/18/2013	9/27/2013	3/28/2014	3/19/2015	3/28/2016
Volatile Organics (USEPA Method 8260B) (µg/L)	NCAC 2B Standard[a]	Calculated Site-Specific SWRSVs[b]																	
cis-1,2-Dichloroethene	NE	3,300	<5	<1.0	<1.0	<1.0	<1.0	**1.9**	<1.0	<1.0	NS	NS	<1.0	**1.0**	**1.4**	**1.3**	**1.2**	**1.3**	<1.0
Tetrachloroethene	3.3	7.0	<5	**1.4**	**2.5**	**1.6**	**1.5**	**2.4**	**1.1**	<1.0	NS	NS	<1.0	**2.1**	**3.2**	**1.3**	**2.8**	**2.5**	<1.0
Toluene	11	NE	<5	<1.0	<1.0	**4.0**	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	30	25	<5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

			Farther Downstream[2]		In Wetland					
		Sample Location:	Downstream-2	Downstream-2	Swamp-1	Swamp-1	Swamp 1	Swamp-2	Swamp-2	Swamp 2
		Date Sampled:	10/23/1998[2]	10/4/1999[2]	11/12/1997	9/25/1998[2]	9/29/2010	11/12/1997	9/25/1998[2]	9/29/2010
Volatile Organics (USEPA Method 8260B) (µg/L)	NCAC 2B Standard[a]	Calculated Site-Specific SWRSVs[b]								
cis-1,2-Dichloroethene	NE	3,300	<1.0	<1.0	<5	<1.0	<1.0	<5	<1.0	<1.0
Tetrachloroethene	3.3	7.0	**1.3**	<1.0	<5	<1.0	<1.0	<5	<1.0	<1.0
Toluene	11	NE	<1.0	<1.0	<5	<1.0	<1.0	<5	**1.2**	<1.0
Trichloroethene	30	25	<1.0	<1.0	<5	<1.0	<1.0	<5	<1.0	<1.0

Notes:
Only detected constituents are presented.
a Title 15A North Carolina Administrative Code Subchapter 2B Surface Water Quality Standards for Class C Waters, Rules .0208 and .0211 (toluene).
b ARCADIS (2012).
Bold Constituent was detected above the laboratory reporting limit.
NA Not available.
NE Not Established.
1 Fluor Daniel GTI (1998).
2 Ashland (1999).

FIGURES



ASHLAND
1415 S. BLOODWORTH ST.
RALIEGH, NORTH CAROLINA

SITE LAYOUT

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY: Augusta, GA DIV/GROUP: ENV DB: A. Saul LD: PIC: PM: D. Malone TM: R. Gerber
1 LAYOUT: 4 SAVED: G:\ENVCAD\Tallahassee-FL\ACTIO\H009000\NC29\164000\1_07000801.dwg ACADVER: 4/27/2016 2:15 PM PAGESETUP: 18.1S (LMS TECH) PLOTSTYLETABLE: ---- PLOTTED: ACS-IMP-MONO.CTB BY: 5/2/2016 6:23 PM
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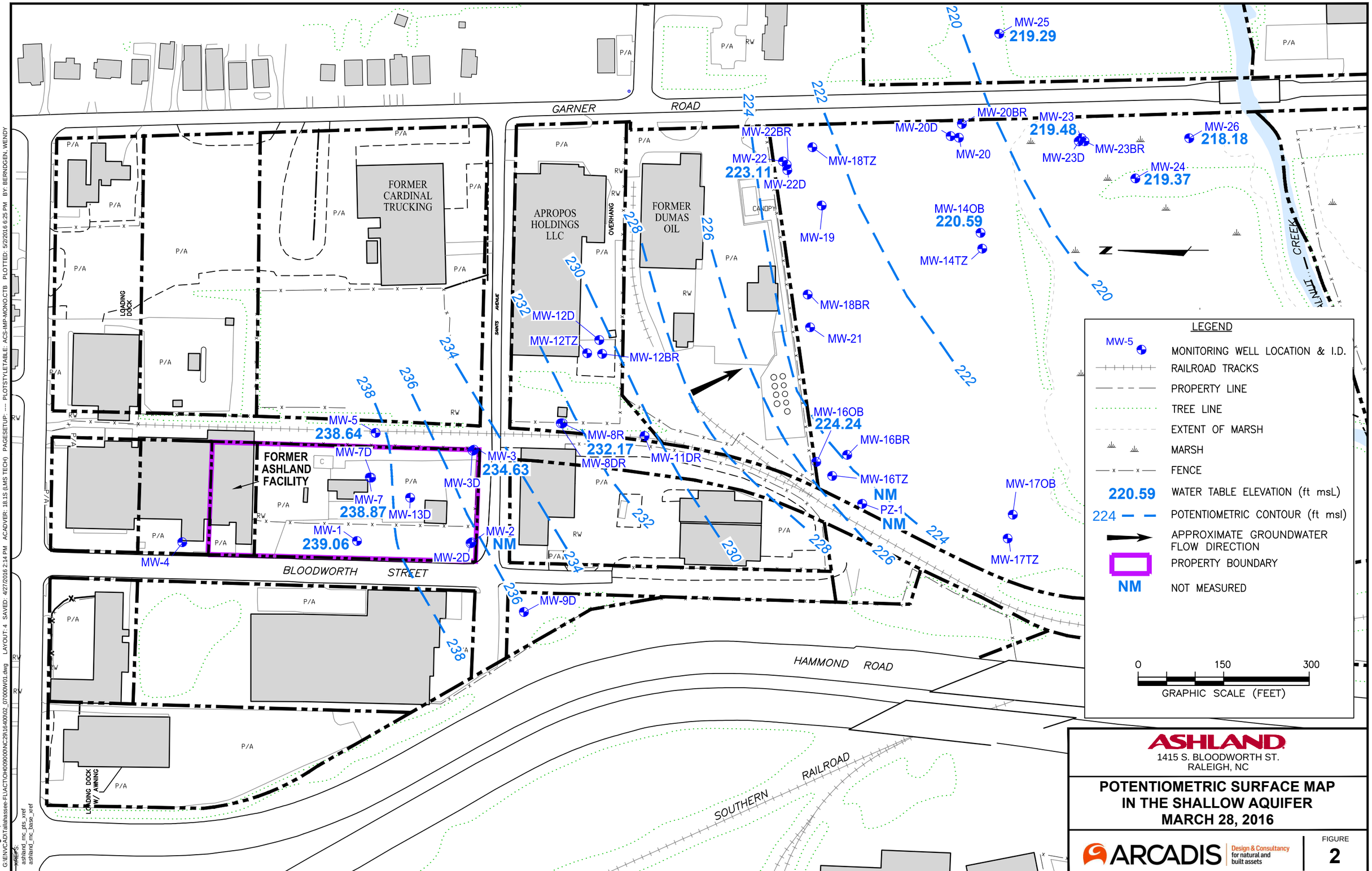

ASHLAND
1415 S. BLOODWORTH ST.
RALEIGH, NC

POTENTIOMETRIC SURFACE MAP IN THE SHALLOW AQUIFER MARCH 28, 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

CITY: Augusta, GA DIV/GROUP: ENV DB: A. Warren LD: PIC: PM: D. Willis TM: G Adams
G:\ENVCAD\Tallahassee-FL\ACT\0HI09000\NC291640\02_07000\W01.dwg LAYOUT: 4 SAVED: 4/27/2016 2:14 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACS:IMP-MONO.CTB PLOTTED: 5/2/2016 6:25 PM BY: BERNDGEN, WENDY
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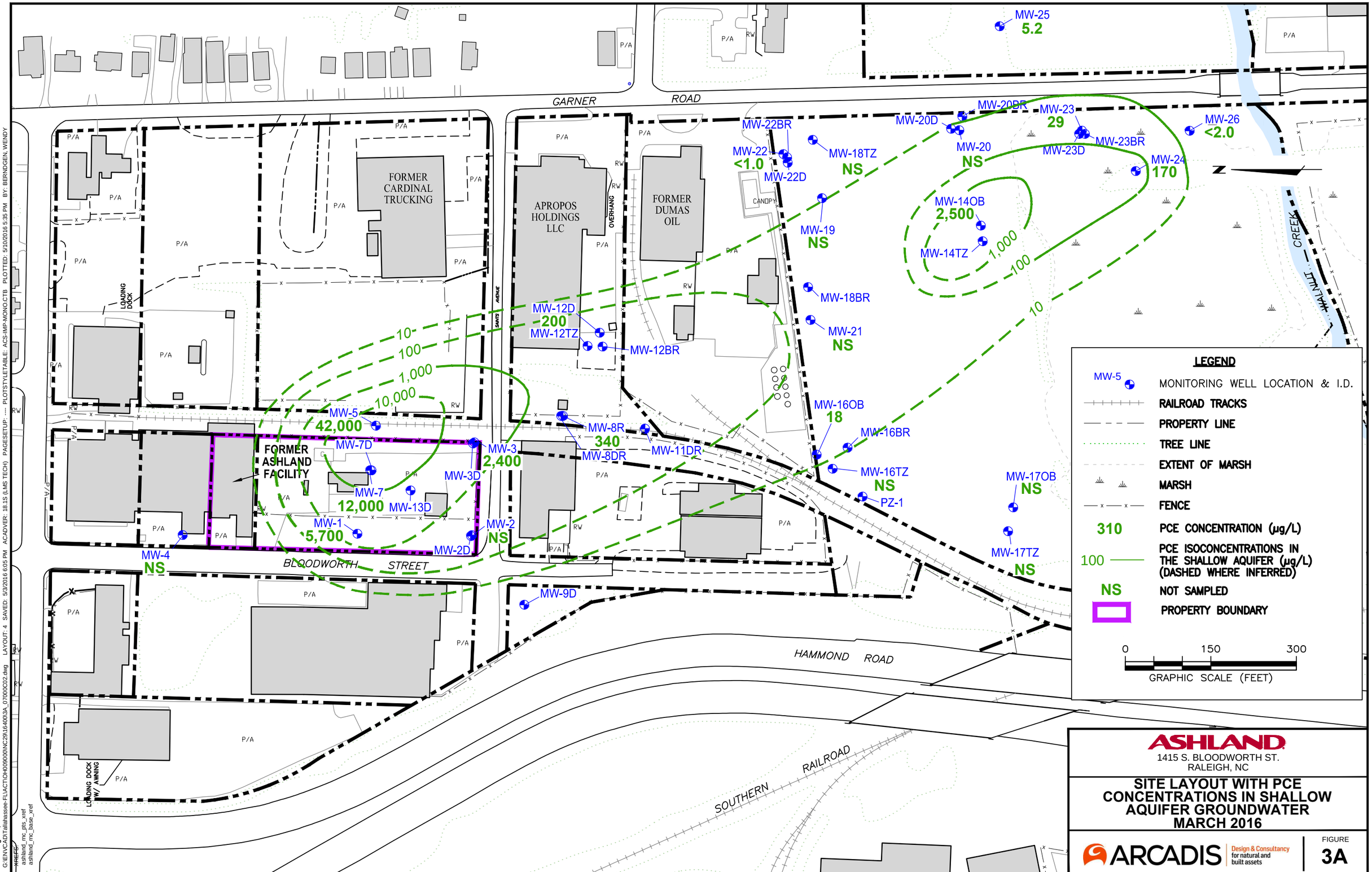

ASHLAND
1415 S. BLOODWORTH ST.
RALEIGH, NC

SITE LAYOUT WITH PCE CONCENTRATIONS IN SHALLOW AQUIFER GROUNDWATER MARCH 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3A

CITY: Augusta, GA DIV/GROUP: ENV DB: A. Warren LD: PIC: PM: D. Willis TM: G Adams
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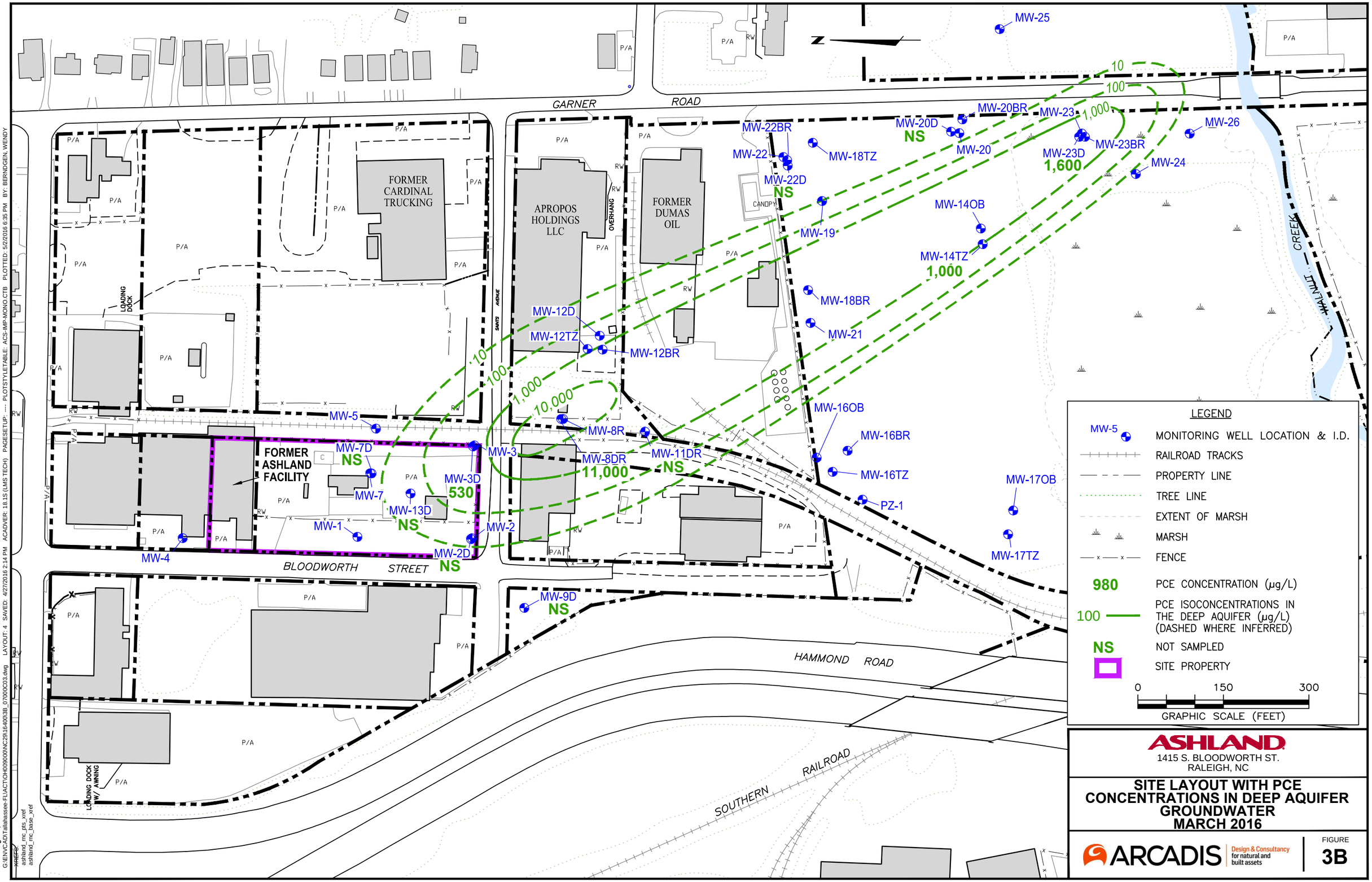

CITY: Augusta, GA DIV/GROUP: ENV DB: A. Warren LD: PIC: PM: D. Willis TM: G Adams
G:\ENVCAD\Tallahassee-FL\ACT\0HI09\00\NC29164\00\3b_07000C03.dwg LAYOUT: 4 SAVED: 4/27/2016 2:14 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACS-IMP-MONO.CTB PLOTTED: 5/2/2016 6:35 PM BY: BERNDGEN, WENDY
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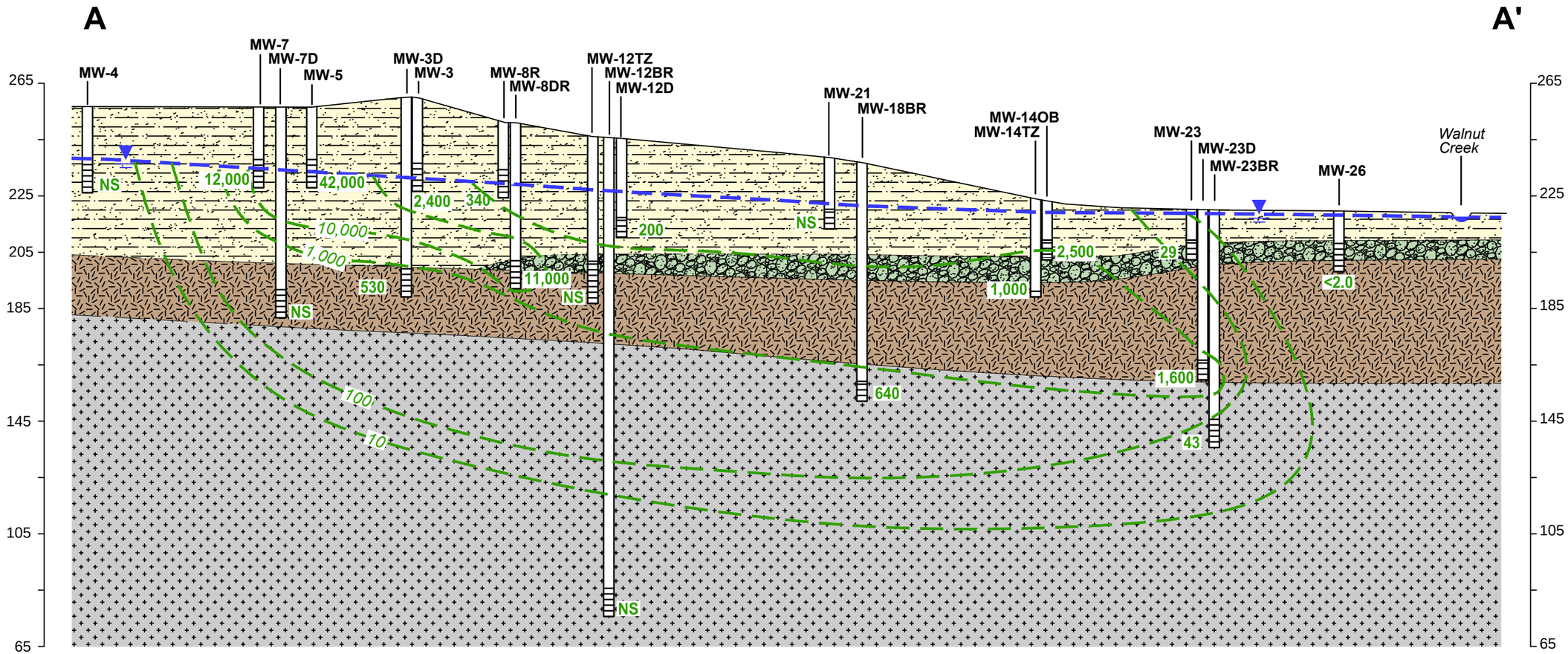


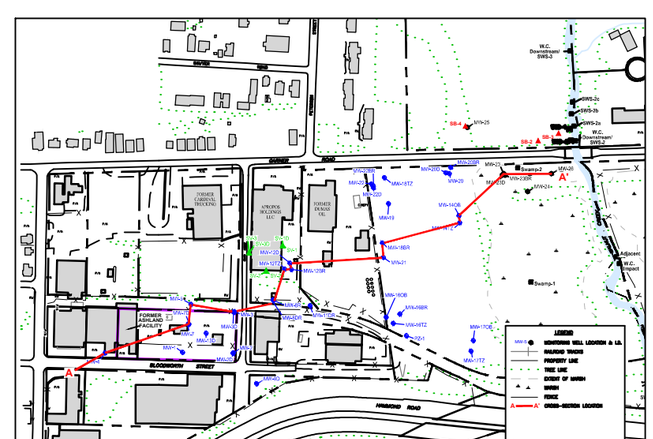
Legend:

- Well Casing
- Well Screen
- Water Level Elevation
- Fine Sand, Silt and Clay
- Alluvial Sand and Gravel
- Partially Weathered Rock
- Competent Bedrock
- 710 PCE Concentrations (µg/L)
- 1,000 PCE Isoconcentrations (µg/L) (Dashed Where Inferred)
- NS Not Sampled

Note: Dashed where inferred, based on data from historical sampling events.

0 160' 320'
HORIZONTAL SCALE

0 40' 80'
VERTICAL SCALE



INSET SCALE 1"=600'

ASHLAND
1415 S. BLOODWORTH ST.
RALEIGH, NC

GEOLOGIC CROSS SECTION A - A'
PCE CONCENTRATION (µg/L)
MARCH 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE
4

CITY: Augusta, GA DIV/GROUP: ENVCAD DB: A. Saul LD: A. Saul PIC: PM: TM: LYR: ON=*;OFF=*REF*
G:\ENVCAD\Tallahassee-FL\ACT\0HO09000\NC291640\04_07000\C04.dwg LAYOUT: 4 SAVED: 5/6/2016 11:14 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACS-IMP-MONO.CTB PLOTTED: 5/6/2016 11:41 AM BY: BERNDGEN, WENDY
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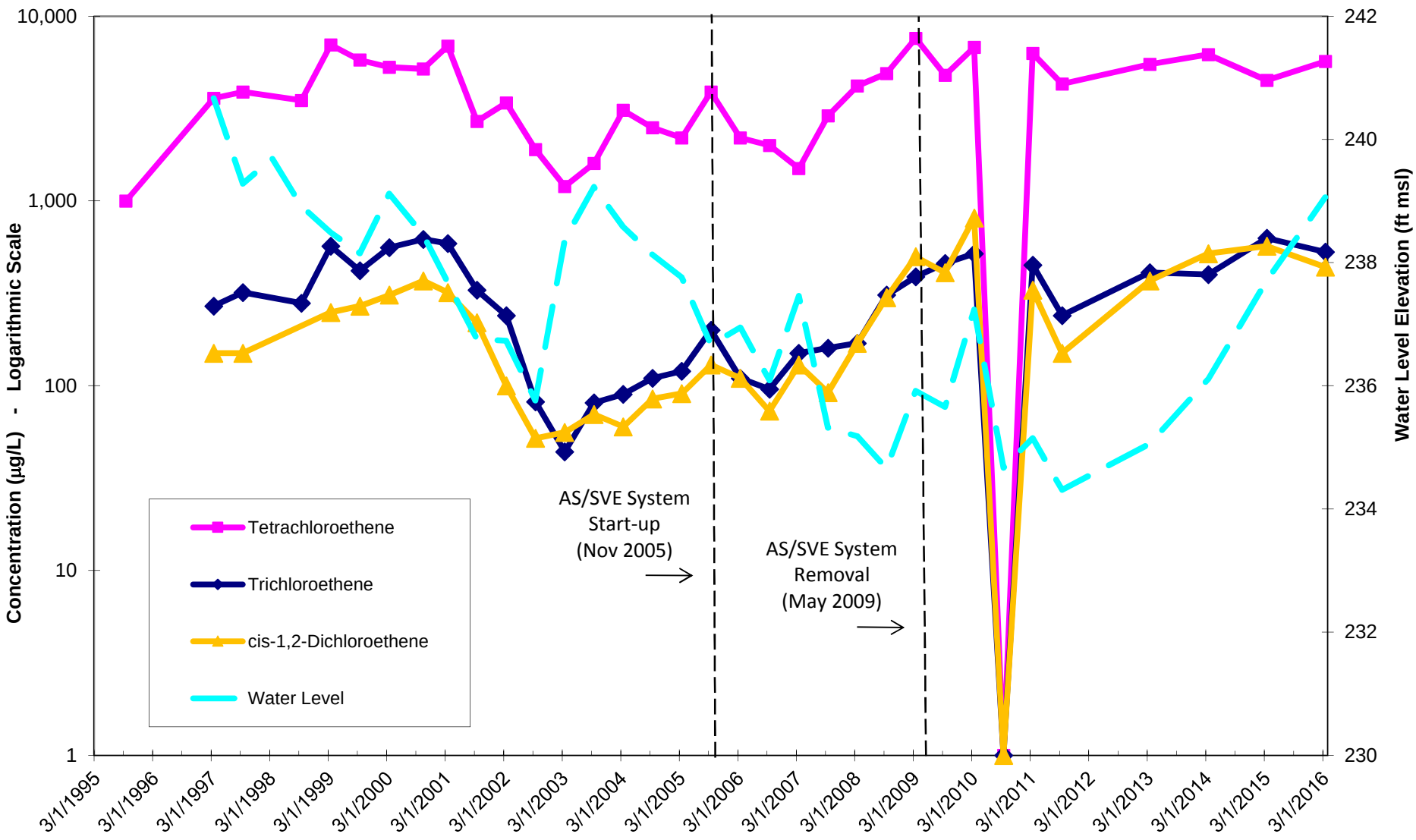
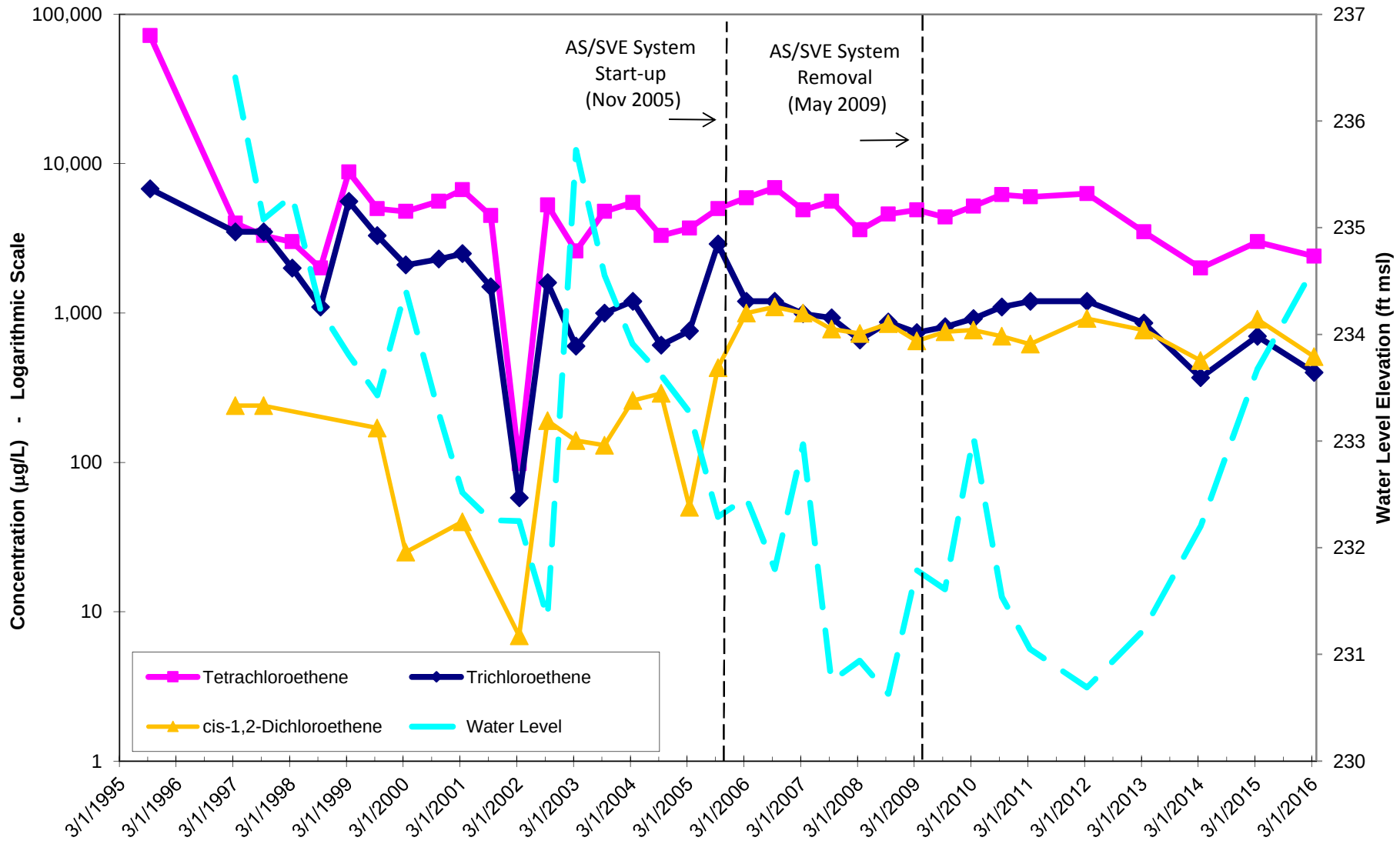
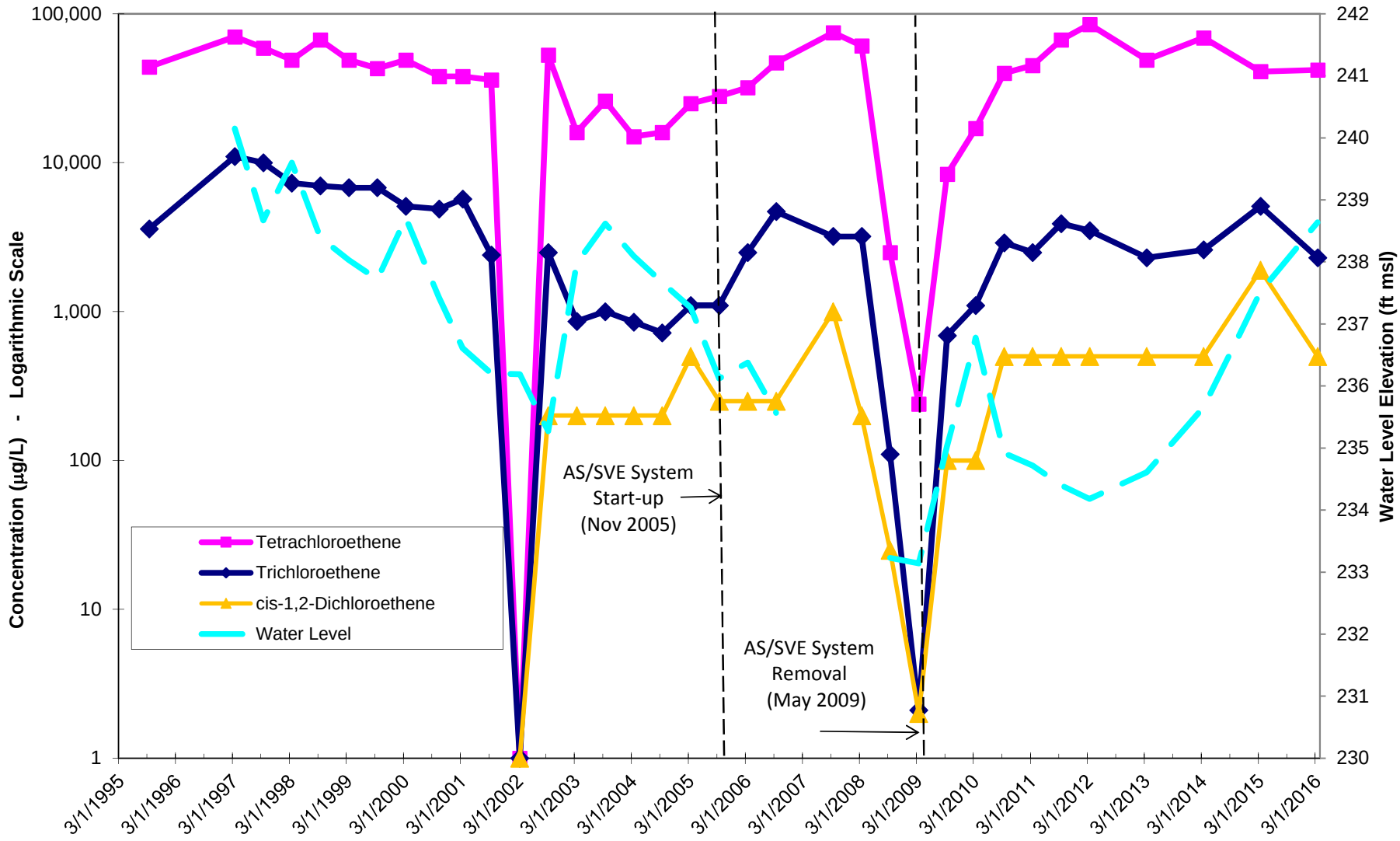


ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-1 Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE **5**

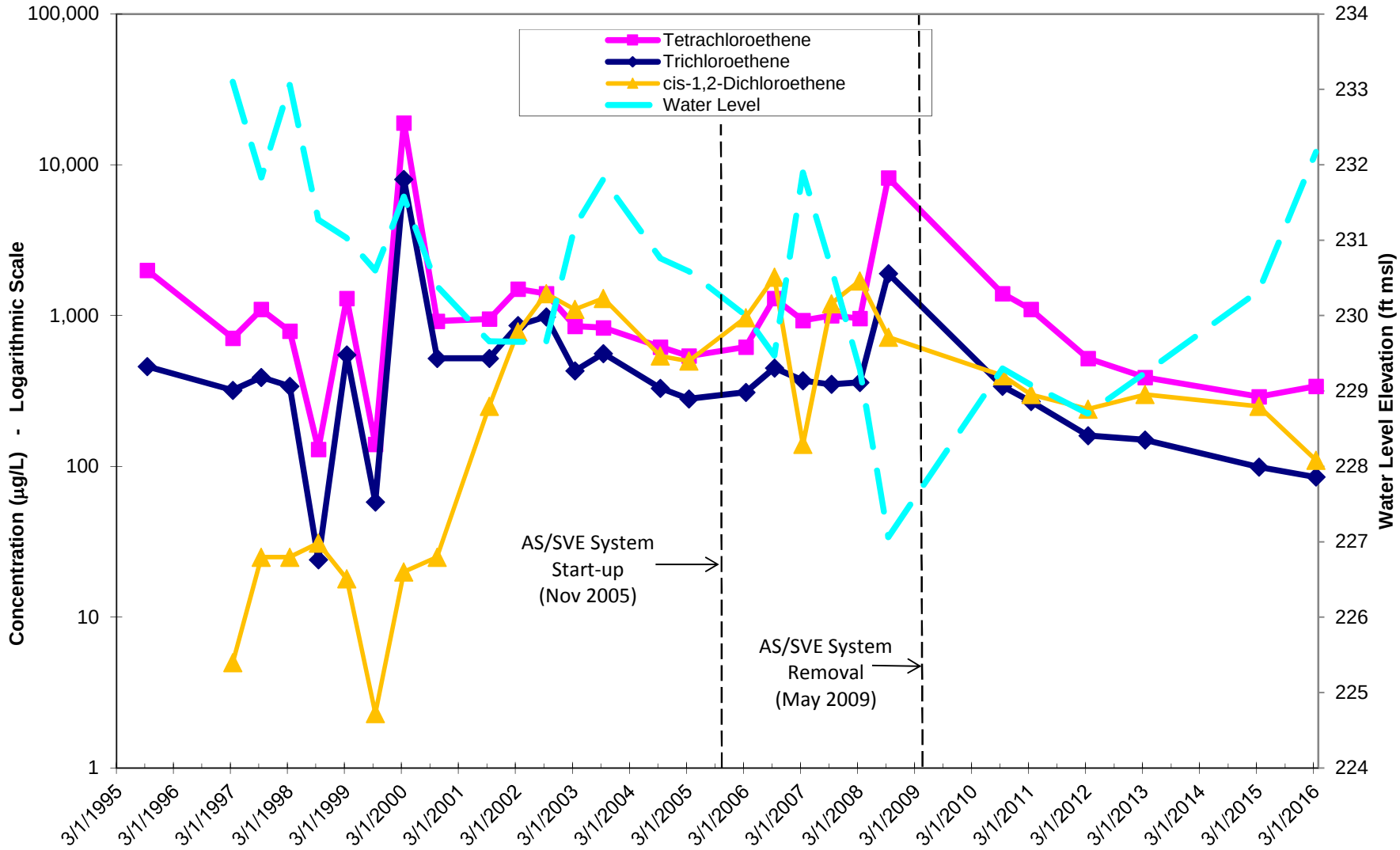


ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-3 Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE: **6**

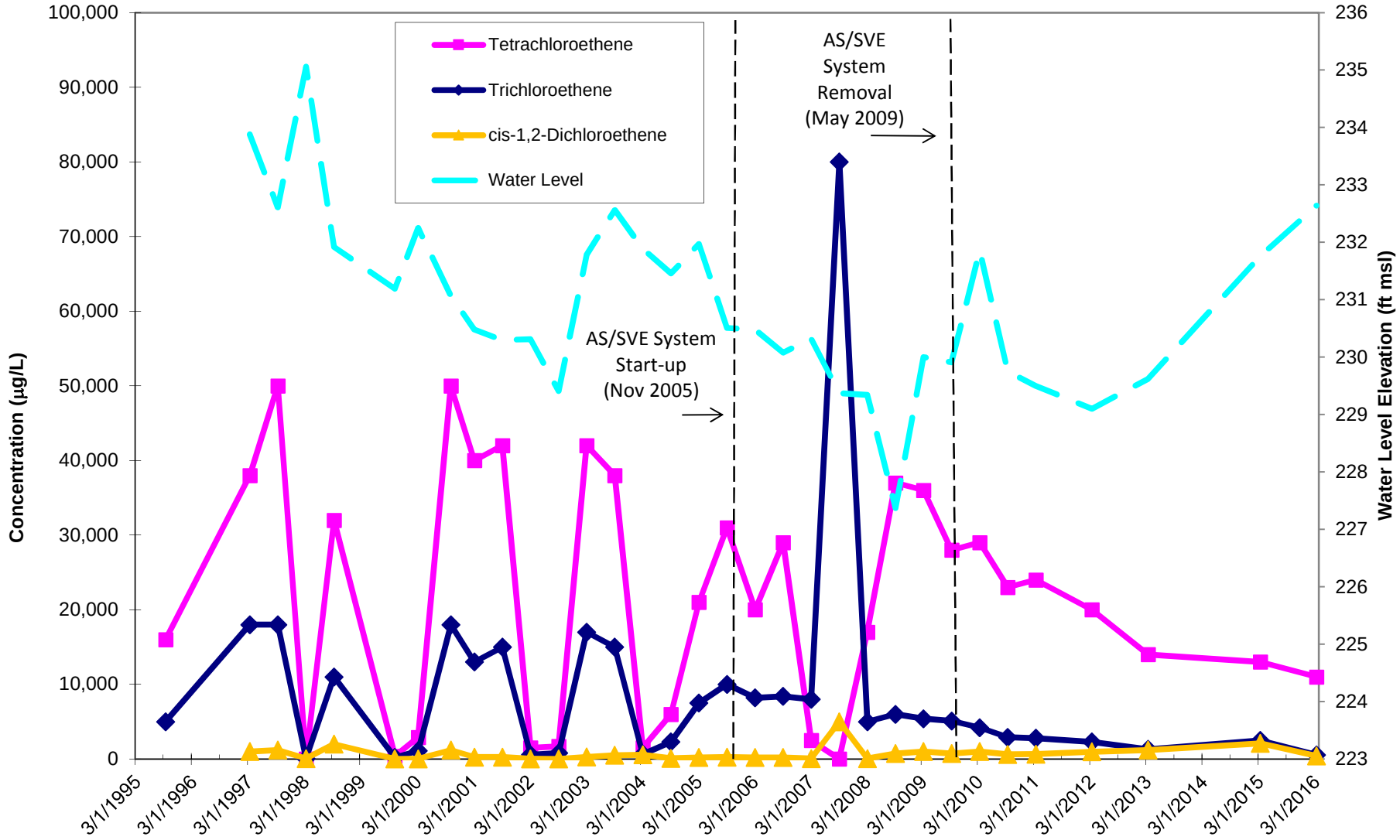


Note: cis-1,2-Dichloroethene was first detected in March 2015. Previous values indicate laboratory reporting limits

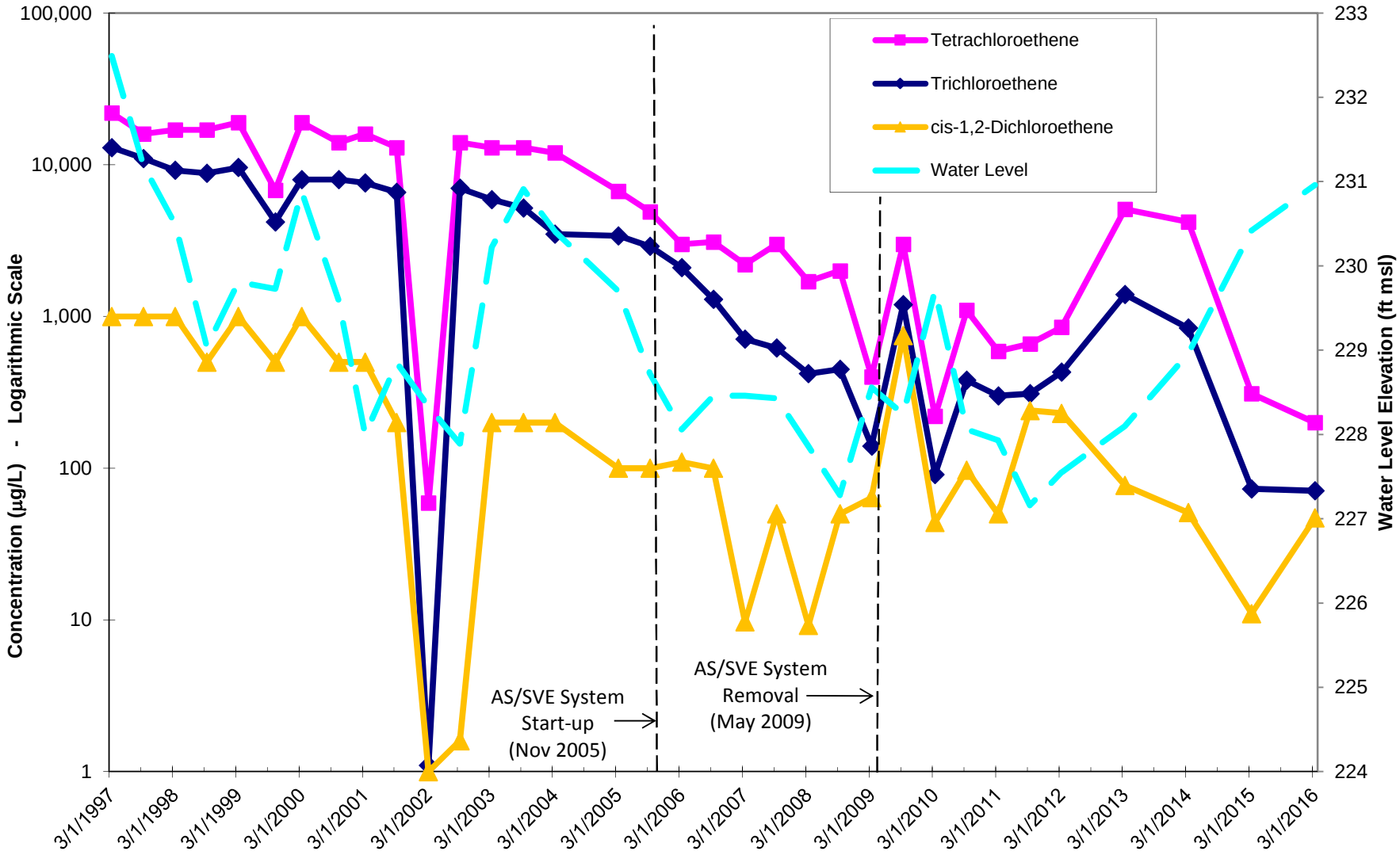
ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-5 Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE: 7



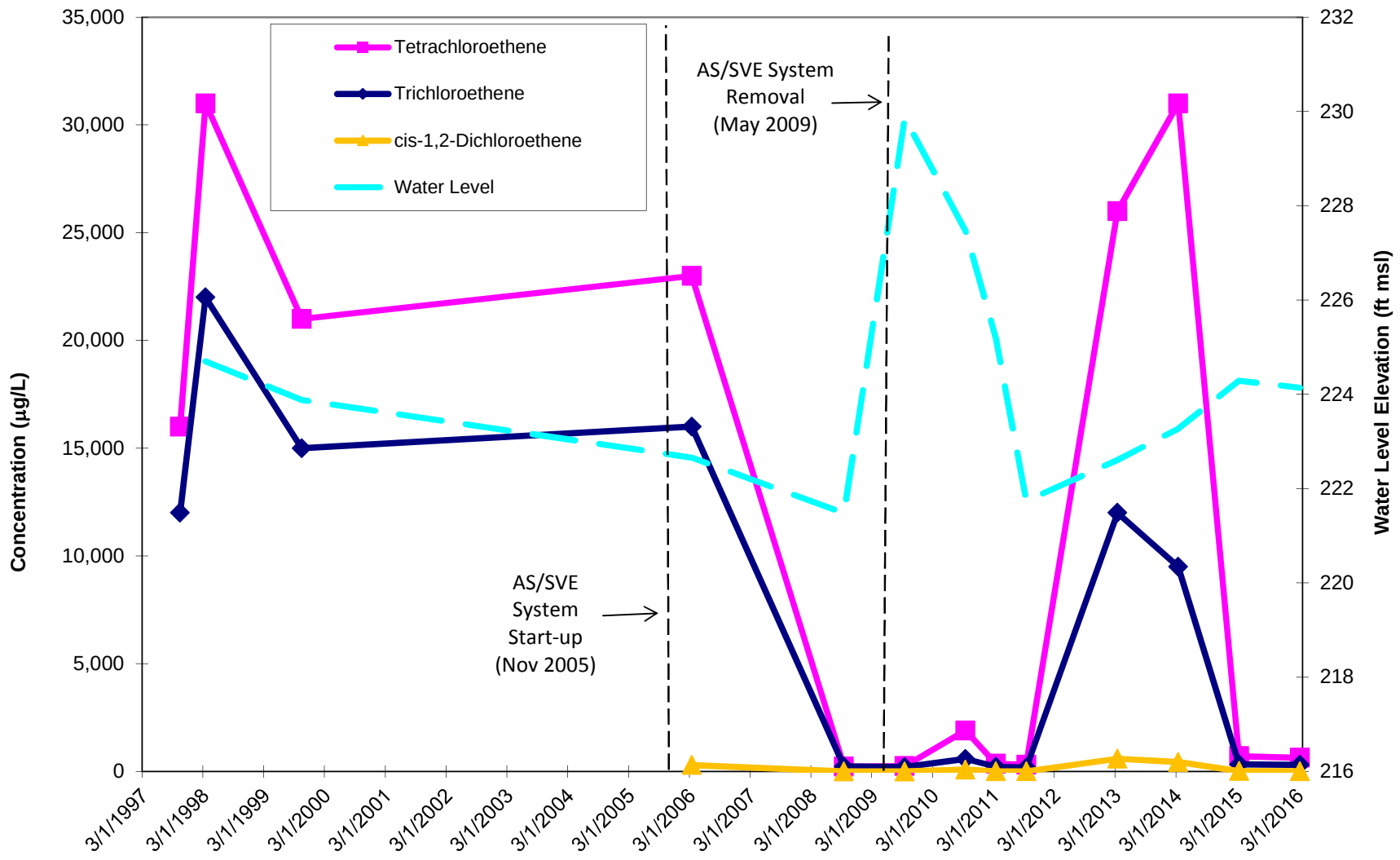
ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-8/8R Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE: **8**



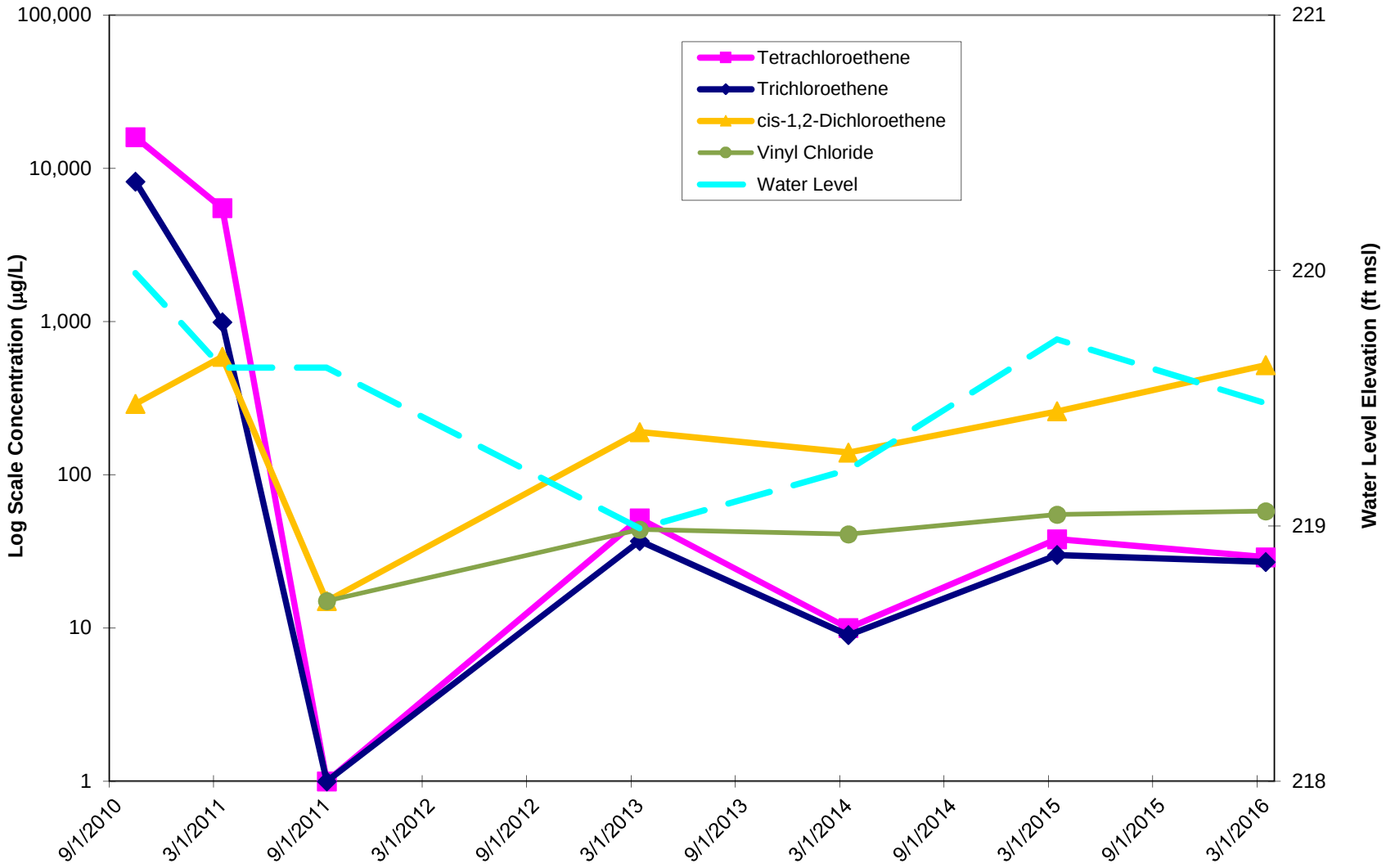
ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-8D/8DR Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE: **9**



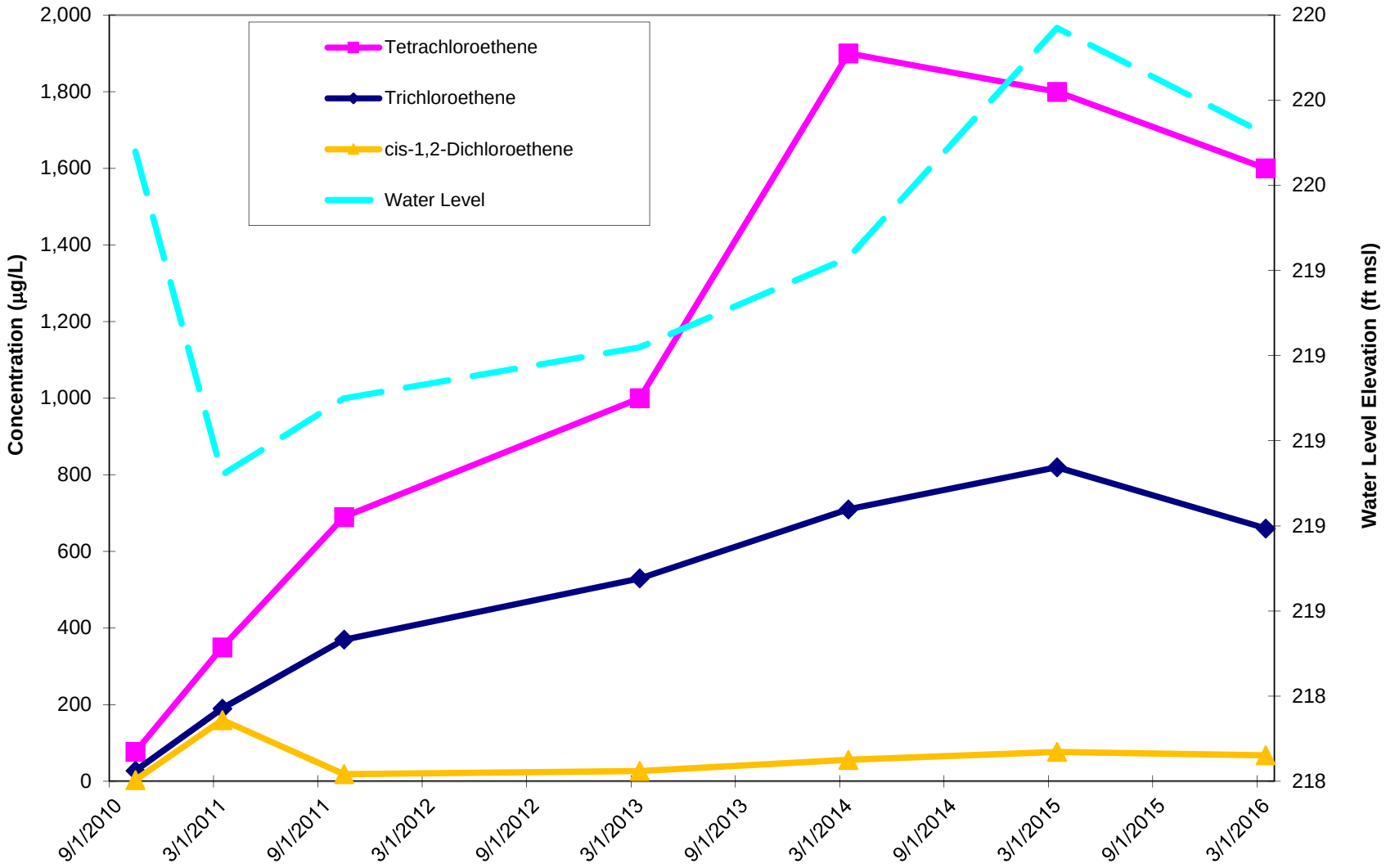
ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-12D Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE: **10**



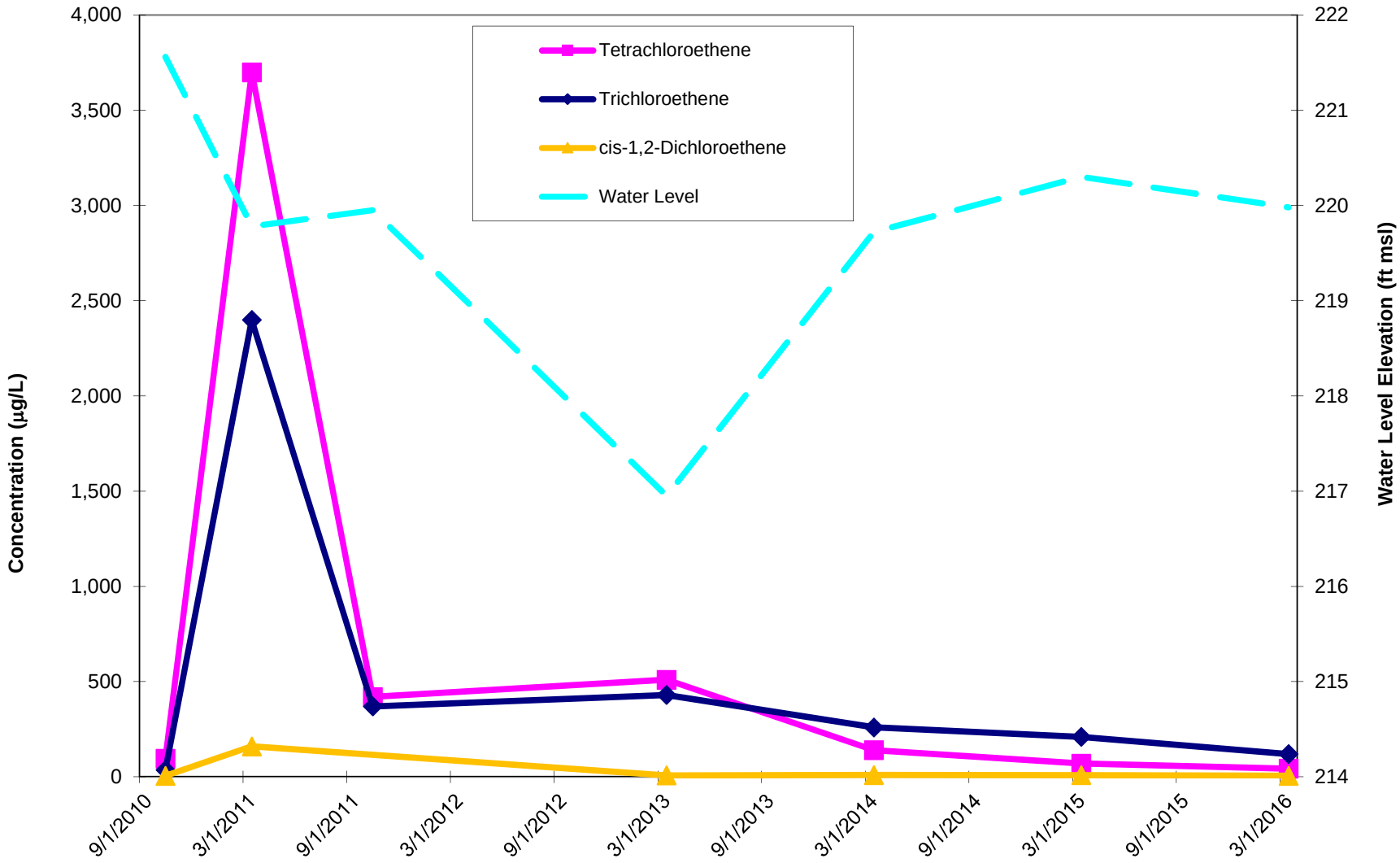
ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-18BR Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE: **11**



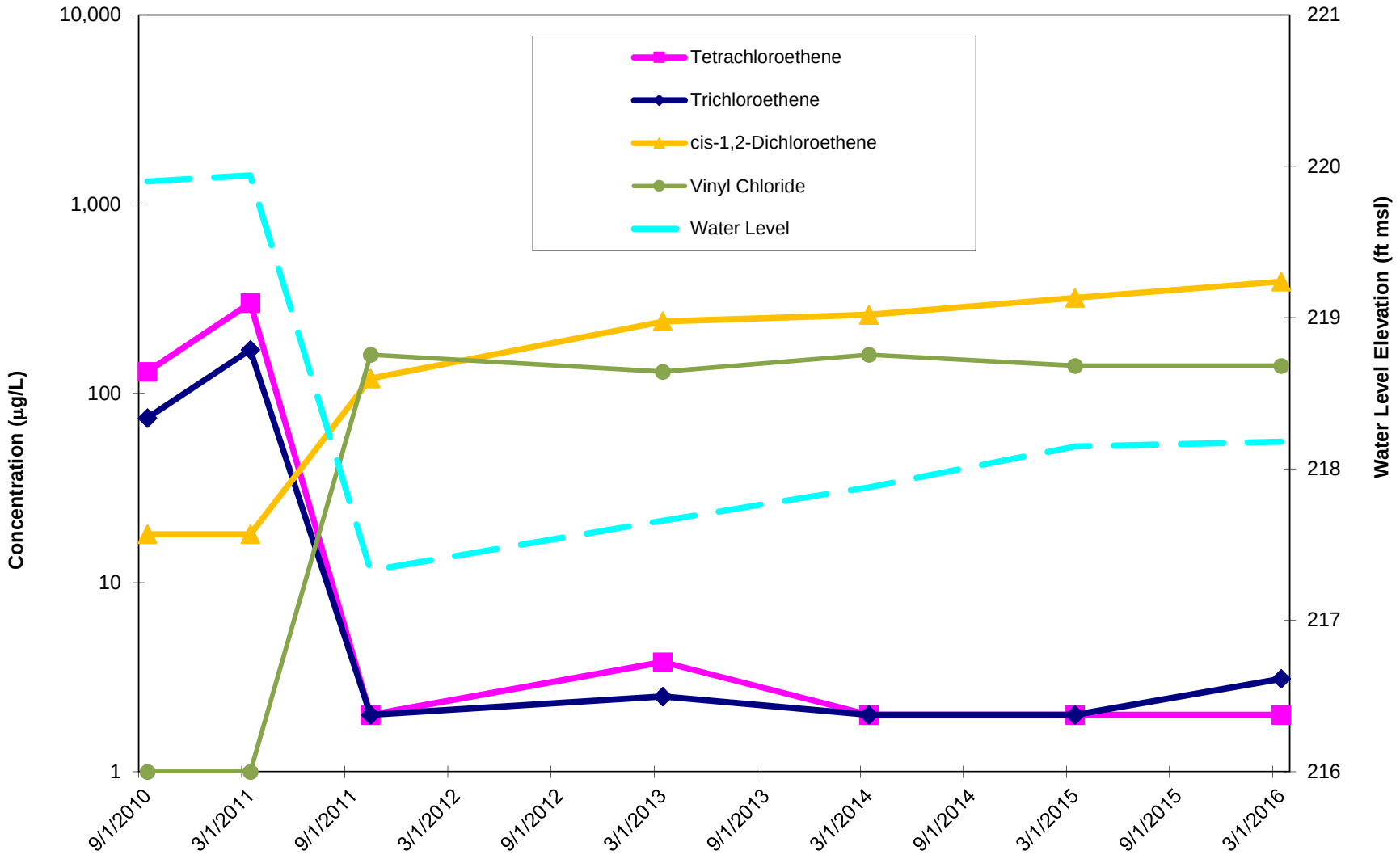
ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-23 Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE: **12**



ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-23D Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE: **13**



ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-23BR Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE: **14**



ARCADIS	Arcadis G&M of North Carolina, Inc. 801 Corporate Center Drive, Suite 300 Raleigh, NC 27607	PROJECT MANAGER: D. Malone	PROJECT NUMBER: OH009000.NC29	MW-26 Primary Constituent Concentrations Over Time Former Ashland Facility Raleigh, North Carolina	FIGURE: **15**

APPENDIX A

Laboratory Analytical Data Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404
Tel: (912)354-7858

TestAmerica Job ID: 680-123585-1
Client Project/Site: Ashland Raleigh

For:
ARCADIS U.S., Inc.
801 Corporate Center Drive
Suite 300
Raleigh, North Carolina 27607-5073

Attn: Mr. Don Malone

Authorized for release by:
4/8/2016 2:53:53 PM

Jerry Lanier, Project Manager I
(912)354-7858 e.3410
jerry.lanier@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 680-123585-1

Laboratory: TestAmerica Savannah

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Ashland Raleigh

Report Number: 680-123585-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT
The samples were received on 03/31/2016; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.3 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MW-24 (680-123585-1), MW-26 (680-123585-2), MW-23 (680-123585-3), MW-23D (680-123585-4), MW-23BR (680-123585-5), SWS-3 (680-123585-6), SWS-2 (680-123585-7), SWS-1 (680-123585-8), MW-25 (680-123585-9), MW-14OB (680-123585-10), MW-14TZ (680-123585-11), MW-8R (680-123585-12), EB-1 (680-123585-13), MW-8DR (680-123585-14), MW-12D (680-123585-15), MW-22 (680-123585-16), MW-18BR (680-123585-17), MW-16OB (680-123585-18), MW-3D (680-123585-19), MW-3 (680-123585-20), MW-5 (680-123585-21), MW-1 (680-123585-22), FB-1 (680-123585-23), MW-7 (680-123585-24), IDW (680-123585-25), DUP-1 (680-123585-26) and TRIP BLANK (680-123585-27) were analyzed for Volatile Organic Compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/05/2016, 04/06/2016 and 04/07/2016.

Samples MW-24 (680-123585-1)[5X], MW-26 (680-123585-2)[2X], MW-23 (680-123585-3)[2X], MW-23 (680-123585-3)[5X], MW-23D (680-123585-4)[20X], MW-23BR (680-123585-5)[2X], MW-14OB (680-123585-10)[20X], MW-14TZ (680-123585-11)[20X], MW-8R (680-123585-12)[5X], MW-8DR (680-123585-14)[200X], MW-12D (680-123585-15)[5X], MW-18BR (680-123585-17)[10X], MW-3D (680-123585-19)[10X], MW-3 (680-123585-20)[25X], MW-5 (680-123585-21)[500X], MW-1 (680-123585-22)[50X], MW-7 (680-123585-24)[100X], MW-7 (680-123585-24)[50X], IDW (680-123585-25)[20X] and DUP-1 (680-123585-26)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 680-427891, 680-427893, 680-428037 and 680-428208.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
680-123585-1	MW-24	Water	03/28/16 14:28	03/31/16 11:05
680-123585-2	MW-26	Water	03/28/16 14:30	03/31/16 11:05
680-123585-3	MW-23	Water	03/28/16 14:50	03/31/16 11:05
680-123585-4	MW-23D	Water	03/28/16 14:55	03/31/16 11:05
680-123585-5	MW-23BR	Water	03/28/16 15:00	03/31/16 11:05
680-123585-6	SWS-3	Water	03/28/16 15:15	03/31/16 11:05
680-123585-7	SWS-2	Water	03/28/16 15:30	03/31/16 11:05
680-123585-8	SWS-1	Water	03/28/16 15:45	03/31/16 11:05
680-123585-9	MW-25	Water	03/28/16 16:15	03/31/16 11:05
680-123585-10	MW-14OB	Water	03/28/16 17:55	03/31/16 11:05
680-123585-11	MW-14TZ	Water	03/28/16 18:35	03/31/16 11:05
680-123585-12	MW-8R	Water	03/29/16 08:50	03/31/16 11:05
680-123585-13	EB-1	Water	03/29/16 08:59	03/31/16 11:05
680-123585-14	MW-8DR	Water	03/29/16 09:32	03/31/16 11:05
680-123585-15	MW-12D	Water	03/29/16 10:18	03/31/16 11:05
680-123585-16	MW-22	Water	03/29/16 11:22	03/31/16 11:05
680-123585-17	MW-18BR	Water	03/29/16 12:00	03/31/16 11:05
680-123585-18	MW-16OB	Water	03/29/16 12:40	03/31/16 11:05
680-123585-19	MW-3D	Water	03/29/16 13:30	03/31/16 11:05
680-123585-20	MW-3	Water	03/29/16 14:00	03/31/16 11:05
680-123585-21	MW-5	Water	03/29/16 14:35	03/31/16 11:05
680-123585-22	MW-1	Water	03/29/16 15:32	03/31/16 11:05
680-123585-23	FB-1	Water	03/29/16 15:27	03/31/16 11:05
680-123585-24	MW-7	Water	03/29/16 18:00	03/31/16 11:05
680-123585-25	IDW	Water	03/29/16 00:00	03/31/16 11:05
680-123585-26	DUP-1	Water	03/29/16 00:00	03/31/16 11:05
680-123585-27	TRIP BLANK	Water	03/28/16 00:00	03/31/16 11:05

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-24 — Lab Sample ID: 680-123585-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	67		5.0		ug/L	5		8260B	Total/NA
1,1-Dichloroethene	44		5.0		ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	740		5.0		ug/L	5		8260B	Total/NA
Trichloroethene	130		5.0		ug/L	5		8260B	Total/NA
Benzene	13		5.0		ug/L	5		8260B	Total/NA
Tetrachloroethene	170		5.0		ug/L	5		8260B	Total/NA

Client Sample ID: MW-26 — Lab Sample ID: 680-123585-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	140		2.0		ug/L	2		8260B	Total/NA
1,1-Dichloroethene	16		2.0		ug/L	2		8260B	Total/NA
cis-1,2-Dichloroethene	390		2.0		ug/L	2		8260B	Total/NA
Trichloroethene	3.1		2.0		ug/L	2		8260B	Total/NA
Benzene	5.7		2.0		ug/L	2		8260B	Total/NA

Client Sample ID: MW-23 — Lab Sample ID: 680-123585-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	58		2.0		ug/L	2		8260B	Total/NA
1,1-Dichloroethene	17		2.0		ug/L	2		8260B	Total/NA
Trichloroethene	27		2.0		ug/L	2		8260B	Total/NA
Benzene	6.2		2.0		ug/L	2		8260B	Total/NA
Tetrachloroethene	29		2.0		ug/L	2		8260B	Total/NA
cis-1,2-Dichloroethene - DL	520		5.0		ug/L	5		8260B	Total/NA

Client Sample ID: MW-23D — Lab Sample ID: 680-123585-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	63		20		ug/L	20		8260B	Total/NA
cis-1,2-Dichloroethene	68		20		ug/L	20		8260B	Total/NA
Carbon tetrachloride	28		20		ug/L	20		8260B	Total/NA
Trichloroethene	660		20		ug/L	20		8260B	Total/NA
Tetrachloroethene	1600		20		ug/L	20		8260B	Total/NA

Client Sample ID: MW-23BR — Lab Sample ID: 680-123585-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	16		2.0		ug/L	2		8260B	Total/NA
cis-1,2-Dichloroethene	5.5		2.0		ug/L	2		8260B	Total/NA
Carbon tetrachloride	2.4		2.0		ug/L	2		8260B	Total/NA
Trichloroethene	120		2.0		ug/L	2		8260B	Total/NA
Tetrachloroethene	43		2.0		ug/L	2		8260B	Total/NA

Client Sample ID: SWS-3 — Lab Sample ID: 680-123585-6

No Detections.

Client Sample ID: SWS-2 — Lab Sample ID: 680-123585-7

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: SWS-1 — Lab Sample ID: 680-123585-8

No Detections.

Client Sample ID: MW-25 — Lab Sample ID: 680-123585-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	1.1		1.0		ug/L	1		8260B	Total/NA
Trichloroethene	1.6		1.0		ug/L	1		8260B	Total/NA
Tetrachloroethene	5.2		1.0		ug/L	1		8260B	Total/NA

Client Sample ID: MW-14OB — Lab Sample ID: 680-123585-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	110		20		ug/L	20		8260B	Total/NA
cis-1,2-Dichloroethene	400		20		ug/L	20		8260B	Total/NA
Carbon tetrachloride	21		20		ug/L	20		8260B	Total/NA
Trichloroethene	660		20		ug/L	20		8260B	Total/NA
Benzene	22		20		ug/L	20		8260B	Total/NA
Tetrachloroethene	2500		20		ug/L	20		8260B	Total/NA

Client Sample ID: MW-14TZ — Lab Sample ID: 680-123585-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	27		20		ug/L	20		8260B	Total/NA
Trichloroethene	200		20		ug/L	20		8260B	Total/NA
Tetrachloroethene	1000		20		ug/L	20		8260B	Total/NA

Client Sample ID: MW-8R — Lab Sample ID: 680-123585-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	16		5.0		ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	110		5.0		ug/L	5		8260B	Total/NA
Trichloroethene	85		5.0		ug/L	5		8260B	Total/NA
Tetrachloroethene	340		5.0		ug/L	5		8260B	Total/NA

Client Sample ID: EB-1 — Lab Sample ID: 680-123585-13

No Detections.

Client Sample ID: MW-8DR — Lab Sample ID: 680-123585-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	410		200		ug/L	200		8260B	Total/NA
Trichloroethene	550		200		ug/L	200		8260B	Total/NA
Tetrachloroethene	11000		200		ug/L	200		8260B	Total/NA

Client Sample ID: MW-12D — Lab Sample ID: 680-123585-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	47		5.0		ug/L	5		8260B	Total/NA
Trichloroethene	71		5.0		ug/L	5		8260B	Total/NA
Tetrachloroethene	200		5.0		ug/L	5		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-22 — Lab Sample ID: 680-123585-16

No Detections.

Client Sample ID: MW-18BR — Lab Sample ID: 680-123585-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	23		10		ug/L	10		8260B	Total/NA
cis-1,2-Dichloroethene	12		10		ug/L	10		8260B	Total/NA
Trichloroethene	310		10		ug/L	10		8260B	Total/NA
Tetrachloroethene	640		10		ug/L	10		8260B	Total/NA

Client Sample ID: MW-16OB — Lab Sample ID: 680-123585-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.3		1.0		ug/L	1		8260B	Total/NA
Tetrachloroethene	18		1.0		ug/L	1		8260B	Total/NA

Client Sample ID: MW-3D — Lab Sample ID: 680-123585-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	43		10		ug/L	10		8260B	Total/NA
cis-1,2-Dichloroethene	88		10		ug/L	10		8260B	Total/NA
Trichloroethene	190		10		ug/L	10		8260B	Total/NA
Tetrachloroethene	530		10		ug/L	10		8260B	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 680-123585-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	60		25		ug/L	25		8260B	Total/NA
cis-1,2-Dichloroethene	510		25		ug/L	25		8260B	Total/NA
1,1,1-Trichloroethane	36		25		ug/L	25		8260B	Total/NA
Trichloroethene	400		25		ug/L	25		8260B	Total/NA
Tetrachloroethene	2400		25		ug/L	25		8260B	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 680-123585-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	2300		500		ug/L	500		8260B	Total/NA
Tetrachloroethene	42000		500		ug/L	500		8260B	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 680-123585-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	220		50		ug/L	50		8260B	Total/NA
cis-1,2-Dichloroethene	440		50		ug/L	50		8260B	Total/NA
1,1,1-Trichloroethane	460		50		ug/L	50		8260B	Total/NA
Trichloroethene	530		50		ug/L	50		8260B	Total/NA
Tetrachloroethene	5700		50		ug/L	50		8260B	Total/NA

Client Sample ID: FB-1 — Lab Sample ID: 680-123585-23

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-7 — Lab Sample ID: 680-123585-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	400		50		ug/L	50		8260B	Total/NA
1,1-Dichloroethane	200		50		ug/L	50		8260B	Total/NA
cis-1,2-Dichloroethene	4900		50		ug/L	50		8260B	Total/NA
1,1,1-Trichloroethane	1200		50		ug/L	50		8260B	Total/NA
Trichloroethene	2400		50		ug/L	50		8260B	Total/NA
Tetrachloroethene - DL	12000		100		ug/L	100		8260B	Total/NA

Client Sample ID: IDW — Lab Sample ID: 680-123585-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	84		20		ug/L	20		8260B	Total/NA
Trichloroethene	100		20		ug/L	20		8260B	Total/NA
Tetrachloroethene	840		20		ug/L	20		8260B	Total/NA

Client Sample ID: DUP-1 — Lab Sample ID: 680-123585-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	380		100		ug/L	100		8260B	Total/NA
Trichloroethene	610		100		ug/L	100		8260B	Total/NA
Tetrachloroethene	14000		100		ug/L	100		8260B	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 680-123585-27

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-24

Date Collected: 03/28/16 14:28
Date Received: 03/31/16 11:05

Lab Sample ID: 680-123585-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<5.0		5.0		ug/L			04/05/16 15:52	5
Bromomethane	<25		25		ug/L			04/05/16 15:52	5
Vinyl chloride	**67**		5.0		ug/L			04/05/16 15:52	5
Chloroethane	<25		25		ug/L			04/05/16 15:52	5
Methylene Chloride	<25		25		ug/L			04/05/16 15:52	5
Acetone	<50		50		ug/L			04/05/16 15:52	5
Carbon disulfide	<10		10		ug/L			04/05/16 15:52	5
1,1-Dichloroethene	**44**		5.0		ug/L			04/05/16 15:52	5
1,1-Dichloroethane	<5.0		5.0		ug/L			04/05/16 15:52	5
cis-1,2-Dichloroethene	**740**		5.0		ug/L			04/05/16 15:52	5
trans-1,2-Dichloroethene	<5.0		5.0		ug/L			04/05/16 15:52	5
Chloroform	<5.0		5.0		ug/L			04/05/16 15:52	5
1,2-Dichloroethane	<5.0		5.0		ug/L			04/05/16 15:52	5
2-Butanone (MEK)	<50		50		ug/L			04/05/16 15:52	5
1,1,1-Trichloroethane	<5.0		5.0		ug/L			04/05/16 15:52	5
Carbon tetrachloride	<5.0		5.0		ug/L			04/05/16 15:52	5
Dichlorobromomethane	<5.0		5.0		ug/L			04/05/16 15:52	5
1,1,2,2-Tetrachloroethane	<5.0		5.0		ug/L			04/05/16 15:52	5
1,2-Dichloropropane	<5.0		5.0		ug/L			04/05/16 15:52	5
trans-1,3-Dichloropropene	<5.0		5.0		ug/L			04/05/16 15:52	5
Trichloroethene	**130**		5.0		ug/L			04/05/16 15:52	5
Chlorodibromomethane	<5.0		5.0		ug/L			04/05/16 15:52	5
1,1,2-Trichloroethane	<5.0		5.0		ug/L			04/05/16 15:52	5
Benzene	**13**		5.0		ug/L			04/05/16 15:52	5
cis-1,3-Dichloropropene	<5.0		5.0		ug/L			04/05/16 15:52	5
Bromoform	<5.0		5.0		ug/L			04/05/16 15:52	5
2-Hexanone	<50		50		ug/L			04/05/16 15:52	5
4-Methyl-2-pentanone (MIBK)	<50		50		ug/L			04/05/16 15:52	5
Tetrachloroethene	**170**		5.0		ug/L			04/05/16 15:52	5
Toluene	<5.0		5.0		ug/L			04/05/16 15:52	5
Chlorobenzene	<5.0		5.0		ug/L			04/05/16 15:52	5
Ethylbenzene	<5.0		5.0		ug/L			04/05/16 15:52	5
Styrene	<5.0		5.0		ug/L			04/05/16 15:52	5
Xylenes, Total	<5.0		5.0		ug/L			04/05/16 15:52	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*70 - 130*		*04/05/16 15:52*	*5*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*04/05/16 15:52*	*5*
Dibromofluoromethane (Surr)	*92*		*70 - 130*		*04/05/16 15:52*	*5*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*04/05/16 15:52*	*5*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-26

Lab Sample ID: 680-123585-2

Date Collected: 03/28/16 14:30
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<2.0		2.0		ug/L			04/05/16 18:21	2
Bromomethane	<10		10		ug/L			04/05/16 18:21	2
Vinyl chloride	**140**		2.0		ug/L			04/05/16 18:21	2
Chloroethane	<10		10		ug/L			04/05/16 18:21	2
Methylene Chloride	<10		10		ug/L			04/05/16 18:21	2
Acetone	<20		20		ug/L			04/05/16 18:21	2
Carbon disulfide	<4.0		4.0		ug/L			04/05/16 18:21	2
1,1-Dichloroethene	**16**		2.0		ug/L			04/05/16 18:21	2
1,1-Dichloroethane	<2.0		2.0		ug/L			04/05/16 18:21	2
cis-1,2-Dichloroethene	**390**		2.0		ug/L			04/05/16 18:21	2
trans-1,2-Dichloroethene	<2.0		2.0		ug/L			04/05/16 18:21	2
Chloroform	<2.0		2.0		ug/L			04/05/16 18:21	2
1,2-Dichloroethane	<2.0		2.0		ug/L			04/05/16 18:21	2
2-Butanone (MEK)	<20		20		ug/L			04/05/16 18:21	2
1,1,1-Trichloroethane	<2.0		2.0		ug/L			04/05/16 18:21	2
Carbon tetrachloride	<2.0		2.0		ug/L			04/05/16 18:21	2
Dichlorobromomethane	<2.0		2.0		ug/L			04/05/16 18:21	2
1,1,2,2-Tetrachloroethane	<2.0		2.0		ug/L			04/05/16 18:21	2
1,2-Dichloropropane	<2.0		2.0		ug/L			04/05/16 18:21	2
trans-1,3-Dichloropropene	<2.0		2.0		ug/L			04/05/16 18:21	2
Trichloroethene	**3.1**		2.0		ug/L			04/05/16 18:21	2
Chlorodibromomethane	<2.0		2.0		ug/L			04/05/16 18:21	2
1,1,2-Trichloroethane	<2.0		2.0		ug/L			04/05/16 18:21	2
Benzene	**5.7**		2.0		ug/L			04/05/16 18:21	2
cis-1,3-Dichloropropene	<2.0		2.0		ug/L			04/05/16 18:21	2
Bromoform	<2.0		2.0		ug/L			04/05/16 18:21	2
2-Hexanone	<20		20		ug/L			04/05/16 18:21	2
4-Methyl-2-pentanone (MIBK)	<20		20		ug/L			04/05/16 18:21	2
Tetrachloroethene	<2.0		2.0		ug/L			04/05/16 18:21	2
Toluene	<2.0		2.0		ug/L			04/05/16 18:21	2
Chlorobenzene	<2.0		2.0		ug/L			04/05/16 18:21	2
Ethylbenzene	<2.0		2.0		ug/L			04/05/16 18:21	2
Styrene	<2.0		2.0		ug/L			04/05/16 18:21	2
Xylenes, Total	<2.0		2.0		ug/L			04/05/16 18:21	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*04/05/16 18:21*	*2*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*04/05/16 18:21*	*2*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*04/05/16 18:21*	*2*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*04/05/16 18:21*	*2*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-23

Date Collected: 03/28/16 14:50
Date Received: 03/31/16 11:05

Lab Sample ID: 680-123585-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<2.0		2.0		ug/L			04/05/16 16:35	2
Bromomethane	<10		10		ug/L			04/05/16 16:35	2
Vinyl chloride	**58**		2.0		ug/L			04/05/16 16:35	2
Chloroethane	<10		10		ug/L			04/05/16 16:35	2
Methylene Chloride	<10		10		ug/L			04/05/16 16:35	2
Acetone	<20		20		ug/L			04/05/16 16:35	2
Carbon disulfide	<4.0		4.0		ug/L			04/05/16 16:35	2
1,1-Dichloroethene	**17**		2.0		ug/L			04/05/16 16:35	2
1,1-Dichloroethane	<2.0		2.0		ug/L			04/05/16 16:35	2
trans-1,2-Dichloroethene	<2.0		2.0		ug/L			04/05/16 16:35	2
Chloroform	<2.0		2.0		ug/L			04/05/16 16:35	2
1,2-Dichloroethane	<2.0		2.0		ug/L			04/05/16 16:35	2
2-Butanone (MEK)	<20		20		ug/L			04/05/16 16:35	2
1,1,1-Trichloroethane	<2.0		2.0		ug/L			04/05/16 16:35	2
Carbon tetrachloride	<2.0		2.0		ug/L			04/05/16 16:35	2
Dichlorobromomethane	<2.0		2.0		ug/L			04/05/16 16:35	2
1,1,2,2-Tetrachloroethane	<2.0		2.0		ug/L			04/05/16 16:35	2
1,2-Dichloropropane	<2.0		2.0		ug/L			04/05/16 16:35	2
trans-1,3-Dichloropropene	<2.0		2.0		ug/L			04/05/16 16:35	2
Trichloroethene	**27**		2.0		ug/L			04/05/16 16:35	2
Chlorodibromomethane	<2.0		2.0		ug/L			04/05/16 16:35	2
1,1,2-Trichloroethane	<2.0		2.0		ug/L			04/05/16 16:35	2
Benzene	**6.2**		2.0		ug/L			04/05/16 16:35	2
cis-1,3-Dichloropropene	<2.0		2.0		ug/L			04/05/16 16:35	2
Bromoform	<2.0		2.0		ug/L			04/05/16 16:35	2
2-Hexanone	<20		20		ug/L			04/05/16 16:35	2
4-Methyl-2-pentanone (MIBK)	<20		20		ug/L			04/05/16 16:35	2
Tetrachloroethene	**29**		2.0		ug/L			04/05/16 16:35	2
Toluene	<2.0		2.0		ug/L			04/05/16 16:35	2
Chlorobenzene	<2.0		2.0		ug/L			04/05/16 16:35	2
Ethylbenzene	<2.0		2.0		ug/L			04/05/16 16:35	2
Styrene	<2.0		2.0		ug/L			04/05/16 16:35	2
Xylenes, Total	<2.0		2.0		ug/L			04/05/16 16:35	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*70 - 130*		*04/05/16 16:35*	*2*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*04/05/16 16:35*	*2*
Dibromofluoromethane (Surr)	*92*		*70 - 130*		*04/05/16 16:35*	*2*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 16:35*	*2*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**520**		5.0		ug/L			04/06/16 12:20	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*70 - 130*		*04/06/16 12:20*	*5*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*		*04/06/16 12:20*	*5*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*04/06/16 12:20*	*5*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*		*04/06/16 12:20*	*5*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-23D

Lab Sample ID: 680-123585-4

Date Collected: 03/28/16 14:55
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<20		20		ug/L			04/05/16 16:56	20
Bromomethane	<100		100		ug/L			04/05/16 16:56	20
Vinyl chloride	<20		20		ug/L			04/05/16 16:56	20
Chloroethane	<100		100		ug/L			04/05/16 16:56	20
Methylene Chloride	<100		100		ug/L			04/05/16 16:56	20
Acetone	<200		200		ug/L			04/05/16 16:56	20
Carbon disulfide	<40		40		ug/L			04/05/16 16:56	20
1,1-Dichloroethene	**63**		20		ug/L			04/05/16 16:56	20
1,1-Dichloroethane	<20		20		ug/L			04/05/16 16:56	20
cis-1,2-Dichloroethene	**68**		20		ug/L			04/05/16 16:56	20
trans-1,2-Dichloroethene	<20		20		ug/L			04/05/16 16:56	20
Chloroform	<20		20		ug/L			04/05/16 16:56	20
1,2-Dichloroethane	<20		20		ug/L			04/05/16 16:56	20
2-Butanone (MEK)	<200		200		ug/L			04/05/16 16:56	20
1,1,1-Trichloroethane	<20		20		ug/L			04/05/16 16:56	20
Carbon tetrachloride	**28**		20		ug/L			04/05/16 16:56	20
Dichlorobromomethane	<20		20		ug/L			04/05/16 16:56	20
1,1,2,2-Tetrachloroethane	<20		20		ug/L			04/05/16 16:56	20
1,2-Dichloropropane	<20		20		ug/L			04/05/16 16:56	20
trans-1,3-Dichloropropene	<20		20		ug/L			04/05/16 16:56	20
Trichloroethene	**660**		20		ug/L			04/05/16 16:56	20
Chlorodibromomethane	<20		20		ug/L			04/05/16 16:56	20
1,1,2-Trichloroethane	<20		20		ug/L			04/05/16 16:56	20
Benzene	<20		20		ug/L			04/05/16 16:56	20
cis-1,3-Dichloropropene	<20		20		ug/L			04/05/16 16:56	20
Bromoform	<20		20		ug/L			04/05/16 16:56	20
2-Hexanone	<200		200		ug/L			04/05/16 16:56	20
4-Methyl-2-pentanone (MIBK)	<200		200		ug/L			04/05/16 16:56	20
Tetrachloroethene	**1600**		20		ug/L			04/05/16 16:56	20
Toluene	<20		20		ug/L			04/05/16 16:56	20
Chlorobenzene	<20		20		ug/L			04/05/16 16:56	20
Ethylbenzene	<20		20		ug/L			04/05/16 16:56	20
Styrene	<20		20		ug/L			04/05/16 16:56	20
Xylenes, Total	<20		20		ug/L			04/05/16 16:56	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*04/05/16 16:56*	*20*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*		*04/05/16 16:56*	*20*
Dibromofluoromethane (Surr)	*92*		*70 - 130*		*04/05/16 16:56*	*20*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 16:56*	*20*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-23BR

Lab Sample ID: 680-123585-5

Date Collected: 03/28/16 15:00
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<2.0		2.0		ug/L			04/05/16 17:17	2
Bromomethane	<10		10		ug/L			04/05/16 17:17	2
Vinyl chloride	<2.0		2.0		ug/L			04/05/16 17:17	2
Chloroethane	<10		10		ug/L			04/05/16 17:17	2
Methylene Chloride	<10		10		ug/L			04/05/16 17:17	2
Acetone	<20		20		ug/L			04/05/16 17:17	2
Carbon disulfide	<4.0		4.0		ug/L			04/05/16 17:17	2
1,1-Dichloroethene	**16**		2.0		ug/L			04/05/16 17:17	2
1,1-Dichloroethane	<2.0		2.0		ug/L			04/05/16 17:17	2
cis-1,2-Dichloroethene	**5.5**		2.0		ug/L			04/05/16 17:17	2
trans-1,2-Dichloroethene	<2.0		2.0		ug/L			04/05/16 17:17	2
Chloroform	<2.0		2.0		ug/L			04/05/16 17:17	2
1,2-Dichloroethane	<2.0		2.0		ug/L			04/05/16 17:17	2
2-Butanone (MEK)	<20		20		ug/L			04/05/16 17:17	2
1,1,1-Trichloroethane	<2.0		2.0		ug/L			04/05/16 17:17	2
Carbon tetrachloride	**2.4**		2.0		ug/L			04/05/16 17:17	2
Dichlorobromomethane	<2.0		2.0		ug/L			04/05/16 17:17	2
1,1,2,2-Tetrachloroethane	<2.0		2.0		ug/L			04/05/16 17:17	2
1,2-Dichloropropane	<2.0		2.0		ug/L			04/05/16 17:17	2
trans-1,3-Dichloropropene	<2.0		2.0		ug/L			04/05/16 17:17	2
Trichloroethene	**120**		2.0		ug/L			04/05/16 17:17	2
Chlorodibromomethane	<2.0		2.0		ug/L			04/05/16 17:17	2
1,1,2-Trichloroethane	<2.0		2.0		ug/L			04/05/16 17:17	2
Benzene	<2.0		2.0		ug/L			04/05/16 17:17	2
cis-1,3-Dichloropropene	<2.0		2.0		ug/L			04/05/16 17:17	2
Bromoform	<2.0		2.0		ug/L			04/05/16 17:17	2
2-Hexanone	<20		20		ug/L			04/05/16 17:17	2
4-Methyl-2-pentanone (MIBK)	<20		20		ug/L			04/05/16 17:17	2
Tetrachloroethene	**43**		2.0		ug/L			04/05/16 17:17	2
Toluene	<2.0		2.0		ug/L			04/05/16 17:17	2
Chlorobenzene	<2.0		2.0		ug/L			04/05/16 17:17	2
Ethylbenzene	<2.0		2.0		ug/L			04/05/16 17:17	2
Styrene	<2.0		2.0		ug/L			04/05/16 17:17	2
Xylenes, Total	<2.0		2.0		ug/L			04/05/16 17:17	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*70 - 130*		*04/05/16 17:17*	*2*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*04/05/16 17:17*	*2*
Dibromofluoromethane (Surr)	*93*		*70 - 130*		*04/05/16 17:17*	*2*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 17:17*	*2*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: SWS-3

Lab Sample ID: 680-123585-6

Date Collected: 03/28/16 15:15
Date Received: 03/31/16 11:05

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 14:28	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 14:28	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 14:28	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 14:28	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 14:28	1
Acetone	<10		10		ug/L			04/05/16 14:28	1
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 14:28	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 14:28	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 14:28	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 14:28	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 14:28	1
Chloroform	<1.0		1.0		ug/L			04/05/16 14:28	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 14:28	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 14:28	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 14:28	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 14:28	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 14:28	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 14:28	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 14:28	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 14:28	1
Trichloroethene	<1.0		1.0		ug/L			04/05/16 14:28	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 14:28	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 14:28	1
Benzene	<1.0		1.0		ug/L			04/05/16 14:28	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 14:28	1
Bromoform	<1.0		1.0		ug/L			04/05/16 14:28	1
2-Hexanone	<10		10		ug/L			04/05/16 14:28	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 14:28	1
Tetrachloroethene	<1.0		1.0		ug/L			04/05/16 14:28	1
Toluene	<1.0		1.0		ug/L			04/05/16 14:28	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 14:28	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 14:28	1
Styrene	<1.0		1.0		ug/L			04/05/16 14:28	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*70 - 130*		*04/05/16 14:28*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*04/05/16 14:28*	*1*
Dibromofluoromethane (Surr)	*90*		*70 - 130*		*04/05/16 14:28*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 14:28*	*1*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: SWS-2

Lab Sample ID: 680-123585-7

Date Collected: 03/28/16 15:30
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 14:49	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 14:49	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 14:49	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 14:49	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 14:49	1
Acetone	<10		10		ug/L			04/05/16 14:49	1
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 14:49	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 14:49	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 14:49	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 14:49	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 14:49	1
Chloroform	<1.0		1.0		ug/L			04/05/16 14:49	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 14:49	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 14:49	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 14:49	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 14:49	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 14:49	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 14:49	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 14:49	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 14:49	1
Trichloroethene	<1.0		1.0		ug/L			04/05/16 14:49	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 14:49	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 14:49	1
Benzene	<1.0		1.0		ug/L			04/05/16 14:49	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 14:49	1
Bromoform	<1.0		1.0		ug/L			04/05/16 14:49	1
2-Hexanone	<10		10		ug/L			04/05/16 14:49	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 14:49	1
Tetrachloroethene	<1.0		1.0		ug/L			04/05/16 14:49	1
Toluene	<1.0		1.0		ug/L			04/05/16 14:49	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 14:49	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 14:49	1
Styrene	<1.0		1.0		ug/L			04/05/16 14:49	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*70 - 130*		*04/05/16 14:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*04/05/16 14:49*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*04/05/16 14:49*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*04/05/16 14:49*	*1*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: SWS-1

Lab Sample ID: 680-123585-8

Date Collected: 03/28/16 15:45
Date Received: 03/31/16 11:05

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 15:10	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 15:10	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 15:10	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 15:10	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 15:10	1
Acetone	<10		10		ug/L			04/05/16 15:10	1
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 15:10	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 15:10	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 15:10	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 15:10	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 15:10	1
Chloroform	<1.0		1.0		ug/L			04/05/16 15:10	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 15:10	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 15:10	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 15:10	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 15:10	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 15:10	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 15:10	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 15:10	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 15:10	1
Trichloroethene	<1.0		1.0		ug/L			04/05/16 15:10	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 15:10	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 15:10	1
Benzene	<1.0		1.0		ug/L			04/05/16 15:10	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 15:10	1
Bromoform	<1.0		1.0		ug/L			04/05/16 15:10	1
2-Hexanone	<10		10		ug/L			04/05/16 15:10	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 15:10	1
Tetrachloroethene	<1.0		1.0		ug/L			04/05/16 15:10	1
Toluene	<1.0		1.0		ug/L			04/05/16 15:10	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 15:10	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 15:10	1
Styrene	<1.0		1.0		ug/L			04/05/16 15:10	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*70 - 130*		*04/05/16 15:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*04/05/16 15:10*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*		*04/05/16 15:10*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*04/05/16 15:10*	*1*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-25

Lab Sample ID: 680-123585-9

Date Collected: 03/28/16 16:15
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 15:31	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 15:31	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 15:31	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 15:31	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 15:31	1
Acetone	<10		10		ug/L			04/05/16 15:31	1
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 15:31	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 15:31	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 15:31	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 15:31	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 15:31	1
Chloroform	**1.1**		1.0		ug/L			04/05/16 15:31	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 15:31	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 15:31	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 15:31	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 15:31	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 15:31	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 15:31	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 15:31	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 15:31	1
Trichloroethene	**1.6**		1.0		ug/L			04/05/16 15:31	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 15:31	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 15:31	1
Benzene	<1.0		1.0		ug/L			04/05/16 15:31	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 15:31	1
Bromoform	<1.0		1.0		ug/L			04/05/16 15:31	1
2-Hexanone	<10		10		ug/L			04/05/16 15:31	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 15:31	1
Tetrachloroethene	**5.2**		1.0		ug/L			04/05/16 15:31	1
Toluene	<1.0		1.0		ug/L			04/05/16 15:31	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 15:31	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 15:31	1
Styrene	<1.0		1.0		ug/L			04/05/16 15:31	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*70 - 130*		*04/05/16 15:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*04/05/16 15:31*	*1*
Dibromofluoromethane (Surr)	*92*		*70 - 130*		*04/05/16 15:31*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 15:31*	*1*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-14OB

Lab Sample ID: 680-123585-10

Date Collected: 03/28/16 17:55

Matrix: Water

Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<20		20		ug/L			04/05/16 17:38	20
Bromomethane	<100		100		ug/L			04/05/16 17:38	20
Vinyl chloride	<20		20		ug/L			04/05/16 17:38	20
Chloroethane	<100		100		ug/L			04/05/16 17:38	20
Methylene Chloride	<100		100		ug/L			04/05/16 17:38	20
Acetone	<200		200		ug/L			04/05/16 17:38	20
Carbon disulfide	<40		40		ug/L			04/05/16 17:38	20
1,1-Dichloroethene	**110**		20		ug/L			04/05/16 17:38	20
1,1-Dichloroethane	<20		20		ug/L			04/05/16 17:38	20
cis-1,2-Dichloroethene	**400**		20		ug/L			04/05/16 17:38	20
trans-1,2-Dichloroethene	<20		20		ug/L			04/05/16 17:38	20
Chloroform	<20		20		ug/L			04/05/16 17:38	20
1,2-Dichloroethane	<20		20		ug/L			04/05/16 17:38	20
2-Butanone (MEK)	<200		200		ug/L			04/05/16 17:38	20
1,1,1-Trichloroethane	<20		20		ug/L			04/05/16 17:38	20
Carbon tetrachloride	**21**		20		ug/L			04/05/16 17:38	20
Dichlorobromomethane	<20		20		ug/L			04/05/16 17:38	20
1,1,2,2-Tetrachloroethane	<20		20		ug/L			04/05/16 17:38	20
1,2-Dichloropropane	<20		20		ug/L			04/05/16 17:38	20
trans-1,3-Dichloropropene	<20		20		ug/L			04/05/16 17:38	20
Trichloroethene	**660**		20		ug/L			04/05/16 17:38	20
Chlorodibromomethane	<20		20		ug/L			04/05/16 17:38	20
1,1,2-Trichloroethane	<20		20		ug/L			04/05/16 17:38	20
Benzene	**22**		20		ug/L			04/05/16 17:38	20
cis-1,3-Dichloropropene	<20		20		ug/L			04/05/16 17:38	20
Bromoform	<20		20		ug/L			04/05/16 17:38	20
2-Hexanone	<200		200		ug/L			04/05/16 17:38	20
4-Methyl-2-pentanone (MIBK)	<200		200		ug/L			04/05/16 17:38	20
Tetrachloroethene	**2500**		20		ug/L			04/05/16 17:38	20
Toluene	<20		20		ug/L			04/05/16 17:38	20
Chlorobenzene	<20		20		ug/L			04/05/16 17:38	20
Ethylbenzene	<20		20		ug/L			04/05/16 17:38	20
Styrene	<20		20		ug/L			04/05/16 17:38	20
Xylenes, Total	<20		20		ug/L			04/05/16 17:38	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*04/05/16 17:38*	*20*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*04/05/16 17:38*	*20*
Dibromofluoromethane (Surr)	*92*		*70 - 130*		*04/05/16 17:38*	*20*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*04/05/16 17:38*	*20*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-14TZ

Lab Sample ID: 680-123585-11

Date Collected: 03/28/16 18:35

Matrix: Water

Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<20		20		ug/L			04/05/16 17:59	20
Bromomethane	<100		100		ug/L			04/05/16 17:59	20
Vinyl chloride	<20		20		ug/L			04/05/16 17:59	20
Chloroethane	<100		100		ug/L			04/05/16 17:59	20
Methylene Chloride	<100		100		ug/L			04/05/16 17:59	20
Acetone	<200		200		ug/L			04/05/16 17:59	20
Carbon disulfide	<40		40		ug/L			04/05/16 17:59	20
1,1-Dichloroethene	<20		20		ug/L			04/05/16 17:59	20
1,1-Dichloroethane	<20		20		ug/L			04/05/16 17:59	20
cis-1,2-Dichloroethene	**27**		20		ug/L			04/05/16 17:59	20
trans-1,2-Dichloroethene	<20		20		ug/L			04/05/16 17:59	20
Chloroform	<20		20		ug/L			04/05/16 17:59	20
1,2-Dichloroethane	<20		20		ug/L			04/05/16 17:59	20
2-Butanone (MEK)	<200		200		ug/L			04/05/16 17:59	20
1,1,1-Trichloroethane	<20		20		ug/L			04/05/16 17:59	20
Carbon tetrachloride	<20		20		ug/L			04/05/16 17:59	20
Dichlorobromomethane	<20		20		ug/L			04/05/16 17:59	20
1,1,2,2-Tetrachloroethane	<20		20		ug/L			04/05/16 17:59	20
1,2-Dichloropropane	<20		20		ug/L			04/05/16 17:59	20
trans-1,3-Dichloropropene	<20		20		ug/L			04/05/16 17:59	20
Trichloroethene	**200**		20		ug/L			04/05/16 17:59	20
Chlorodibromomethane	<20		20		ug/L			04/05/16 17:59	20
1,1,2-Trichloroethane	<20		20		ug/L			04/05/16 17:59	20
Benzene	<20		20		ug/L			04/05/16 17:59	20
cis-1,3-Dichloropropene	<20		20		ug/L			04/05/16 17:59	20
Bromoform	<20		20		ug/L			04/05/16 17:59	20
2-Hexanone	<200		200		ug/L			04/05/16 17:59	20
4-Methyl-2-pentanone (MIBK)	<200		200		ug/L			04/05/16 17:59	20
Tetrachloroethene	**1000**		20		ug/L			04/05/16 17:59	20
Toluene	<20		20		ug/L			04/05/16 17:59	20
Chlorobenzene	<20		20		ug/L			04/05/16 17:59	20
Ethylbenzene	<20		20		ug/L			04/05/16 17:59	20
Styrene	<20		20		ug/L			04/05/16 17:59	20
Xylenes, Total	<20		20		ug/L			04/05/16 17:59	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*04/05/16 17:59*	*20*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*04/05/16 17:59*	*20*
Dibromofluoromethane (Surr)	*92*		*70 - 130*		*04/05/16 17:59*	*20*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 17:59*	*20*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-8R

Lab Sample ID: 680-123585-12

Date Collected: 03/29/16 08:50

Matrix: Water

Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<5.0		5.0		ug/L			04/05/16 13:12	5
Bromomethane	<25		25		ug/L			04/05/16 13:12	5
Vinyl chloride	<5.0		5.0		ug/L			04/05/16 13:12	5
Chloroethane	<25		25		ug/L			04/05/16 13:12	5
Methylene Chloride	<25		25		ug/L			04/05/16 13:12	5
Acetone	<50		50		ug/L			04/05/16 13:12	5
Carbon disulfide	<10		10		ug/L			04/05/16 13:12	5
1,1-Dichloroethene	**16**		5.0		ug/L			04/05/16 13:12	5
1,1-Dichloroethane	<5.0		5.0		ug/L			04/05/16 13:12	5
cis-1,2-Dichloroethene	**110**		5.0		ug/L			04/05/16 13:12	5
trans-1,2-Dichloroethene	<5.0		5.0		ug/L			04/05/16 13:12	5
Chloroform	<5.0		5.0		ug/L			04/05/16 13:12	5
1,2-Dichloroethane	<5.0		5.0		ug/L			04/05/16 13:12	5
2-Butanone (MEK)	<50		50		ug/L			04/05/16 13:12	5
1,1,1-Trichloroethane	<5.0		5.0		ug/L			04/05/16 13:12	5
Carbon tetrachloride	<5.0		5.0		ug/L			04/05/16 13:12	5
Dichlorobromomethane	<5.0		5.0		ug/L			04/05/16 13:12	5
1,1,2,2-Tetrachloroethane	<5.0		5.0		ug/L			04/05/16 13:12	5
1,2-Dichloropropane	<5.0		5.0		ug/L			04/05/16 13:12	5
trans-1,3-Dichloropropene	<5.0		5.0		ug/L			04/05/16 13:12	5
Trichloroethene	**85**		5.0		ug/L			04/05/16 13:12	5
Chlorodibromomethane	<5.0		5.0		ug/L			04/05/16 13:12	5
1,1,2-Trichloroethane	<5.0		5.0		ug/L			04/05/16 13:12	5
Benzene	<5.0		5.0		ug/L			04/05/16 13:12	5
cis-1,3-Dichloropropene	<5.0		5.0		ug/L			04/05/16 13:12	5
Bromoform	<5.0		5.0		ug/L			04/05/16 13:12	5
2-Hexanone	<50		50		ug/L			04/05/16 13:12	5
4-Methyl-2-pentanone (MIBK)	<50		50		ug/L			04/05/16 13:12	5
Tetrachloroethene	**340**		5.0		ug/L			04/05/16 13:12	5
Toluene	<5.0		5.0		ug/L			04/05/16 13:12	5
Chlorobenzene	<5.0		5.0		ug/L			04/05/16 13:12	5
Ethylbenzene	<5.0		5.0		ug/L			04/05/16 13:12	5
Styrene	<5.0		5.0		ug/L			04/05/16 13:12	5
Xylenes, Total	<5.0		5.0		ug/L			04/05/16 13:12	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*04/05/16 13:12*	*5*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*		*04/05/16 13:12*	*5*
Dibromofluoromethane (Surr)	*113*		*70 - 130*		*04/05/16 13:12*	*5*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 13:12*	*5*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: EB-1

Lab Sample ID: 680-123585-13

Date Collected: 03/29/16 08:59
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 11:41	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 11:41	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 11:41	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 11:41	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 11:41	1
Acetone	<10		10		ug/L			04/05/16 11:41	1
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 11:41	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:41	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 11:41	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:41	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:41	1
Chloroform	<1.0		1.0		ug/L			04/05/16 11:41	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 11:41	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 11:41	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 11:41	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 11:41	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 11:41	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 11:41	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 11:41	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 11:41	1
Trichloroethene	<1.0		1.0		ug/L			04/05/16 11:41	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 11:41	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 11:41	1
Benzene	<1.0		1.0		ug/L			04/05/16 11:41	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 11:41	1
Bromoform	<1.0		1.0		ug/L			04/05/16 11:41	1
2-Hexanone	<10		10		ug/L			04/05/16 11:41	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 11:41	1
Tetrachloroethene	<1.0		1.0		ug/L			04/05/16 11:41	1
Toluene	<1.0		1.0		ug/L			04/05/16 11:41	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 11:41	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 11:41	1
Styrene	<1.0		1.0		ug/L			04/05/16 11:41	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 11:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*04/05/16 11:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*04/05/16 11:41*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*04/05/16 11:41*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 11:41*	*1*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-8DR

Lab Sample ID: 680-123585-14

Date Collected: 03/29/16 09:32
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<200		200		ug/L			04/05/16 13:35	200
Bromomethane	<1000		1000		ug/L			04/05/16 13:35	200
Vinyl chloride	<200		200		ug/L			04/05/16 13:35	200
Chloroethane	<1000		1000		ug/L			04/05/16 13:35	200
Methylene Chloride	<1000		1000		ug/L			04/05/16 13:35	200
Acetone	<2000		2000		ug/L			04/05/16 13:35	200
Carbon disulfide	<400		400		ug/L			04/05/16 13:35	200
1,1-Dichloroethene	<200		200		ug/L			04/05/16 13:35	200
1,1-Dichloroethane	<200		200		ug/L			04/05/16 13:35	200
cis-1,2-Dichloroethene	**410**		200		ug/L			04/05/16 13:35	200
trans-1,2-Dichloroethene	<200		200		ug/L			04/05/16 13:35	200
Chloroform	<200		200		ug/L			04/05/16 13:35	200
1,2-Dichloroethane	<200		200		ug/L			04/05/16 13:35	200
2-Butanone (MEK)	<2000		2000		ug/L			04/05/16 13:35	200
1,1,1-Trichloroethane	<200		200		ug/L			04/05/16 13:35	200
Carbon tetrachloride	<200		200		ug/L			04/05/16 13:35	200
Dichlorobromomethane	<200		200		ug/L			04/05/16 13:35	200
1,1,2,2-Tetrachloroethane	<200		200		ug/L			04/05/16 13:35	200
1,2-Dichloropropane	<200		200		ug/L			04/05/16 13:35	200
trans-1,3-Dichloropropene	<200		200		ug/L			04/05/16 13:35	200
Trichloroethene	**550**		200		ug/L			04/05/16 13:35	200
Chlorodibromomethane	<200		200		ug/L			04/05/16 13:35	200
1,1,2-Trichloroethane	<200		200		ug/L			04/05/16 13:35	200
Benzene	<200		200		ug/L			04/05/16 13:35	200
cis-1,3-Dichloropropene	<200		200		ug/L			04/05/16 13:35	200
Bromoform	<200		200		ug/L			04/05/16 13:35	200
2-Hexanone	<2000		2000		ug/L			04/05/16 13:35	200
4-Methyl-2-pentanone (MIBK)	<2000		2000		ug/L			04/05/16 13:35	200
Tetrachloroethene	**11000**		200		ug/L			04/05/16 13:35	200
Toluene	<200		200		ug/L			04/05/16 13:35	200
Chlorobenzene	<200		200		ug/L			04/05/16 13:35	200
Ethylbenzene	<200		200		ug/L			04/05/16 13:35	200
Styrene	<200		200		ug/L			04/05/16 13:35	200
Xylenes, Total	<200		200		ug/L			04/05/16 13:35	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*04/05/16 13:35*	*200*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 130*		*04/05/16 13:35*	*200*
Dibromofluoromethane (Surr)	*107*		*70 - 130*		*04/05/16 13:35*	*200*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 13:35*	*200*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-12D

Lab Sample ID: 680-123585-15

Date Collected: 03/29/16 10:18

Matrix: Water

Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<5.0		5.0		ug/L			04/05/16 13:58	5
Bromomethane	<25		25		ug/L			04/05/16 13:58	5
Vinyl chloride	<5.0		5.0		ug/L			04/05/16 13:58	5
Chloroethane	<25		25		ug/L			04/05/16 13:58	5
Methylene Chloride	<25		25		ug/L			04/05/16 13:58	5
Acetone	<50		50		ug/L			04/05/16 13:58	5
Carbon disulfide	<10		10		ug/L			04/05/16 13:58	5
1,1-Dichloroethene	<5.0		5.0		ug/L			04/05/16 13:58	5
1,1-Dichloroethane	<5.0		5.0		ug/L			04/05/16 13:58	5
cis-1,2-Dichloroethene	**47**		5.0		ug/L			04/05/16 13:58	5
trans-1,2-Dichloroethene	<5.0		5.0		ug/L			04/05/16 13:58	5
Chloroform	<5.0		5.0		ug/L			04/05/16 13:58	5
1,2-Dichloroethane	<5.0		5.0		ug/L			04/05/16 13:58	5
2-Butanone (MEK)	<50		50		ug/L			04/05/16 13:58	5
1,1,1-Trichloroethane	<5.0		5.0		ug/L			04/05/16 13:58	5
Carbon tetrachloride	<5.0		5.0		ug/L			04/05/16 13:58	5
Dichlorobromomethane	<5.0		5.0		ug/L			04/05/16 13:58	5
1,1,2,2-Tetrachloroethane	<5.0		5.0		ug/L			04/05/16 13:58	5
1,2-Dichloropropane	<5.0		5.0		ug/L			04/05/16 13:58	5
trans-1,3-Dichloropropene	<5.0		5.0		ug/L			04/05/16 13:58	5
Trichloroethene	**71**		5.0		ug/L			04/05/16 13:58	5
Chlorodibromomethane	<5.0		5.0		ug/L			04/05/16 13:58	5
1,1,2-Trichloroethane	<5.0		5.0		ug/L			04/05/16 13:58	5
Benzene	<5.0		5.0		ug/L			04/05/16 13:58	5
cis-1,3-Dichloropropene	<5.0		5.0		ug/L			04/05/16 13:58	5
Bromoform	<5.0		5.0		ug/L			04/05/16 13:58	5
2-Hexanone	<50		50		ug/L			04/05/16 13:58	5
4-Methyl-2-pentanone (MIBK)	<50		50		ug/L			04/05/16 13:58	5
Tetrachloroethene	**200**		5.0		ug/L			04/05/16 13:58	5
Toluene	<5.0		5.0		ug/L			04/05/16 13:58	5
Chlorobenzene	<5.0		5.0		ug/L			04/05/16 13:58	5
Ethylbenzene	<5.0		5.0		ug/L			04/05/16 13:58	5
Styrene	<5.0		5.0		ug/L			04/05/16 13:58	5
Xylenes, Total	<5.0		5.0		ug/L			04/05/16 13:58	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*70 - 130*		*04/05/16 13:58*	*5*
1,2-Dichloroethane-d4 (Surr)	*120*		*70 - 130*		*04/05/16 13:58*	*5*
Dibromofluoromethane (Surr)	*117*		*70 - 130*		*04/05/16 13:58*	*5*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*04/05/16 13:58*	*5*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-22

Lab Sample ID: 680-123585-16

Date Collected: 03/29/16 11:22
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 12:49	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 12:49	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 12:49	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 12:49	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 12:49	1
Acetone	<10		10		ug/L			04/05/16 12:49	1
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 12:49	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 12:49	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 12:49	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 12:49	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 12:49	1
Chloroform	<1.0		1.0		ug/L			04/05/16 12:49	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 12:49	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 12:49	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 12:49	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 12:49	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 12:49	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 12:49	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 12:49	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 12:49	1
Trichloroethene	<1.0		1.0		ug/L			04/05/16 12:49	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 12:49	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 12:49	1
Benzene	<1.0		1.0		ug/L			04/05/16 12:49	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 12:49	1
Bromoform	<1.0		1.0		ug/L			04/05/16 12:49	1
2-Hexanone	<10		10		ug/L			04/05/16 12:49	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 12:49	1
Tetrachloroethene	<1.0		1.0		ug/L			04/05/16 12:49	1
Toluene	<1.0		1.0		ug/L			04/05/16 12:49	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 12:49	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 12:49	1
Styrene	<1.0		1.0		ug/L			04/05/16 12:49	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 12:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*04/05/16 12:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*04/05/16 12:49*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*04/05/16 12:49*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*04/05/16 12:49*	*1*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-18BR

Lab Sample ID: 680-123585-17

Date Collected: 03/29/16 12:00
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<10		10		ug/L			04/05/16 14:21	10
Bromomethane	<50		50		ug/L			04/05/16 14:21	10
Vinyl chloride	<10		10		ug/L			04/05/16 14:21	10
Chloroethane	<50		50		ug/L			04/05/16 14:21	10
Methylene Chloride	<50		50		ug/L			04/05/16 14:21	10
Acetone	<100		100		ug/L			04/05/16 14:21	10
Carbon disulfide	<20		20		ug/L			04/05/16 14:21	10
1,1-Dichloroethene	**23**		10		ug/L			04/05/16 14:21	10
1,1-Dichloroethane	<10		10		ug/L			04/05/16 14:21	10
cis-1,2-Dichloroethene	**12**		10		ug/L			04/05/16 14:21	10
trans-1,2-Dichloroethene	<10		10		ug/L			04/05/16 14:21	10
Chloroform	<10		10		ug/L			04/05/16 14:21	10
1,2-Dichloroethane	<10		10		ug/L			04/05/16 14:21	10
2-Butanone (MEK)	<100		100		ug/L			04/05/16 14:21	10
1,1,1-Trichloroethane	<10		10		ug/L			04/05/16 14:21	10
Carbon tetrachloride	<10		10		ug/L			04/05/16 14:21	10
Dichlorobromomethane	<10		10		ug/L			04/05/16 14:21	10
1,1,2,2-Tetrachloroethane	<10		10		ug/L			04/05/16 14:21	10
1,2-Dichloropropane	<10		10		ug/L			04/05/16 14:21	10
trans-1,3-Dichloropropene	<10		10		ug/L			04/05/16 14:21	10
Trichloroethene	**310**		10		ug/L			04/05/16 14:21	10
Chlorodibromomethane	<10		10		ug/L			04/05/16 14:21	10
1,1,2-Trichloroethane	<10		10		ug/L			04/05/16 14:21	10
Benzene	<10		10		ug/L			04/05/16 14:21	10
cis-1,3-Dichloropropene	<10		10		ug/L			04/05/16 14:21	10
Bromoform	<10		10		ug/L			04/05/16 14:21	10
2-Hexanone	<100		100		ug/L			04/05/16 14:21	10
4-Methyl-2-pentanone (MIBK)	<100		100		ug/L			04/05/16 14:21	10
Tetrachloroethene	**640**		10		ug/L			04/05/16 14:21	10
Toluene	<10		10		ug/L			04/05/16 14:21	10
Chlorobenzene	<10		10		ug/L			04/05/16 14:21	10
Ethylbenzene	<10		10		ug/L			04/05/16 14:21	10
Styrene	<10		10		ug/L			04/05/16 14:21	10
Xylenes, Total	<10		10		ug/L			04/05/16 14:21	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*04/05/16 14:21*	*10*
1,2-Dichloroethane-d4 (Surr)	*123*		*70 - 130*		*04/05/16 14:21*	*10*
Dibromofluoromethane (Surr)	*114*		*70 - 130*		*04/05/16 14:21*	*10*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 14:21*	*10*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-16OB

Lab Sample ID: 680-123585-18

Date Collected: 03/29/16 12:40
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 12:26	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 12:26	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 12:26	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 12:26	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 12:26	1
Acetone	<10		10		ug/L			04/05/16 12:26	1
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 12:26	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 12:26	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 12:26	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 12:26	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 12:26	1
Chloroform	<1.0		1.0		ug/L			04/05/16 12:26	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 12:26	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 12:26	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 12:26	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 12:26	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 12:26	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 12:26	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 12:26	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 12:26	1
Trichloroethene	**1.3**		1.0		ug/L			04/05/16 12:26	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 12:26	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 12:26	1
Benzene	<1.0		1.0		ug/L			04/05/16 12:26	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 12:26	1
Bromoform	<1.0		1.0		ug/L			04/05/16 12:26	1
2-Hexanone	<10		10		ug/L			04/05/16 12:26	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 12:26	1
Tetrachloroethene	**18**		1.0		ug/L			04/05/16 12:26	1
Toluene	<1.0		1.0		ug/L			04/05/16 12:26	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 12:26	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 12:26	1
Styrene	<1.0		1.0		ug/L			04/05/16 12:26	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 12:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*04/05/16 12:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*04/05/16 12:26*	*1*
Dibromofluoromethane (Surr)	*106*		*70 - 130*		*04/05/16 12:26*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 12:26*	*1*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-3D

Lab Sample ID: 680-123585-19

Date Collected: 03/29/16 13:30
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<10		10		ug/L			04/05/16 14:44	10
Bromomethane	<50		50		ug/L			04/05/16 14:44	10
Vinyl chloride	<10		10		ug/L			04/05/16 14:44	10
Chloroethane	<50		50		ug/L			04/05/16 14:44	10
Methylene Chloride	<50		50		ug/L			04/05/16 14:44	10
Acetone	<100		100		ug/L			04/05/16 14:44	10
Carbon disulfide	<20		20		ug/L			04/05/16 14:44	10
1,1-Dichloroethene	**43**		10		ug/L			04/05/16 14:44	10
1,1-Dichloroethane	<10		10		ug/L			04/05/16 14:44	10
cis-1,2-Dichloroethene	**88**		10		ug/L			04/05/16 14:44	10
trans-1,2-Dichloroethene	<10		10		ug/L			04/05/16 14:44	10
Chloroform	<10		10		ug/L			04/05/16 14:44	10
1,2-Dichloroethane	<10		10		ug/L			04/05/16 14:44	10
2-Butanone (MEK)	<100		100		ug/L			04/05/16 14:44	10
1,1,1-Trichloroethane	<10		10		ug/L			04/05/16 14:44	10
Carbon tetrachloride	<10		10		ug/L			04/05/16 14:44	10
Dichlorobromomethane	<10		10		ug/L			04/05/16 14:44	10
1,1,2,2-Tetrachloroethane	<10		10		ug/L			04/05/16 14:44	10
1,2-Dichloropropane	<10		10		ug/L			04/05/16 14:44	10
trans-1,3-Dichloropropene	<10		10		ug/L			04/05/16 14:44	10
Trichloroethene	**190**		10		ug/L			04/05/16 14:44	10
Chlorodibromomethane	<10		10		ug/L			04/05/16 14:44	10
1,1,2-Trichloroethane	<10		10		ug/L			04/05/16 14:44	10
Benzene	<10		10		ug/L			04/05/16 14:44	10
cis-1,3-Dichloropropene	<10		10		ug/L			04/05/16 14:44	10
Bromoform	<10		10		ug/L			04/05/16 14:44	10
2-Hexanone	<100		100		ug/L			04/05/16 14:44	10
4-Methyl-2-pentanone (MIBK)	<100		100		ug/L			04/05/16 14:44	10
Tetrachloroethene	**530**		10		ug/L			04/05/16 14:44	10
Toluene	<10		10		ug/L			04/05/16 14:44	10
Chlorobenzene	<10		10		ug/L			04/05/16 14:44	10
Ethylbenzene	<10		10		ug/L			04/05/16 14:44	10
Styrene	<10		10		ug/L			04/05/16 14:44	10
Xylenes, Total	<10		10		ug/L			04/05/16 14:44	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*04/05/16 14:44*	*10*
1,2-Dichloroethane-d4 (Surr)	*117*		*70 - 130*		*04/05/16 14:44*	*10*
Dibromofluoromethane (Surr)	*114*		*70 - 130*		*04/05/16 14:44*	*10*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 14:44*	*10*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-3

Lab Sample ID: 680-123585-20

Date Collected: 03/29/16 14:00

Matrix: Water

Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<25		25		ug/L			04/05/16 15:07	25
Bromomethane	<130		130		ug/L			04/05/16 15:07	25
Vinyl chloride	<25		25		ug/L			04/05/16 15:07	25
Chloroethane	<130		130		ug/L			04/05/16 15:07	25
Methylene Chloride	<130		130		ug/L			04/05/16 15:07	25
Acetone	<250		250		ug/L			04/05/16 15:07	25
Carbon disulfide	<50		50		ug/L			04/05/16 15:07	25
1,1-Dichloroethene	**60**		25		ug/L			04/05/16 15:07	25
1,1-Dichloroethane	<25		25		ug/L			04/05/16 15:07	25
cis-1,2-Dichloroethene	**510**		25		ug/L			04/05/16 15:07	25
trans-1,2-Dichloroethene	<25		25		ug/L			04/05/16 15:07	25
Chloroform	<25		25		ug/L			04/05/16 15:07	25
1,2-Dichloroethane	<25		25		ug/L			04/05/16 15:07	25
2-Butanone (MEK)	<250		250		ug/L			04/05/16 15:07	25
1,1,1-Trichloroethane	**36**		25		ug/L			04/05/16 15:07	25
Carbon tetrachloride	<25		25		ug/L			04/05/16 15:07	25
Dichlorobromomethane	<25		25		ug/L			04/05/16 15:07	25
1,1,2,2-Tetrachloroethane	<25		25		ug/L			04/05/16 15:07	25
1,2-Dichloropropane	<25		25		ug/L			04/05/16 15:07	25
trans-1,3-Dichloropropene	<25		25		ug/L			04/05/16 15:07	25
Trichloroethene	**400**		25		ug/L			04/05/16 15:07	25
Chlorodibromomethane	<25		25		ug/L			04/05/16 15:07	25
1,1,2-Trichloroethane	<25		25		ug/L			04/05/16 15:07	25
Benzene	<25		25		ug/L			04/05/16 15:07	25
cis-1,3-Dichloropropene	<25		25		ug/L			04/05/16 15:07	25
Bromoform	<25		25		ug/L			04/05/16 15:07	25
2-Hexanone	<250		250		ug/L			04/05/16 15:07	25
4-Methyl-2-pentanone (MIBK)	<250		250		ug/L			04/05/16 15:07	25
Tetrachloroethene	**2400**		25		ug/L			04/05/16 15:07	25
Toluene	<25		25		ug/L			04/05/16 15:07	25
Chlorobenzene	<25		25		ug/L			04/05/16 15:07	25
Ethylbenzene	<25		25		ug/L			04/05/16 15:07	25
Styrene	<25		25		ug/L			04/05/16 15:07	25
Xylenes, Total	<25		25		ug/L			04/05/16 15:07	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*04/05/16 15:07*	*25*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*		*04/05/16 15:07*	*25*
Dibromofluoromethane (Surr)	*111*		*70 - 130*		*04/05/16 15:07*	*25*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*04/05/16 15:07*	*25*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-5

Lab Sample ID: 680-123585-21

Date Collected: 03/29/16 14:35
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<500		500		ug/L			04/05/16 15:30	500
Bromomethane	<2500		2500		ug/L			04/05/16 15:30	500
Vinyl chloride	<500		500		ug/L			04/05/16 15:30	500
Chloroethane	<2500		2500		ug/L			04/05/16 15:30	500
Methylene Chloride	<2500		2500		ug/L			04/05/16 15:30	500
Acetone	<5000		5000		ug/L			04/05/16 15:30	500
Carbon disulfide	<1000		1000		ug/L			04/05/16 15:30	500
1,1-Dichloroethene	<500		500		ug/L			04/05/16 15:30	500
1,1-Dichloroethane	<500		500		ug/L			04/05/16 15:30	500
cis-1,2-Dichloroethene	<500		500		ug/L			04/05/16 15:30	500
trans-1,2-Dichloroethene	<500		500		ug/L			04/05/16 15:30	500
Chloroform	<500		500		ug/L			04/05/16 15:30	500
1,2-Dichloroethane	<500		500		ug/L			04/05/16 15:30	500
2-Butanone (MEK)	<5000		5000		ug/L			04/05/16 15:30	500
1,1,1-Trichloroethane	<500		500		ug/L			04/05/16 15:30	500
Carbon tetrachloride	<500		500		ug/L			04/05/16 15:30	500
Dichlorobromomethane	<500		500		ug/L			04/05/16 15:30	500
1,1,2,2-Tetrachloroethane	<500		500		ug/L			04/05/16 15:30	500
1,2-Dichloropropane	<500		500		ug/L			04/05/16 15:30	500
trans-1,3-Dichloropropene	<500		500		ug/L			04/05/16 15:30	500
Trichloroethene	**2300**		500		ug/L			04/05/16 15:30	500
Chlorodibromomethane	<500		500		ug/L			04/05/16 15:30	500
1,1,2-Trichloroethane	<500		500		ug/L			04/05/16 15:30	500
Benzene	<500		500		ug/L			04/05/16 15:30	500
cis-1,3-Dichloropropene	<500		500		ug/L			04/05/16 15:30	500
Bromoform	<500		500		ug/L			04/05/16 15:30	500
2-Hexanone	<5000		5000		ug/L			04/05/16 15:30	500
4-Methyl-2-pentanone (MIBK)	<5000		5000		ug/L			04/05/16 15:30	500
Tetrachloroethene	**42000**		500		ug/L			04/05/16 15:30	500
Toluene	<500		500		ug/L			04/05/16 15:30	500
Chlorobenzene	<500		500		ug/L			04/05/16 15:30	500
Ethylbenzene	<500		500		ug/L			04/05/16 15:30	500
Styrene	<500		500		ug/L			04/05/16 15:30	500
Xylenes, Total	<500		500		ug/L			04/05/16 15:30	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*04/05/16 15:30*	*500*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*		*04/05/16 15:30*	*500*
Dibromofluoromethane (Surr)	*105*		*70 - 130*		*04/05/16 15:30*	*500*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*04/05/16 15:30*	*500*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-1

Lab Sample ID: 680-123585-22

Date Collected: 03/29/16 15:32

Matrix: Water

Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<50		50		ug/L			04/05/16 15:52	50
Bromomethane	<250		250		ug/L			04/05/16 15:52	50
Vinyl chloride	<50		50		ug/L			04/05/16 15:52	50
Chloroethane	<250		250		ug/L			04/05/16 15:52	50
Methylene Chloride	<250		250		ug/L			04/05/16 15:52	50
Acetone	<500		500		ug/L			04/05/16 15:52	50
Carbon disulfide	<100		100		ug/L			04/05/16 15:52	50
1,1-Dichloroethene	**220**		50		ug/L			04/05/16 15:52	50
1,1-Dichloroethane	<50		50		ug/L			04/05/16 15:52	50
cis-1,2-Dichloroethene	**440**		50		ug/L			04/05/16 15:52	50
trans-1,2-Dichloroethene	<50		50		ug/L			04/05/16 15:52	50
Chloroform	<50		50		ug/L			04/05/16 15:52	50
1,2-Dichloroethane	<50		50		ug/L			04/05/16 15:52	50
2-Butanone (MEK)	<500		500		ug/L			04/05/16 15:52	50
1,1,1-Trichloroethane	**460**		50		ug/L			04/05/16 15:52	50
Carbon tetrachloride	<50		50		ug/L			04/05/16 15:52	50
Dichlorobromomethane	<50		50		ug/L			04/05/16 15:52	50
1,1,2,2-Tetrachloroethane	<50		50		ug/L			04/05/16 15:52	50
1,2-Dichloropropane	<50		50		ug/L			04/05/16 15:52	50
trans-1,3-Dichloropropene	<50		50		ug/L			04/05/16 15:52	50
Trichloroethene	**530**		50		ug/L			04/05/16 15:52	50
Chlorodibromomethane	<50		50		ug/L			04/05/16 15:52	50
1,1,2-Trichloroethane	<50		50		ug/L			04/05/16 15:52	50
Benzene	<50		50		ug/L			04/05/16 15:52	50
cis-1,3-Dichloropropene	<50		50		ug/L			04/05/16 15:52	50
Bromoform	<50		50		ug/L			04/05/16 15:52	50
2-Hexanone	<500		500		ug/L			04/05/16 15:52	50
4-Methyl-2-pentanone (MIBK)	<500		500		ug/L			04/05/16 15:52	50
Tetrachloroethene	**5700**		50		ug/L			04/05/16 15:52	50
Toluene	<50		50		ug/L			04/05/16 15:52	50
Chlorobenzene	<50		50		ug/L			04/05/16 15:52	50
Ethylbenzene	<50		50		ug/L			04/05/16 15:52	50
Styrene	<50		50		ug/L			04/05/16 15:52	50
Xylenes, Total	<50		50		ug/L			04/05/16 15:52	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*04/05/16 15:52*	*50*
1,2-Dichloroethane-d4 (Surr)	*121*		*70 - 130*		*04/05/16 15:52*	*50*
Dibromofluoromethane (Surr)	*114*		*70 - 130*		*04/05/16 15:52*	*50*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 15:52*	*50*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: FB-1

Lab Sample ID: 680-123585-23

Date Collected: 03/29/16 15:27
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 12:04	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 12:04	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 12:04	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 12:04	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 12:04	1
Acetone	<10		10		ug/L			04/05/16 12:04	1
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 12:04	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 12:04	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 12:04	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 12:04	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 12:04	1
Chloroform	<1.0		1.0		ug/L			04/05/16 12:04	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 12:04	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 12:04	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 12:04	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 12:04	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 12:04	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 12:04	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 12:04	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 12:04	1
Trichloroethene	<1.0		1.0		ug/L			04/05/16 12:04	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 12:04	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 12:04	1
Benzene	<1.0		1.0		ug/L			04/05/16 12:04	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 12:04	1
Bromoform	<1.0		1.0		ug/L			04/05/16 12:04	1
2-Hexanone	<10		10		ug/L			04/05/16 12:04	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 12:04	1
Tetrachloroethene	<1.0		1.0		ug/L			04/05/16 12:04	1
Toluene	<1.0		1.0		ug/L			04/05/16 12:04	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 12:04	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 12:04	1
Styrene	<1.0		1.0		ug/L			04/05/16 12:04	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 12:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*04/05/16 12:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*04/05/16 12:04*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*04/05/16 12:04*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 12:04*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-7

Lab Sample ID: 680-123585-24

Date Collected: 03/29/16 18:00
Matrix: Water
Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<50		50		ug/L			04/05/16 16:15	50
Bromomethane	<250		250		ug/L			04/05/16 16:15	50
Vinyl chloride	<50		50		ug/L			04/05/16 16:15	50
Chloroethane	<250		250		ug/L			04/05/16 16:15	50
Methylene Chloride	<250		250		ug/L			04/05/16 16:15	50
Acetone	<500		500		ug/L			04/05/16 16:15	50
Carbon disulfide	<100		100		ug/L			04/05/16 16:15	50
1,1-Dichloroethene	**400**		50		ug/L			04/05/16 16:15	50
1,1-Dichloroethane	**200**		50		ug/L			04/05/16 16:15	50
cis-1,2-Dichloroethene	**4900**		50		ug/L			04/05/16 16:15	50
trans-1,2-Dichloroethene	<50		50		ug/L			04/05/16 16:15	50
Chloroform	<50		50		ug/L			04/05/16 16:15	50
1,2-Dichloroethane	<50		50		ug/L			04/05/16 16:15	50
2-Butanone (MEK)	<500		500		ug/L			04/05/16 16:15	50
1,1,1-Trichloroethane	**1200**		50		ug/L			04/05/16 16:15	50
Carbon tetrachloride	<50		50		ug/L			04/05/16 16:15	50
Dichlorobromomethane	<50		50		ug/L			04/05/16 16:15	50
1,1,2,2-Tetrachloroethane	<50		50		ug/L			04/05/16 16:15	50
1,2-Dichloropropane	<50		50		ug/L			04/05/16 16:15	50
trans-1,3-Dichloropropene	<50		50		ug/L			04/05/16 16:15	50
Trichloroethene	**2400**		50		ug/L			04/05/16 16:15	50
Chlorodibromomethane	<50		50		ug/L			04/05/16 16:15	50
1,1,2-Trichloroethane	<50		50		ug/L			04/05/16 16:15	50
Benzene	<50		50		ug/L			04/05/16 16:15	50
cis-1,3-Dichloropropene	<50		50		ug/L			04/05/16 16:15	50
Bromoform	<50		50		ug/L			04/05/16 16:15	50
2-Hexanone	<500		500		ug/L			04/05/16 16:15	50
4-Methyl-2-pentanone (MIBK)	<500		500		ug/L			04/05/16 16:15	50
Toluene	<50		50		ug/L			04/05/16 16:15	50
Chlorobenzene	<50		50		ug/L			04/05/16 16:15	50
Ethylbenzene	<50		50		ug/L			04/05/16 16:15	50
Styrene	<50		50		ug/L			04/05/16 16:15	50
Xylenes, Total	<50		50		ug/L			04/05/16 16:15	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*04/05/16 16:15*	*50*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*04/05/16 16:15*	*50*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*04/05/16 16:15*	*50*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*04/05/16 16:15*	*50*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**12000**		100		ug/L			04/07/16 14:03	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*04/07/16 14:03*	*100*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*04/07/16 14:03*	*100*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*04/07/16 14:03*	*100*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*04/07/16 14:03*	*100*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: IDW

Lab Sample ID: 680-123585-25

Date Collected: 03/29/16 00:00

Matrix: Water

Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<20		20		ug/L			04/05/16 16:38	20
Bromomethane	<100		100		ug/L			04/05/16 16:38	20
Vinyl chloride	<20		20		ug/L			04/05/16 16:38	20
Chloroethane	<100		100		ug/L			04/05/16 16:38	20
Methylene Chloride	<100		100		ug/L			04/05/16 16:38	20
Acetone	<200		200		ug/L			04/05/16 16:38	20
Carbon disulfide	<40		40		ug/L			04/05/16 16:38	20
1,1-Dichloroethene	<20		20		ug/L			04/05/16 16:38	20
1,1-Dichloroethane	<20		20		ug/L			04/05/16 16:38	20
cis-1,2-Dichloroethene	**84**		20		ug/L			04/05/16 16:38	20
trans-1,2-Dichloroethene	<20		20		ug/L			04/05/16 16:38	20
Chloroform	<20		20		ug/L			04/05/16 16:38	20
1,2-Dichloroethane	<20		20		ug/L			04/05/16 16:38	20
2-Butanone (MEK)	<200		200		ug/L			04/05/16 16:38	20
1,1,1-Trichloroethane	<20		20		ug/L			04/05/16 16:38	20
Carbon tetrachloride	<20		20		ug/L			04/05/16 16:38	20
Dichlorobromomethane	<20		20		ug/L			04/05/16 16:38	20
1,1,2,2-Tetrachloroethane	<20		20		ug/L			04/05/16 16:38	20
1,2-Dichloropropane	<20		20		ug/L			04/05/16 16:38	20
trans-1,3-Dichloropropene	<20		20		ug/L			04/05/16 16:38	20
Trichloroethene	**100**		20		ug/L			04/05/16 16:38	20
Chlorodibromomethane	<20		20		ug/L			04/05/16 16:38	20
1,1,2-Trichloroethane	<20		20		ug/L			04/05/16 16:38	20
Benzene	<20		20		ug/L			04/05/16 16:38	20
cis-1,3-Dichloropropene	<20		20		ug/L			04/05/16 16:38	20
Bromoform	<20		20		ug/L			04/05/16 16:38	20
2-Hexanone	<200		200		ug/L			04/05/16 16:38	20
4-Methyl-2-pentanone (MIBK)	<200		200		ug/L			04/05/16 16:38	20
Tetrachloroethene	**840**		20		ug/L			04/05/16 16:38	20
Toluene	<20		20		ug/L			04/05/16 16:38	20
Chlorobenzene	<20		20		ug/L			04/05/16 16:38	20
Ethylbenzene	<20		20		ug/L			04/05/16 16:38	20
Styrene	<20		20		ug/L			04/05/16 16:38	20
Xylenes, Total	<20		20		ug/L			04/05/16 16:38	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*04/05/16 16:38*	*20*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*		*04/05/16 16:38*	*20*
Dibromofluoromethane (Surr)	*110*		*70 - 130*		*04/05/16 16:38*	*20*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*04/05/16 16:38*	*20*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: DUP-1

Lab Sample ID: 680-123585-26

Date Collected: 03/29/16 00:00

Matrix: Water

Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<100		100		ug/L			04/06/16 13:01	100
Bromomethane	<500		500		ug/L			04/06/16 13:01	100
Vinyl chloride	<100		100		ug/L			04/06/16 13:01	100
Chloroethane	<500		500		ug/L			04/06/16 13:01	100
Methylene Chloride	<500		500		ug/L			04/06/16 13:01	100
Acetone	<1000		1000		ug/L			04/06/16 13:01	100
Carbon disulfide	<200		200		ug/L			04/06/16 13:01	100
1,1-Dichloroethene	<100		100		ug/L			04/06/16 13:01	100
1,1-Dichloroethane	<100		100		ug/L			04/06/16 13:01	100
cis-1,2-Dichloroethene	**380**		100		ug/L			04/06/16 13:01	100
trans-1,2-Dichloroethene	<100		100		ug/L			04/06/16 13:01	100
Chloroform	<100		100		ug/L			04/06/16 13:01	100
1,2-Dichloroethane	<100		100		ug/L			04/06/16 13:01	100
2-Butanone (MEK)	<1000		1000		ug/L			04/06/16 13:01	100
1,1,1-Trichloroethane	<100		100		ug/L			04/06/16 13:01	100
Carbon tetrachloride	<100		100		ug/L			04/06/16 13:01	100
Dichlorobromomethane	<100		100		ug/L			04/06/16 13:01	100
1,1,2,2-Tetrachloroethane	<100		100		ug/L			04/06/16 13:01	100
1,2-Dichloropropane	<100		100		ug/L			04/06/16 13:01	100
trans-1,3-Dichloropropene	<100		100		ug/L			04/06/16 13:01	100
Trichloroethene	**610**		100		ug/L			04/06/16 13:01	100
Chlorodibromomethane	<100		100		ug/L			04/06/16 13:01	100
1,1,2-Trichloroethane	<100		100		ug/L			04/06/16 13:01	100
Benzene	<100		100		ug/L			04/06/16 13:01	100
cis-1,3-Dichloropropene	<100		100		ug/L			04/06/16 13:01	100
Bromoform	<100		100		ug/L			04/06/16 13:01	100
2-Hexanone	<1000		1000		ug/L			04/06/16 13:01	100
4-Methyl-2-pentanone (MIBK)	<1000		1000		ug/L			04/06/16 13:01	100
Tetrachloroethene	**14000**		100		ug/L			04/06/16 13:01	100
Toluene	<100		100		ug/L			04/06/16 13:01	100
Chlorobenzene	<100		100		ug/L			04/06/16 13:01	100
Ethylbenzene	<100		100		ug/L			04/06/16 13:01	100
Styrene	<100		100		ug/L			04/06/16 13:01	100
Xylenes, Total	<100		100		ug/L			04/06/16 13:01	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*04/06/16 13:01*	*100*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*04/06/16 13:01*	*100*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*04/06/16 13:01*	*100*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*		*04/06/16 13:01*	*100*

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 680-123585-27

Date Collected: 03/28/16 00:00

Matrix: Water

Date Received: 03/31/16 11:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 11:39	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 11:39	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 11:39	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 11:39	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 11:39	1
Acetone	<10		10		ug/L			04/05/16 11:39	1
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 11:39	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:39	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 11:39	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:39	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:39	1
Chloroform	<1.0		1.0		ug/L			04/05/16 11:39	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 11:39	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 11:39	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 11:39	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 11:39	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 11:39	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 11:39	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 11:39	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 11:39	1
Trichloroethene	<1.0		1.0		ug/L			04/05/16 11:39	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 11:39	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 11:39	1
Benzene	<1.0		1.0		ug/L			04/05/16 11:39	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 11:39	1
Bromoform	<1.0		1.0		ug/L			04/05/16 11:39	1
2-Hexanone	<10		10		ug/L			04/05/16 11:39	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 11:39	1
Tetrachloroethene	<1.0		1.0		ug/L			04/05/16 11:39	1
Toluene	<1.0		1.0		ug/L			04/05/16 11:39	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 11:39	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 11:39	1
Styrene	<1.0		1.0		ug/L			04/05/16 11:39	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 11:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*04/05/16 11:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*04/05/16 11:39*	*1*
Dibromofluoromethane (Surr)	*91*		*70 - 130*		*04/05/16 11:39*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*04/05/16 11:39*	*1*

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	12DCE	DBFM	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
680-123585-1	MW-24	105	84	92	102
680-123585-2	MW-26	104	83	90	104
680-123585-3	MW-23	106	83	92	103
680-123585-3 - DL	MW-23	94	111	108	82
680-123585-4	MW-23D	104	85	92	103
680-123585-5	MW-23BR	105	84	93	103
680-123585-6	SWS-3	105	83	90	103
680-123585-7	SWS-2	105	84	94	102
680-123585-8	SWS-1	106	84	93	104
680-123585-9	MW-25	105	84	92	103
680-123585-10	MW-14OB	103	84	92	101
680-123585-11	MW-14TZ	103	83	92	103
680-123585-12	MW-8R	102	116	113	103
680-123585-13	EB-1	101	100	104	103
680-123585-14	MW-8DR	104	114	107	103
680-123585-15	MW-12D	105	120	117	102
680-123585-16	MW-22	102	102	104	105
680-123585-17	MW-18BR	102	123	114	103
680-123585-18	MW-16OB	102	102	106	103
680-123585-19	MW-3D	102	117	114	103
680-123585-20	MW-3	104	116	111	104
680-123585-21	MW-5	101	110	105	105
680-123585-22	MW-1	104	121	114	103
680-123585-23	FB-1	101	103	102	103
680-123585-24	MW-7	101	108	108	103
680-123585-24 - DL	MW-7	102	83	94	108
680-123585-25	IDW	100	116	110	102
680-123585-26	DUP-1	100	96	100	84
680-123585-27	TRIP BLANK	104	83	91	100
LCS 680-427891/4	Lab Control Sample	103	85	97	96
LCS 680-427893/3	Lab Control Sample	101	99	97	99
LCS 680-428037/4	Lab Control Sample	94	105	103	82
LCS 680-428208/4	Lab Control Sample	104	85	97	99
LCSD 680-427891/5	Lab Control Sample Dup	102	80	94	98
LCSD 680-427893/4	Lab Control Sample Dup	100	105	101	99
LCSD 680-428037/5	Lab Control Sample Dup	94	102	100	82
LCSD 680-428208/5	Lab Control Sample Dup	103	84	97	99
MB 680-427891/9	Method Blank	105	83	91	101
MB 680-427893/9	Method Blank	101	102	105	99
MB 680-428037/8	Method Blank	101	96	99	84
MB 680-428208/16	Method Blank	104	84	93	106

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-427891/9
Matrix: Water
Analysis Batch: 427891

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 11:06	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 11:06	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 11:06	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 11:06	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 11:06	1
Acetone	<10		10		ug/L			04/05/16 11:06	1
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 11:06	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:06	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 11:06	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:06	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:06	1
Chloroform	<1.0		1.0		ug/L			04/05/16 11:06	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 11:06	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 11:06	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 11:06	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 11:06	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 11:06	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 11:06	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 11:06	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 11:06	1
Trichloroethene	<1.0		1.0		ug/L			04/05/16 11:06	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 11:06	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 11:06	1
Benzene	<1.0		1.0		ug/L			04/05/16 11:06	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 11:06	1
Bromoform	<1.0		1.0		ug/L			04/05/16 11:06	1
2-Hexanone	<10		10		ug/L			04/05/16 11:06	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 11:06	1
Tetrachloroethene	<1.0		1.0		ug/L			04/05/16 11:06	1
Toluene	<1.0		1.0		ug/L			04/05/16 11:06	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 11:06	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 11:06	1
Styrene	<1.0		1.0		ug/L			04/05/16 11:06	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 11:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*70 - 130*		*04/05/16 11:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*70 - 130*		*04/05/16 11:06*	*1*
Dibromofluoromethane (Surr)	*91*		*70 - 130*		*04/05/16 11:06*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*04/05/16 11:06*	*1*

Lab Sample ID: LCS 680-427891/4
Matrix: Water
Analysis Batch: 427891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	50.0	39.1		ug/L		78	63 - 126
Bromomethane	50.0	39.6		ug/L		79	20 - 180

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-427891/4
Matrix: Water
Analysis Batch: 427891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl chloride	50.0	46.2		ug/L		92	68 - 132
Chloroethane	50.0	40.7		ug/L		81	50 - 151
Methylene Chloride	50.0	50.8		ug/L		102	76 - 129
Acetone	250	237		ug/L		95	60 - 154
Carbon disulfide	50.0	45.6		ug/L		91	73 - 127
1,1-Dichloroethene	50.0	51.0		ug/L		102	74 - 125
1,1-Dichloroethane	50.0	44.5		ug/L		89	80 - 120
cis-1,2-Dichloroethene	50.0	43.8		ug/L		88	80 - 122
trans-1,2-Dichloroethene	50.0	48.8		ug/L		98	78 - 123
Chloroform	50.0	47.4		ug/L		95	79 - 122
1,2-Dichloroethane	50.0	43.2		ug/L		86	75 - 130
2-Butanone (MEK)	250	251		ug/L		100	75 - 133
1,1,1-Trichloroethane	50.0	45.1		ug/L		90	74 - 128
Carbon tetrachloride	50.0	45.4		ug/L		91	75 - 130
Dichlorobromomethane	50.0	46.1		ug/L		92	77 - 129
1,1,2,2-Tetrachloroethane	50.0	49.3		ug/L		99	72 - 128
1,2-Dichloropropane	50.0	45.7		ug/L		91	80 - 123
trans-1,3-Dichloropropene	50.0	47.8		ug/L		96	74 - 140
Trichloroethene	50.0	48.1		ug/L		96	80 - 123
Chlorodibromomethane	50.0	49.8		ug/L		100	71 - 136
1,1,2-Trichloroethane	50.0	51.2		ug/L		102	79 - 125
Benzene	50.0	48.2		ug/L		96	73 - 131
cis-1,3-Dichloropropene	50.0	47.2		ug/L		94	80 - 133
Bromoform	50.0	52.7		ug/L		105	69 - 135
2-Hexanone	250	212		ug/L		85	70 - 141
4-Methyl-2-pentanone (MIBK)	250	213		ug/L		85	75 - 135
Tetrachloroethene	50.0	48.7		ug/L		97	77 - 123
Toluene	50.0	50.6		ug/L		101	80 - 122
Chlorobenzene	50.0	53.1		ug/L		106	80 - 120
Ethylbenzene	50.0	52.1		ug/L		104	80 - 120
Styrene	50.0	56.0		ug/L		112	80 - 122
Xylenes, Total	100	105		ug/L		105	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 680-427891/5
Matrix: Water
Analysis Batch: 427891

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloromethane	50.0	38.6		ug/L		77	63 - 126	1	30
Bromomethane	50.0	38.2		ug/L		76	20 - 180	4	40
Vinyl chloride	50.0	46.9		ug/L		94	68 - 132	1	30
Chloroethane	50.0	40.9		ug/L		82	50 - 151	0	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-427891/5
Matrix: Water
Analysis Batch: 427891

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methylene Chloride	50.0	49.3		ug/L		99	76 - 129	3	20
Acetone	250	229		ug/L		92	60 - 154	3	40
Carbon disulfide	50.0	45.9		ug/L		92	73 - 127	0	20
1,1-Dichloroethene	50.0	50.5		ug/L		101	74 - 125	1	20
1,1-Dichloroethane	50.0	44.7		ug/L		89	80 - 120	0	20
cis-1,2-Dichloroethene	50.0	43.1		ug/L		86	80 - 122	2	20
trans-1,2-Dichloroethene	50.0	48.5		ug/L		97	78 - 123	1	20
Chloroform	50.0	46.1		ug/L		92	79 - 122	3	20
1,2-Dichloroethane	50.0	41.0		ug/L		82	75 - 130	5	20
2-Butanone (MEK)	250	233		ug/L		93	75 - 133	8	30
1,1,1-Trichloroethane	50.0	45.7		ug/L		91	74 - 128	1	20
Carbon tetrachloride	50.0	44.7		ug/L		89	75 - 130	2	20
Dichlorobromomethane	50.0	44.0		ug/L		88	77 - 129	5	20
1,1,2,2-Tetrachloroethane	50.0	47.9		ug/L		96	72 - 128	3	20
1,2-Dichloropropane	50.0	43.8		ug/L		88	80 - 123	4	20
trans-1,3-Dichloropropene	50.0	46.3		ug/L		93	74 - 140	3	20
Trichloroethene	50.0	47.7		ug/L		95	80 - 123	1	20
Chlorodibromomethane	50.0	47.5		ug/L		95	71 - 136	5	20
1,1,2-Trichloroethane	50.0	48.9		ug/L		98	79 - 125	5	20
Benzene	50.0	47.3		ug/L		95	73 - 131	2	30
cis-1,3-Dichloropropene	50.0	45.1		ug/L		90	80 - 133	5	20
Bromoform	50.0	49.8		ug/L		100	69 - 135	6	20
2-Hexanone	250	198		ug/L		79	70 - 141	7	40
4-Methyl-2-pentanone (MIBK)	250	200		ug/L		80	75 - 135	7	30
Tetrachloroethene	50.0	48.5		ug/L		97	77 - 123	0	20
Toluene	50.0	49.7		ug/L		99	80 - 122	2	20
Chlorobenzene	50.0	51.6		ug/L		103	80 - 120	3	20
Ethylbenzene	50.0	51.8		ug/L		104	80 - 120	0	20
Styrene	50.0	54.3		ug/L		109	80 - 122	3	20
Xylenes, Total	100	104		ug/L		104	80 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*80*		*70 - 130*
Dibromofluoromethane (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 680-427893/9
Matrix: Water
Analysis Batch: 427893

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/05/16 11:14	1
Bromomethane	<5.0		5.0		ug/L			04/05/16 11:14	1
Vinyl chloride	<1.0		1.0		ug/L			04/05/16 11:14	1
Chloroethane	<5.0		5.0		ug/L			04/05/16 11:14	1
Methylene Chloride	<5.0		5.0		ug/L			04/05/16 11:14	1
Acetone	<10		10		ug/L			04/05/16 11:14	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-427893/9
Matrix: Water
Analysis Batch: 427893

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	<2.0		2.0		ug/L			04/05/16 11:14	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:14	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/05/16 11:14	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:14	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/05/16 11:14	1
Chloroform	<1.0		1.0		ug/L			04/05/16 11:14	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/05/16 11:14	1
2-Butanone (MEK)	<10		10		ug/L			04/05/16 11:14	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/05/16 11:14	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/05/16 11:14	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/05/16 11:14	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/05/16 11:14	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/05/16 11:14	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 11:14	1
Trichloroethene	<1.0		1.0		ug/L			04/05/16 11:14	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/05/16 11:14	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/05/16 11:14	1
Benzene	<1.0		1.0		ug/L			04/05/16 11:14	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/05/16 11:14	1
Bromoform	<1.0		1.0		ug/L			04/05/16 11:14	1
2-Hexanone	<10		10		ug/L			04/05/16 11:14	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/05/16 11:14	1
Tetrachloroethene	<1.0		1.0		ug/L			04/05/16 11:14	1
Toluene	<1.0		1.0		ug/L			04/05/16 11:14	1
Chlorobenzene	<1.0		1.0		ug/L			04/05/16 11:14	1
Ethylbenzene	<1.0		1.0		ug/L			04/05/16 11:14	1
Styrene	<1.0		1.0		ug/L			04/05/16 11:14	1
Xylenes, Total	<1.0		1.0		ug/L			04/05/16 11:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*04/05/16 11:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*04/05/16 11:14*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 130*		*04/05/16 11:14*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*04/05/16 11:14*	*1*

Lab Sample ID: LCS 680-427893/3
Matrix: Water
Analysis Batch: 427893

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	50.0	55.3		ug/L		111	63 - 126
Bromomethane	50.0	53.2		ug/L		106	20 - 180
Vinyl chloride	50.0	55.1		ug/L		110	68 - 132
Chloroethane	50.0	53.9		ug/L		108	50 - 151
Methylene Chloride	50.0	50.8		ug/L		102	76 - 129
Acetone	250	233		ug/L		93	60 - 154
Carbon disulfide	50.0	50.7		ug/L		101	73 - 127
1,1-Dichloroethene	50.0	54.3		ug/L		109	74 - 125

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-427893/3
Matrix: Water
Analysis Batch: 427893

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	50.0	50.7		ug/L		101	80 - 120
cis-1,2-Dichloroethene	50.0	50.1		ug/L		100	80 - 122
trans-1,2-Dichloroethene	50.0	50.6		ug/L		101	78 - 123
Chloroform	50.0	48.6		ug/L		97	79 - 122
1,2-Dichloroethane	50.0	50.0		ug/L		100	75 - 130
2-Butanone (MEK)	250	286		ug/L		114	75 - 133
1,1,1-Trichloroethane	50.0	51.7		ug/L		103	74 - 128
Carbon tetrachloride	50.0	51.1		ug/L		102	75 - 130
Dichlorobromomethane	50.0	50.9		ug/L		102	77 - 129
1,1,2,2-Tetrachloroethane	50.0	54.8		ug/L		110	72 - 128
1,2-Dichloropropane	50.0	50.1		ug/L		100	80 - 123
trans-1,3-Dichloropropene	50.0	54.9		ug/L		110	74 - 140
Trichloroethene	50.0	50.1		ug/L		100	80 - 123
Chlorodibromomethane	50.0	52.9		ug/L		106	71 - 136
1,1,2-Trichloroethane	50.0	51.3		ug/L		103	79 - 125
Benzene	50.0	50.6		ug/L		101	73 - 131
cis-1,3-Dichloropropene	50.0	53.0		ug/L		106	80 - 133
Bromoform	50.0	54.0		ug/L		108	69 - 135
2-Hexanone	250	272		ug/L		109	70 - 141
4-Methyl-2-pentanone (MIBK)	250	260		ug/L		104	75 - 135
Tetrachloroethene	50.0	49.9		ug/L		100	77 - 123
Toluene	50.0	50.1		ug/L		100	80 - 122
Chlorobenzene	50.0	52.0		ug/L		104	80 - 120
Ethylbenzene	50.0	53.7		ug/L		107	80 - 120
Styrene	50.0	56.4		ug/L		113	80 - 122
Xylenes, Total	100	108		ug/L		108	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 680-427893/4
Matrix: Water
Analysis Batch: 427893

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloromethane	50.0	58.0		ug/L		116	63 - 126	5	30
Bromomethane	50.0	56.6		ug/L		113	20 - 180	6	40
Vinyl chloride	50.0	53.1		ug/L		106	68 - 132	4	30
Chloroethane	50.0	53.9		ug/L		108	50 - 151	0	30
Methylene Chloride	50.0	52.3		ug/L		105	76 - 129	3	20
Acetone	250	253		ug/L		101	60 - 154	8	40
Carbon disulfide	50.0	50.3		ug/L		101	73 - 127	1	20
1,1-Dichloroethene	50.0	51.0		ug/L		102	74 - 125	6	20
1,1-Dichloroethane	50.0	51.4		ug/L		103	80 - 120	1	20
cis-1,2-Dichloroethene	50.0	50.0		ug/L		100	80 - 122	0	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-427893/4
Matrix: Water
Analysis Batch: 427893

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	50.0	50.0		ug/L		100	78 - 123	1	20
Chloroform	50.0	50.5		ug/L		101	79 - 122	4	20
1,2-Dichloroethane	50.0	51.2		ug/L		102	75 - 130	2	20
2-Butanone (MEK)	250	298		ug/L		119	75 - 133	4	30
1,1,1-Trichloroethane	50.0	50.1		ug/L		100	74 - 128	3	20
Carbon tetrachloride	50.0	48.5		ug/L		97	75 - 130	5	20
Dichlorobromomethane	50.0	51.7		ug/L		103	77 - 129	1	20
1,1,2,2-Tetrachloroethane	50.0	55.3		ug/L		111	72 - 128	1	20
1,2-Dichloropropane	50.0	50.4		ug/L		101	80 - 123	1	20
trans-1,3-Dichloropropene	50.0	57.0		ug/L		114	74 - 140	4	20
Trichloroethene	50.0	48.6		ug/L		97	80 - 123	3	20
Chlorodibromomethane	50.0	53.9		ug/L		108	71 - 136	2	20
1,1,2-Trichloroethane	50.0	53.4		ug/L		107	79 - 125	4	20
Benzene	50.0	51.0		ug/L		102	73 - 131	1	30
cis-1,3-Dichloropropene	50.0	54.2		ug/L		108	80 - 133	2	20
Bromoform	50.0	53.3		ug/L		107	69 - 135	1	20
2-Hexanone	250	282		ug/L		113	70 - 141	4	40
4-Methyl-2-pentanone (MIBK)	250	267		ug/L		107	75 - 135	3	30
Tetrachloroethene	50.0	50.1		ug/L		100	77 - 123	0	20
Toluene	50.0	50.7		ug/L		101	80 - 122	1	20
Chlorobenzene	50.0	51.6		ug/L		103	80 - 120	1	20
Ethylbenzene	50.0	52.2		ug/L		104	80 - 120	3	20
Styrene	50.0	56.0		ug/L		112	80 - 122	1	20
Xylenes, Total	100	108		ug/L		108	80 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 680-428037/8
Matrix: Water
Analysis Batch: 428037

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/06/16 10:41	1
Bromomethane	<5.0		5.0		ug/L			04/06/16 10:41	1
Vinyl chloride	<1.0		1.0		ug/L			04/06/16 10:41	1
Chloroethane	<5.0		5.0		ug/L			04/06/16 10:41	1
Methylene Chloride	<5.0		5.0		ug/L			04/06/16 10:41	1
Acetone	<10		10		ug/L			04/06/16 10:41	1
Carbon disulfide	<2.0		2.0		ug/L			04/06/16 10:41	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/06/16 10:41	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/06/16 10:41	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/06/16 10:41	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/06/16 10:41	1
Chloroform	<1.0		1.0		ug/L			04/06/16 10:41	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-428037/8
Matrix: Water
Analysis Batch: 428037

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	<1.0		1.0		ug/L			04/06/16 10:41	1
2-Butanone (MEK)	<10		10		ug/L			04/06/16 10:41	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/06/16 10:41	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/06/16 10:41	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/06/16 10:41	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/06/16 10:41	1
1,2-Dichloropropane	<1.0		1.0		ug/L			04/06/16 10:41	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/06/16 10:41	1
Trichloroethene	<1.0		1.0		ug/L			04/06/16 10:41	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/06/16 10:41	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/06/16 10:41	1
Benzene	<1.0		1.0		ug/L			04/06/16 10:41	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/06/16 10:41	1
Bromoform	<1.0		1.0		ug/L			04/06/16 10:41	1
2-Hexanone	<10		10		ug/L			04/06/16 10:41	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/06/16 10:41	1
Tetrachloroethene	<1.0		1.0		ug/L			04/06/16 10:41	1
Toluene	<1.0		1.0		ug/L			04/06/16 10:41	1
Chlorobenzene	<1.0		1.0		ug/L			04/06/16 10:41	1
Ethylbenzene	<1.0		1.0		ug/L			04/06/16 10:41	1
Styrene	<1.0		1.0		ug/L			04/06/16 10:41	1
Xylenes, Total	<1.0		1.0		ug/L			04/06/16 10:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*04/06/16 10:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*04/06/16 10:41*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*04/06/16 10:41*	*1*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*		*04/06/16 10:41*	*1*

Lab Sample ID: LCS 680-428037/4
Matrix: Water
Analysis Batch: 428037

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	50.0	48.5		ug/L		97	63 - 126
Bromomethane	50.0	45.7		ug/L		91	20 - 180
Vinyl chloride	50.0	55.6		ug/L		111	68 - 132
Chloroethane	50.0	48.9		ug/L		98	50 - 151
Methylene Chloride	50.0	49.8		ug/L		100	76 - 129
Acetone	250	246		ug/L		99	60 - 154
Carbon disulfide	50.0	48.4		ug/L		97	73 - 127
1,1-Dichloroethene	50.0	49.2		ug/L		98	74 - 125
1,1-Dichloroethane	50.0	53.4		ug/L		107	80 - 120
cis-1,2-Dichloroethene	50.0	50.3		ug/L		101	80 - 122
trans-1,2-Dichloroethene	50.0	46.3		ug/L		93	78 - 123
Chloroform	50.0	49.9		ug/L		100	79 - 122
1,2-Dichloroethane	50.0	53.3		ug/L		107	75 - 130
2-Butanone (MEK)	250	273		ug/L		109	75 - 133

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-428037/4
Matrix: Water
Analysis Batch: 428037

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	50.2		ug/L		100	74 - 128
Carbon tetrachloride	50.0	48.2		ug/L		96	75 - 130
Dichlorobromomethane	50.0	51.1		ug/L		102	77 - 129
1,1,2,2-Tetrachloroethane	50.0	51.9		ug/L		104	72 - 128
1,2-Dichloropropane	50.0	46.9		ug/L		94	80 - 123
trans-1,3-Dichloropropene	50.0	58.1		ug/L		116	74 - 140
Trichloroethene	50.0	50.0		ug/L		100	80 - 123
Chlorodibromomethane	50.0	57.1		ug/L		114	71 - 136
1,1,2-Trichloroethane	50.0	51.0		ug/L		102	79 - 125
Benzene	50.0	49.2		ug/L		98	73 - 131
cis-1,3-Dichloropropene	50.0	50.8		ug/L		102	80 - 133
Bromoform	50.0	60.3		ug/L		121	69 - 135
2-Hexanone	250	273		ug/L		109	70 - 141
4-Methyl-2-pentanone (MIBK)	250	269		ug/L		108	75 - 135
Tetrachloroethene	50.0	59.0		ug/L		118	77 - 123
Toluene	50.0	49.4		ug/L		99	80 - 122
Chlorobenzene	50.0	49.1		ug/L		98	80 - 120
Ethylbenzene	50.0	48.1		ug/L		96	80 - 120
Styrene	50.0	53.3		ug/L		107	80 - 122
Xylenes, Total	100	97.8		ug/L		98	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*94*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*

Lab Sample ID: LCSD 680-428037/5
Matrix: Water
Analysis Batch: 428037

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloromethane	50.0	57.7		ug/L		115	63 - 126	17	30
Bromomethane	50.0	38.2		ug/L		76	20 - 180	18	40
Vinyl chloride	50.0	61.0		ug/L		122	68 - 132	9	30
Chloroethane	50.0	49.9		ug/L		100	50 - 151	2	30
Methylene Chloride	50.0	48.9		ug/L		98	76 - 129	2	20
Acetone	250	218		ug/L		87	60 - 154	12	40
Carbon disulfide	50.0	49.9		ug/L		100	73 - 127	3	20
1,1-Dichloroethene	50.0	50.6		ug/L		101	74 - 125	3	20
1,1-Dichloroethane	50.0	52.5		ug/L		105	80 - 120	2	20
cis-1,2-Dichloroethene	50.0	50.4		ug/L		101	80 - 122	0	20
trans-1,2-Dichloroethene	50.0	48.1		ug/L		96	78 - 123	4	20
Chloroform	50.0	49.0		ug/L		98	79 - 122	2	20
1,2-Dichloroethane	50.0	50.6		ug/L		101	75 - 130	5	20
2-Butanone (MEK)	250	267		ug/L		107	75 - 133	2	30
1,1,1-Trichloroethane	50.0	51.8		ug/L		104	74 - 128	3	20
Carbon tetrachloride	50.0	49.8		ug/L		100	75 - 130	3	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-428037/5
Matrix: Water
Analysis Batch: 428037

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorobromomethane	50.0	49.0		ug/L		98	77 - 129	4	20
1,1,2,2-Tetrachloroethane	50.0	49.4		ug/L		99	72 - 128	5	20
1,2-Dichloropropane	50.0	45.3		ug/L		91	80 - 123	3	20
trans-1,3-Dichloropropene	50.0	55.1		ug/L		110	74 - 140	5	20
Trichloroethene	50.0	50.9		ug/L		102	80 - 123	2	20
Chlorodibromomethane	50.0	53.6		ug/L		107	71 - 136	6	20
1,1,2-Trichloroethane	50.0	50.0		ug/L		100	79 - 125	2	20
Benzene	50.0	49.3		ug/L		99	73 - 131	0	30
cis-1,3-Dichloropropene	50.0	49.2		ug/L		98	80 - 133	3	20
Bromoform	50.0	57.7		ug/L		115	69 - 135	4	20
2-Hexanone	250	265		ug/L		106	70 - 141	3	40
4-Methyl-2-pentanone (MIBK)	250	251		ug/L		100	75 - 135	7	30
Tetrachloroethene	50.0	59.8		ug/L		120	77 - 123	1	20
Toluene	50.0	49.9		ug/L		100	80 - 122	1	20
Chlorobenzene	50.0	48.9		ug/L		98	80 - 120	0	20
Ethylbenzene	50.0	49.0		ug/L		98	80 - 120	2	20
Styrene	50.0	52.8		ug/L		106	80 - 122	1	20
Xylenes, Total	100	98.7		ug/L		99	80 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*94*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*

Lab Sample ID: MB 680-428208/16
Matrix: Water
Analysis Batch: 428208

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	<1.0		1.0		ug/L			04/07/16 13:21	1
Bromomethane	<5.0		5.0		ug/L			04/07/16 13:21	1
Vinyl chloride	<1.0		1.0		ug/L			04/07/16 13:21	1
Chloroethane	<5.0		5.0		ug/L			04/07/16 13:21	1
Methylene Chloride	<5.0		5.0		ug/L			04/07/16 13:21	1
Acetone	<10		10		ug/L			04/07/16 13:21	1
Carbon disulfide	<2.0		2.0		ug/L			04/07/16 13:21	1
1,1-Dichloroethene	<1.0		1.0		ug/L			04/07/16 13:21	1
1,1-Dichloroethane	<1.0		1.0		ug/L			04/07/16 13:21	1
cis-1,2-Dichloroethene	<1.0		1.0		ug/L			04/07/16 13:21	1
trans-1,2-Dichloroethene	<1.0		1.0		ug/L			04/07/16 13:21	1
Chloroform	<1.0		1.0		ug/L			04/07/16 13:21	1
1,2-Dichloroethane	<1.0		1.0		ug/L			04/07/16 13:21	1
2-Butanone (MEK)	<10		10		ug/L			04/07/16 13:21	1
1,1,1-Trichloroethane	<1.0		1.0		ug/L			04/07/16 13:21	1
Carbon tetrachloride	<1.0		1.0		ug/L			04/07/16 13:21	1
Dichlorobromomethane	<1.0		1.0		ug/L			04/07/16 13:21	1
1,1,2,2-Tetrachloroethane	<1.0		1.0		ug/L			04/07/16 13:21	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-428208/16
Matrix: Water
Analysis Batch: 428208

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	<1.0		1.0		ug/L			04/07/16 13:21	1
trans-1,3-Dichloropropene	<1.0		1.0		ug/L			04/07/16 13:21	1
Trichloroethene	<1.0		1.0		ug/L			04/07/16 13:21	1
Chlorodibromomethane	<1.0		1.0		ug/L			04/07/16 13:21	1
1,1,2-Trichloroethane	<1.0		1.0		ug/L			04/07/16 13:21	1
Benzene	<1.0		1.0		ug/L			04/07/16 13:21	1
cis-1,3-Dichloropropene	<1.0		1.0		ug/L			04/07/16 13:21	1
Bromoform	<1.0		1.0		ug/L			04/07/16 13:21	1
2-Hexanone	<10		10		ug/L			04/07/16 13:21	1
4-Methyl-2-pentanone (MIBK)	<10		10		ug/L			04/07/16 13:21	1
Tetrachloroethene	<1.0		1.0		ug/L			04/07/16 13:21	1
Toluene	<1.0		1.0		ug/L			04/07/16 13:21	1
Chlorobenzene	<1.0		1.0		ug/L			04/07/16 13:21	1
Ethylbenzene	<1.0		1.0		ug/L			04/07/16 13:21	1
Styrene	<1.0		1.0		ug/L			04/07/16 13:21	1
Xylenes, Total	<1.0		1.0		ug/L			04/07/16 13:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*04/07/16 13:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*04/07/16 13:21*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*		*04/07/16 13:21*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*04/07/16 13:21*	*1*

Lab Sample ID: LCS 680-428208/4
Matrix: Water
Analysis Batch: 428208

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	50.0	36.0		ug/L		72	63 - 126
Bromomethane	50.0	38.5		ug/L		77	20 - 180
Vinyl chloride	50.0	43.2		ug/L		86	68 - 132
Chloroethane	50.0	38.8		ug/L		78	50 - 151
Methylene Chloride	50.0	50.7		ug/L		101	76 - 129
Acetone	250	239		ug/L		95	60 - 154
Carbon disulfide	50.0	44.5		ug/L		89	73 - 127
1,1-Dichloroethene	50.0	49.4		ug/L		99	74 - 125
1,1-Dichloroethane	50.0	45.8		ug/L		92	80 - 120
cis-1,2-Dichloroethene	50.0	43.9		ug/L		88	80 - 122
trans-1,2-Dichloroethene	50.0	49.2		ug/L		98	78 - 123
Chloroform	50.0	47.8		ug/L		96	79 - 122
1,2-Dichloroethane	50.0	43.5		ug/L		87	75 - 130
2-Butanone (MEK)	250	256		ug/L		102	75 - 133
1,1,1-Trichloroethane	50.0	45.4		ug/L		91	74 - 128
Carbon tetrachloride	50.0	44.2		ug/L		88	75 - 130
Dichlorobromomethane	50.0	45.6		ug/L		91	77 - 129
1,1,2,2-Tetrachloroethane	50.0	49.7		ug/L		99	72 - 128
1,2-Dichloropropane	50.0	46.0		ug/L		92	80 - 123
trans-1,3-Dichloropropene	50.0	48.1		ug/L		96	74 - 140

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-428208/4
Matrix: Water
Analysis Batch: 428208

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	50.0	48.2		ug/L		96	80 - 123
Chlorodibromomethane	50.0	49.4		ug/L		99	71 - 136
1,1,2-Trichloroethane	50.0	51.7		ug/L		103	79 - 125
Benzene	50.0	48.9		ug/L		98	73 - 131
cis-1,3-Dichloropropene	50.0	48.1		ug/L		96	80 - 133
Bromoform	50.0	49.2		ug/L		98	69 - 135
2-Hexanone	250	209		ug/L		84	70 - 141
4-Methyl-2-pentanone (MIBK)	250	213		ug/L		85	75 - 135
Tetrachloroethene	50.0	49.0		ug/L		98	77 - 123
Toluene	50.0	50.9		ug/L		102	80 - 122
Chlorobenzene	50.0	53.2		ug/L		106	80 - 120
Ethylbenzene	50.0	52.3		ug/L		105	80 - 120
Styrene	50.0	55.3		ug/L		111	80 - 122
Xylenes, Total	100	105		ug/L		105	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*85*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 680-428208/5
Matrix: Water
Analysis Batch: 428208

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloromethane	50.0	37.4		ug/L		75	63 - 126	4	30
Bromomethane	50.0	39.4		ug/L		79	20 - 180	2	40
Vinyl chloride	50.0	44.4		ug/L		89	68 - 132	3	30
Chloroethane	50.0	39.4		ug/L		79	50 - 151	2	30
Methylene Chloride	50.0	51.0		ug/L		102	76 - 129	1	20
Acetone	250	228		ug/L		91	60 - 154	5	40
Carbon disulfide	50.0	45.5		ug/L		91	73 - 127	2	20
1,1-Dichloroethene	50.0	51.4		ug/L		103	74 - 125	4	20
1,1-Dichloroethane	50.0	45.9		ug/L		92	80 - 120	0	20
cis-1,2-Dichloroethene	50.0	44.8		ug/L		90	80 - 122	2	20
trans-1,2-Dichloroethene	50.0	50.0		ug/L		100	78 - 123	2	20
Chloroform	50.0	47.8		ug/L		96	79 - 122	0	20
1,2-Dichloroethane	50.0	43.0		ug/L		86	75 - 130	1	20
2-Butanone (MEK)	250	247		ug/L		99	75 - 133	3	30
1,1,1-Trichloroethane	50.0	46.6		ug/L		93	74 - 128	3	20
Carbon tetrachloride	50.0	45.6		ug/L		91	75 - 130	3	20
Dichlorobromomethane	50.0	45.7		ug/L		91	77 - 129	0	20
1,1,2,2-Tetrachloroethane	50.0	48.7		ug/L		97	72 - 128	2	20
1,2-Dichloropropane	50.0	46.2		ug/L		92	80 - 123	0	20
trans-1,3-Dichloropropene	50.0	47.4		ug/L		95	74 - 140	1	20
Trichloroethene	50.0	49.5		ug/L		99	80 - 123	3	20
Chlorodibromomethane	50.0	49.3		ug/L		99	71 - 136	0	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-428208/5
Matrix: Water
Analysis Batch: 428208

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloroethane			50.0	51.5		ug/L		103	79 - 125	0	20
Benzene			50.0	49.6		ug/L		99	73 - 131	1	30
cis-1,3-Dichloropropene			50.0	47.9		ug/L		96	80 - 133	0	20
Bromoform			50.0	49.2		ug/L		98	69 - 135	0	20
2-Hexanone			250	204		ug/L		82	70 - 141	3	40
4-Methyl-2-pentanone (MIBK)			250	205		ug/L		82	75 - 135	4	30
Tetrachloroethene			50.0	48.6		ug/L		97	77 - 123	1	20
Toluene			50.0	51.5		ug/L		103	80 - 122	1	20
Chlorobenzene			50.0	52.4		ug/L		105	80 - 120	2	20
Ethylbenzene			50.0	51.9		ug/L		104	80 - 120	1	20
Styrene			50.0	54.1		ug/L		108	80 - 122	2	20
Xylenes, Total			100	104		ug/L		104	80 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

GC/MS VOA

Analysis Batch: 427891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-123585-1	MW-24	Total/NA	Water	8260B	
680-123585-2	MW-26	Total/NA	Water	8260B	
680-123585-3	MW-23	Total/NA	Water	8260B	
680-123585-4	MW-23D	Total/NA	Water	8260B	
680-123585-5	MW-23BR	Total/NA	Water	8260B	
680-123585-6	SWS-3	Total/NA	Water	8260B	
680-123585-7	SWS-2	Total/NA	Water	8260B	
680-123585-8	SWS-1	Total/NA	Water	8260B	
680-123585-9	MW-25	Total/NA	Water	8260B	
680-123585-10	MW-14OB	Total/NA	Water	8260B	
680-123585-11	MW-14TZ	Total/NA	Water	8260B	
680-123585-27	TRIP BLANK	Total/NA	Water	8260B	
LCS 680-427891/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-427891/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-427891/9	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 427893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-123585-12	MW-8R	Total/NA	Water	8260B	
680-123585-13	EB-1	Total/NA	Water	8260B	
680-123585-14	MW-8DR	Total/NA	Water	8260B	
680-123585-15	MW-12D	Total/NA	Water	8260B	
680-123585-16	MW-22	Total/NA	Water	8260B	
680-123585-17	MW-18BR	Total/NA	Water	8260B	
680-123585-18	MW-16OB	Total/NA	Water	8260B	
680-123585-19	MW-3D	Total/NA	Water	8260B	
680-123585-20	MW-3	Total/NA	Water	8260B	
680-123585-21	MW-5	Total/NA	Water	8260B	
680-123585-22	MW-1	Total/NA	Water	8260B	
680-123585-23	FB-1	Total/NA	Water	8260B	
680-123585-24	MW-7	Total/NA	Water	8260B	
680-123585-25	IDW	Total/NA	Water	8260B	
LCS 680-427893/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-427893/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-427893/9	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 428037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-123585-3 - DL	MW-23	Total/NA	Water	8260B	
680-123585-26	DUP-1	Total/NA	Water	8260B	
LCS 680-428037/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-428037/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-428037/8	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 428208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-123585-24 - DL	MW-7	Total/NA	Water	8260B	
LCS 680-428208/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 680-428208/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 680-428208/16	Method Blank	Total/NA	Water	8260B	

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-24

Lab Sample ID: 680-123585-1
Matrix: Water
Date Collected: 03/28/16 14:28
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	5 mL	5 mL	427891	04/05/16 15:52	CEJ	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: MW-26

Lab Sample ID: 680-123585-2
Matrix: Water
Date Collected: 03/28/16 14:30
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	5 mL	5 mL	427891	04/05/16 18:21	CEJ	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: MW-23

Lab Sample ID: 680-123585-3
Matrix: Water
Date Collected: 03/28/16 14:50
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	5 mL	5 mL	427891	04/05/16 16:35	CEJ	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	8260B	DL	5	5 mL	5 mL	428037	04/06/16 12:20	CEJ	TAL SAV
	Instrument ID: CMSO2									

Client Sample ID: MW-23D

Lab Sample ID: 680-123585-4
Matrix: Water
Date Collected: 03/28/16 14:55
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	5 mL	5 mL	427891	04/05/16 16:56	CEJ	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: MW-23BR

Lab Sample ID: 680-123585-5
Matrix: Water
Date Collected: 03/28/16 15:00
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	5 mL	5 mL	427891	04/05/16 17:17	CEJ	TAL SAV
	Instrument ID: CMSB									

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: SWS-3 — Lab Sample ID: 680-123585-6

Date Collected: 03/28/16 15:15 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	427891	04/05/16 14:28	CEJ	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: SWS-2 — Lab Sample ID: 680-123585-7

Date Collected: 03/28/16 15:30 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	427891	04/05/16 14:49	CEJ	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: SWS-1 — Lab Sample ID: 680-123585-8

Date Collected: 03/28/16 15:45 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	427891	04/05/16 15:10	CEJ	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: MW-25 — Lab Sample ID: 680-123585-9

Date Collected: 03/28/16 16:15 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	427891	04/05/16 15:31	CEJ	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: MW-14OB — Lab Sample ID: 680-123585-10

Date Collected: 03/28/16 17:55 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	5 mL	5 mL	427891	04/05/16 17:38	CEJ	TAL SAV
	Instrument ID: CMSB									

Client Sample ID: MW-14TZ — Lab Sample ID: 680-123585-11

Date Collected: 03/28/16 18:35 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	5 mL	5 mL	427891	04/05/16 17:59	CEJ	TAL SAV
	Instrument ID: CMSB									

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-8R — Lab Sample ID: 680-123585-12

Date Collected: 03/29/16 08:50 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	5 mL	5 mL	427893	04/05/16 13:12	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: EB-1 — Lab Sample ID: 680-123585-13

Date Collected: 03/29/16 08:59 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	427893	04/05/16 11:41	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: MW-8DR — Lab Sample ID: 680-123585-14

Date Collected: 03/29/16 09:32 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		200	5 mL	5 mL	427893	04/05/16 13:35	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: MW-12D — Lab Sample ID: 680-123585-15

Date Collected: 03/29/16 10:18 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	5 mL	5 mL	427893	04/05/16 13:58	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: MW-22 — Lab Sample ID: 680-123585-16

Date Collected: 03/29/16 11:22 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	427893	04/05/16 12:49	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: MW-18BR — Lab Sample ID: 680-123585-17

Date Collected: 03/29/16 12:00 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	5 mL	5 mL	427893	04/05/16 14:21	CEJ	TAL SAV
	Instrument ID: CMSC									

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-16OB — Lab Sample ID: 680-123585-18

Date Collected: 03/29/16 12:40 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	427893	04/05/16 12:26	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: MW-3D — Lab Sample ID: 680-123585-19

Date Collected: 03/29/16 13:30 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	5 mL	5 mL	427893	04/05/16 14:44	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: MW-3 — Lab Sample ID: 680-123585-20

Date Collected: 03/29/16 14:00 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		25	5 mL	5 mL	427893	04/05/16 15:07	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: MW-5 — Lab Sample ID: 680-123585-21

Date Collected: 03/29/16 14:35 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		500	5 mL	5 mL	427893	04/05/16 15:30	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: MW-1 — Lab Sample ID: 680-123585-22

Date Collected: 03/29/16 15:32 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	5 mL	5 mL	427893	04/05/16 15:52	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: FB-1 — Lab Sample ID: 680-123585-23

Date Collected: 03/29/16 15:27 — **Matrix: Water**
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	427893	04/05/16 12:04	CEJ	TAL SAV
	Instrument ID: CMSC									

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Client Sample ID: MW-7

Lab Sample ID: 680-123585-24

Date Collected: 03/29/16 18:00
Matrix: Water
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	DL	100	5 mL	5 mL	428208	04/07/16 14:03	DAS	TAL SAV
	Instrument ID: CMSB									
Total/NA	Analysis	8260B		50	5 mL	5 mL	427893	04/05/16 16:15	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: IDW

Lab Sample ID: 680-123585-25

Date Collected: 03/29/16 00:00
Matrix: Water
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	5 mL	5 mL	427893	04/05/16 16:38	CEJ	TAL SAV
	Instrument ID: CMSC									

Client Sample ID: DUP-1

Lab Sample ID: 680-123585-26

Date Collected: 03/29/16 00:00
Matrix: Water
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	5 mL	5 mL	428037	04/06/16 13:01	CEJ	TAL SAV
	Instrument ID: CMSO2									

Client Sample ID: TRIP BLANK

Lab Sample ID: 680-123585-27

Date Collected: 03/28/16 00:00
Matrix: Water
Date Received: 03/31/16 11:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	427891	04/05/16 11:39	CEJ	TAL SAV
	Instrument ID: CMSB									

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Serial Number 105508

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE: Ashland - Raleigh	PROJECT NO.	PROJECT LOCATION (STATE): NC	PAGE 1 OF 3
TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO	STANDARD REPORT DELIVERY ✓
CLIENT (SITE) PM: Ryan Gerber	CLIENT PHONE: 919 415-2265	CLIENT FAX	DATE DUE
CLIENT NAME: Arcadis	CLIENT E-MAIL: ryan.gerber@arcadis-us.com		EXPEDITED REPORT DELIVERY (SURCHARGE)
CLIENT ADDRESS: 801 Corporate Center Dr. Ste 300, Raleigh, NC 27607			DATE DUE
COMPANY CONTRACTING THIS WORK (if applicable)			NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE; AQUEOUS (WATER); SOLID OR SEMISOLID; AIR; NONAQUEOUS LIQUID (OIL, SOLVENT, ...)

REQUIRED ANALYSIS: 8260; MW

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G)	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/28/16	1428	MW-24	G	✓				3	
	1430	MW-26							
	1450	MW-23							
	1455	MW-23D							
	1500	MW-23BR							
	1515	SWS-3							
	1530	SWS-2							
	1545	SWS-1							
	1615	MW-25							
	1755	MW-14DB							
	1835	MW-14TZ							
3/29/16	0850	MW-8R							

680-123585 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	3/30/16	1630						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
	03/31/16	1105	YES ○ NO ○	680-123585		29(CF) 3.3°

TAL8240-680 (1008)

Serial Number 103138

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location
Phone:
Fax:

PROJECT REFERENCE: Ashland - Raleigh	PROJECT NO.	PROJECT LOCATION (STATE): NC
TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Ryan Gerber	CLIENT PHONE	CLIENT FAX
CLIENT NAME: Arcadis	CLIENT E-MAIL: ryan.gerber@arcadis-us.com	
CLIENT ADDRESS: 801 Corporate Center Dr. Ste 300, Raleigh, NC 27607		
COMPANY CONTRACTING THIS WORK (if applicable)		

PAGE 2 OF 3

STANDARD REPORT DELIVERY ◯
DATE DUE _____
EXPEDITED REPORT DELIVERY (SURCHARGE) ◯
DATE DUE _____

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

REQUIRED ANALYSIS: 8260; HCl

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
3/29/16	0859	EB-1	G	✓				3	
	0932	MW-8DR							
	1018	MW-12D							
	1122	MW-22							
	1200	MW-18BR							
	1240	MW-16DB							
	1330	MW-3D							
	1400	MW-3							
	1435	MW-5							
	1532	MW-1							
	1527	FB-1							
	1800	MW-7							

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	3/30/16	1630						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO	LABORATORY REMARKS
[signature]	03/31/16	1105	YES ◯ NO ◯		680-123585	2.9(cf) 3.3c

TAL8240-680 (1008)

Serial Number 103139

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Savannah
5102 LaRoche Avenue
Savannah, GA 31404

Website: www.testamericainc.com
Phone: (912) 354-7858
Fax: (912) 352-0165

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE: Ashland-Raleigh	PROJECT NO	PROJECT LOCATION (STATE): NC	PAGE 3 OF 3
TAL (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.	STANDARD REPORT DELIVERY ◯ DATE DUE ____
CLIENT (SITE) PM: Ryan Gerber	CLIENT PHONE: 919 415 2265	CLIENT FAX	EXPEDITED REPORT DELIVERY (SURCHARGE) ◯ DATE DUE ____
CLIENT NAME: Arcadis	CLIENT E-MAIL: ryan.gerber@arcadis-us.com		
CLIENT ADDRESS: 801 Corporate Center Dr. ste 300, Raleigh, NC 27607			NUMBER OF COOLERS SUBMITTED PER SHIPMENT:
COMPANY CONTRACTING THIS WORK (if applicable)			

REQUIRED ANALYSIS: 8260

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ..)	NUMBER OF CONTAINERS SUBMITTED (8260)	REMARKS
3/29/16	1810	IDW	G	✓				3	
		DUP-1	G	✓				3	
		Trip Blank						4	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	3/30/16	1630						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY. (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT	CUSTODY SEAL NO.	SAVANNAH LOG NO.	LABORATORY REMARKS
	03/31/16	1105	YES ◯ NO ◯	680-123585		2.9(CF) 3.3°C

TAL8240-680 (1008)

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4/8/2016

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 680-123585-1

Login Number: 123585

List Source: TestAmerica Savannah

List Number: 1

Creator: Banda, Christy S

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Ashland Raleigh

TestAmerica Job ID: 680-123585-1

Laboratory: TestAmerica Savannah

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
North Carolina (WW/SW)	State Program	4	269	12-31-16