May 28, 2019

Alexis McKinnon
Solid Waste Specialist
Kitsap County Public Works
Solid Waste Division
604 Division Street, MS-27
Port Orchard, WA 98366

Re: First Quarter 2019 Environmental Monitoring Report, Hansville Landfill, Kitsap County, Washington

Project No. 160423-05.1

Dear Alexis:

This quarterly report summarizes the results of environmental monitoring conducted at the Hansville Landfill (Site) during the first quarter of 2019, and was prepared by Aspect Consulting, LLC (Aspect) on behalf of Kitsap County Public Works Solid Waste Division and Waste Management of Washington (WMW). Ongoing environmental monitoring at the Site supports the selected remedy of natural attenuation of groundwater with enhanced monitoring and institutional controls that was established under Amended Consent Decree No. 95-2-03005-1 (August 5, 2011). The data sets presented in this letter report were collected in accordance with the Site Cleanup Action Plan (CAP; Ecology, 2011) and the "Compliance Monitoring Plan with Sampling & Analysis Plan and Quality Assurance Plan" (SCS, 2011; herein referred as Compliance Monitoring Plan), except where otherwise noted.

Conditions monitored at the Site during the first quarter of 2019 were consistent with historical trends showing improvements in protection of human health and the environment recently described in the 2018 Annual Report (Aspect, 2019). This report is organized consistent with quarterly reporting topics listed in the Compliance Monitoring Plan (SCS, 2011), and includes:

- Site monitoring and maintenance activities, along with a discussion of any deviations from the CAP, or required tasks not otherwise documented in project plans.
- Landfill gas monitoring results and gas collection system adjustments.
- Determination of groundwater flow direction and gradient, including a groundwater surface elevation contour map.
- Water quality sampling results, including tabulated field data and laboratory analyses.

Also included are time-series plots and projected trends in groundwater concentrations for selected analytes at selected monitoring locations. Finally, this report discusses geochemical parameters as indicators of landfill effects on groundwater and surface water.

Site Activities – First Quarter 2019

Site activities during the reporting period included environmental monitoring of landfill gas, groundwater, and surface water. Landfill gas monitoring data are presented in Attachment A. Groundwater elevations, a groundwater contour map, and groundwater and surface water quality analytical results are presented in Attachment B. Summary statistics, time-series graphs, and graphs of projected groundwater concentrations for arsenic and vinyl chloride at selected monitoring wells are presented in Attachment C. Supporting field records, laboratory data reports, and chain-of-custody documentation are presented in Attachment D. A chronology of on-Site monitoring activities performed during the first quarter 2019 is provided below:

- On January 16, 2019, groundwater and surface water sampling was completed by Aspect representatives. Groundwater and surface water samples were collected in accordance with the Compliance Monitoring Plan (SCS, 2011).
- On January 17, January 29, and February 21, 2019, Aspect conducted system tuning of the landfill gas system. As necessary, flow rates were adjusted to ensure capture of landfill gasses.
- On March 21, 2019, Aspect conducted landfill gas monitoring in accordance with the Compliance Monitoring Plan (SCS, 2011). As necessary, flow rates were adjusted to ensure capture of landfill gasses.

Condensate Management System Improvements

Modifications to the condensate management system were completed during the first quarter 2019, which allow collection and storage of condensate at the flare compound. An as-built schematic and photographs are provided in Attachment E showing the components of the condensate management system including:

- A float switch installed in the condensate riser to control the pump
- An aboveground transfer pump
- Conveyance piping with freeze protection
- A 2,500-gallon condensate storage tank

Since mid-November 2018, approximately 400 gallons of water has been collected in the tank, translating to a collection rate of approximately 2.6 gallons per day. As needed, condensate will be disposed in bulk by transferring to a vactor truck and disposing at a publicly owned treatment works.

Deviations from the Compliance Monitoring Plan

There were no deviations from the Compliance Monitoring Plan (SCS, 2011) during the first quarter 2019 landfill gas compliance monitoring.

Summary of Landfill Gas Conditions

The following sections provide a discussion of landfill gas monitoring and gas extraction system performance. The layout of the landfill gas extraction system is shown on Figure A-1.

Landfill Gas Monitoring

The landfill gas collection system was tuned on January 17, January 29, and February 21, 2019, and compliance monitoring of the landfill gas collection system occurred on March 21, 2019.

Measurements were made with a GEM-5000 multigas meter. Landfill gas monitoring parameters collected for the compliance monitoring event are summarized in Table A-1, and listed below:

- Landfill gas composition measurements included methane (CH_4), carbon dioxide (CO_2), oxygen (O_2), and balance gas (Balance) concentrations.
- Collection system pressure measurements included the static pressure measured before and after any valve adjustments, reported as "initial" and "adjusted," respectively.
- Collection system flow-rate measurements were obtained at all locations via orifice plates. The differential pressure and gas temperature were measured to calculate flow. Table A-1 presents flow rates measured after valve adjustments, reported as "adjusted."

Landfill Gas System Performance

During the compliance monitoring event on March 21, 2019, the flow at the blower inlet was approximately 78 standard cubic feet per minute (scfm). Methane and carbon dioxide concentrations at the blower inlet were approximately 3 percent by volume and 13 percent by volume, respectively. Oxygen concentration was approximately 5 percent by volume. Well-field optimization will continue to focus on maximizing methane and carbon dioxide collection rates.

Explosive Gas Control

Methane was not detected in any of the perimeter compliance-gas probes during the compliance monitoring event on March 21, 2019. Carbon dioxide concentrations were less than 5 percent, which is within the range of natural conditions.

Summary of Groundwater and Surface Water Conditions

This section addresses groundwater and surface water conditions based on the monitoring event on January 16, 2019. Groundwater samples were collected from six monitoring wells and surface water samples were collected from four locations (see Figure B-1).

Groundwater Flow

Groundwater surface elevations were calculated using water levels measured January 16, 2019, and are presented in Table B-1. Groundwater elevations ranged from 238.7 feet North American Vertical Datum of 1988 (NAVD88) in MW-12I to 268.8 feet NAVD88 in MW-5. The direction of groundwater flow at the Site was to the southwest. Groundwater gradients ranged from 0.009 feet over feet (feet/feet) in the upgradient areas, to 0.015 feet/feet further downgradient, with the gradient steepening near the groundwater discharge area (Figure B-1). Groundwater flow conditions were consistent with those observed during previous monitoring events.

Groundwater and Surface Water Quality

Groundwater quality results from the first quarter 2019 are presented in Table B-2, including field parameters, conventional parameters, dissolved metals, and volatile organic compounds. During the reporting period, arsenic concentrations in groundwater were below the Site-specific cleanup level of 0.005 milligrams per liter (mg/L) at all monitoring wells except MW-14 (0.0146 mg/L). Dissolved manganese concentrations were below the Site-specific cleanup level of 2.24 mg/L. Vinyl chloride concentrations in groundwater were below the Site-specific groundwater cleanup level of 0.025 micrograms per liter (µg/L) at all monitoring wells except MW-6 (0.088 µg/L), MW-12I (0.039 µg/L), and MW-14 (0.033 µg/L).

Surface water quality results from the first quarter 2019 are presented in Table B-3, including field parameters, conventional parameters, dissolved metals, and volatile organic compounds. During the reporting period, dissolved arsenic concentrations in surface water were below the Site-specific cleanup level of 0.005 mg/L. Dissolved manganese concentrations were below the Site-specific cleanup level of 2.24 mg/L. Vinyl chloride concentrations in surface water were not detected at a reporting limit below the Site-specific cleanup level of 0.025 µg/L.

Time-Series Plots and Projected Trends

Groundwater sampling results since 2007 are shown on time-series plots for dissolved arsenic (Figure C-1) and vinyl chloride (Figure C-2) at all compliance monitoring locations. Figure C-1 shows that dissolved arsenic concentrations in groundwater have been less than the cleanup level of 0.005 mg/L at MW-5 (background well), MW-6, MW-7, and MW-12I. Dissolved arsenic concentrations have historically been below the cleanup level at MW-13D except during the third quarter 2018. Dissolved arsenic concentrations at MW-14 have historically exceeded the Site-specific cleanup level and have been decreasing over time.

Figure C-2 shows vinyl chloride concentrations in groundwater have been less than the cleanup level of 0.025 µg/L at MW-5 (background well), MW-7, and MW-13D. The concentrations of vinyl chloride at MW-6, MW-12I, and MW-14 have historically exceeded the Site-specific cleanup level and have been decreasing over time. For the first time since monitoring began, vinyl chloride concentrations at MW-14 were below the Site-specific cleanup level during the third quarter 2018.

Figure C-3 shows time-series plots of historical and 10-year projected groundwater concentrations for MW-6 (vinyl chloride), MW-12I (vinyl chloride), and MW-14 (arsenic and vinyl chloride). The projected restoration time frames for vinyl chloride concentrations range from approximately 5 to 10 years. The projected restoration time frame for arsenic in groundwater at MW-14 is more than 10 years. Increasing the rate of landfill gas collection system may achieve groundwater cleanup levels within a shorter time frame than shown on Figure C-3.

Statistical Evaluation of Groundwater Trends

There are statistically significant decreasing trends in concentrations where dissolved arsenic and/or vinyl chloride have been detected above Site-specific cleanup levels (at monitoring wells MW-6, MW-12I, and MW-14). Table C-1 provides results of statistical analysis for arsenic and vinyl chloride for monitoring wells MW-6, MW-12I, and MW-14. The trends are defined as “statistically significant” because the magnitude of the Mann-Kendall Test Value (Z) was greater than the Critical Value (which is based on the number of data points and alpha). The trends are defined as

decreasing because the Sen's Slopes are negative.[1] These statistics confirm what is visually apparent on Figure C-3 showing historical groundwater concentrations.

The statistical analysis of groundwater data was performed in accordance with the Compliance Monitoring Plan (SCS, 2011) for historical data collected since January 23, 2007. The program Sanitas WQStat (ver. 9.0.34) was used to evaluate the Mann-Kendall Test and Sen's Slope. Mann-Kendall testing was performed to assess whether there were statistically significant trends in groundwater concentrations using the two-tailed test (alpha = 0.05). Mann-Kendall results are reported as an approximated normal distribution Test Value "Z" (where the number of data points was greater than 40). Sen's slope analysis was performed to identify the trend direction for statistically significant trends and reflects the median of the slopes of all pairs of historical data.

Geochemical Parameters

Geochemical parameters in groundwater and surface water serve as indicators of landfill effects and can distinguish leachate impacts from gas-to-groundwater impacts. As shown in Tables B-2 and B-3, geochemical parameters collected at the Site include field parameters (dissolved oxygen, pH, Redox [reduction-oxidation potential], specific conductivity, and temperature), alkalinity/carbonate/bicarbonate, chloride, nitrate/nitrite/ammonia, sulfate, and total organic carbon.

Based on low concentrations of geochemical parameters identified as leachate indicators (such as chloride, sulfate, alkalinity, and bicarbonate) across the Site, there appears to be little if any leachate effect on groundwater and surface water quality. However, the downgradient monitoring wells show lower dissolved oxygen concentrations than the upgradient well (MW-5), which is likely caused by carbon dioxide in landfill gas coming in contact with groundwater directly beneath the landfill. Increasing the rate of landfill gas collection may prevent carbon dioxide from contacting groundwater, maintain background dissolved oxygen levels, and support geochemical conditions that keeps naturally occurring arsenic immobilized.

References

Aspect Consulting, LLC (Aspect), 2019, 2018 Annual Environmental Monitoring Report, Hansville Landfill, Kitsap County, WA, March 1, 2019.

SCS Engineers (SCS), 2011, Compliance Monitoring Plan with Sampling & Analysis Plan and Quality Assurance Plan – Remedial Action at the Hansville Landfill, September 15, 2011.

Washington State Department of Ecology (Ecology), 2011, Cleanup Action Plan Hansville Landfill, Kitsap County, Washington, Ecology Facility Site Identification Number: 2605, June 2011.

[1] Sen's slope values reflect the median of the slopes of historical data pairs, and were provided in units of µg/L per day in reports by SCS through 2016. Starting in 2017, Sen's slope values will be provided in units of µg/L per year, to support interpretation. For comparison, Table C-1 provides Sen's slope values for both units.

Limitations

Work for this project was performed for the Kitsap County Public Works (Client), and this letter was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This letter does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

Sincerely,

Aspect consulting, LLC

Peter S. Bannister, PE
Associate Engineer
pbannister@aspectconsulting.com

Meilani Lanier-Kamaha'o, LG
Project Geologist
mlkamahao@aspectconsulting.com

Attachments:
A – Landfill Gas Data
B – Water Quality Results
C – Groundwater Statistics and Time-Series Plots
D – Field Forms and Laboratory Reports
E – Condensate System Improvements As-Built and Photographs

cc: Phil Perley, Waste Management of Washington
Patrick Hamel, Kitsap Public Health District
Ron Timm, Washington State Department of Ecology
Sam Phillips, Port Gamble S'Klallam Tribe

V:\160423 Kitsap County Hansville Landfill\Deliverables\2019 Reports\2019Q1\Client Draft\First Quarter Monitoring Report 2019 Final_20190528.docx

ATTACHMENT A

Landfill Gas Data

TABLE

Table A-1. Landfill Gas Data, First Quarter, 2019

Project No. 160423, Hansville Landfill, Hansville, WA

Location	Device ID	Date/Time	Methane CH4 (% by vol)	Carbon Dioxide CO2 (% by vol)	Oxygen O2 (% by vol)	Balance Bal (% by vol)	Static Pressure (inches H2O)		Gas Temperature (degrees F)		Flow Rate (SCFM)	
							Initial	Adjusted	Initial	Adjusted	Initial	Adjusted
Blower Inlet	HANSBLIN	3/21/2019 10:05	3.2	13.4	5	78.4	-4.95	-5.51	50.4	50.1	77.8	78.6
Blower Outlet	HANSBLOT	3/21/2019 10:06	3.1	13.3	4.9	78.7	N/A	N/A	N/A	N/A	N/A	N/A
Extraction Well 001	HANSR001	3/21/2019 12:17	7.4	14.7	0.1	77.8	-0.76	-0.76	68.3	67.2	1.1	1.1
Extraction Well 002	HANSR002	3/21/2019 12:14	1.7	14.2	4.7	79.4	-2.46	-2.46	61.7	61.7	N/A	N/A
Extraction Well 003	HANSR003	3/21/2019 12:23	7.6	14.4	0	78	-1.46	-1.47	68.9	69	3.2	3.2
Extraction Well 004	HANSR004	3/21/2019 12:30	3.1	18.1	0	78.8	-1.66	-1.67	66.1	65.8	2.5	2.6
Extraction Well 005	HANSR005	3/21/2019 13:01	1.8	10.8	9.1	78.3	-0.77	-0.78	65.2	65.8	2.3	2.4
Extraction Well 006	HANSR006	3/21/2019 12:58	2.9	16.7	2.4	78	-1.07	-1.08	69.5	69.9	1.9	2.1
Extraction Well 007	HANSR007	3/21/2019 12:51	0.4	15.6	0.2	83.8	-0.54	-0.58	67.8	68.4	2.6	2.6
Extraction Well 008	HANSR008	3/21/2019 11:51	5.1	18.3	0.1	76.5	-0.9	-0.91	58.7	58.8	1.2	1.2
Extraction Well 009	HANSR009	3/21/2019 12:00	1.6	14.9	2.7	80.8	-1.27	-1.27	72.2	72.2	N/A	N/A
Extraction Well 010	HANSR010	3/21/2019 12:04	4.6	9.4	5.7	80.3	-0.65	-0.72	61.4	60.9	0.8	0.8
Extraction Well 011	HANSR011	3/21/2019 12:08	2.8	8.5	0.1	88.6	-0.9	-0.9	60.6	60.8	0.8	0.8
Extraction Well 012	HANSR012	3/21/2019 12:40	8.9	4.6	0	86.5	-0.84	-0.86	71.1	71.2	1	1
Extraction Well 013	HANSR013	3/21/2019 12:48	2.9	13.9	1.4	81.8	-3.01	-3.01	70.7	70.7	N/A	N/A
Trench Collector TD-1	HANSTD01	3/21/2019 9:53	2.3	20.4	0	77.3	-0.08	-0.08	58	58	15.1	13.4
Trench Collector TR-1	HANSTR01	3/21/2019 12:55	0	14.2	4.5	81.3	-0.8	-0.79	65.3	66	2.4	2.3
Trench Collector TR-2	HANSTR02	3/21/2019 11:55	6.7	16.6	0.3	76.4	-1.17	-1.17	59.9	59.9	N/A	N/A
Trench Collector TR-3	HANSTR03	3/21/2019 12:11	0	0.1	20.9	79	-1.03	-1.03	63.8	63.8	N/A	N/A
Trench Collector TR-4	HANSTR04	3/21/2019 12:33	1	18	0.1	80.9	-0.84	-0.83	65.4	66.3	2.6	2.7
Trench Collector TR-5	HANSTR05	3/21/2019 12:37	0.4	0.3	19.8	79.5	-1.16	-1.16	71.5	71.5	N/A	N/A
Trench Collector TR-6	HANSTR06	3/21/2019 12:44	7.6	15.2	0.5	76.7	-0.95	-0.95	67.6	67.6	N/A	N/A
Trench Collector TR-7	HANSTR07	3/21/2019 12:27	7.1	15.8	0.6	76.5	-0.93	-0.93	61.9	61.9	3.7	3.4
Native Soil Extraction Well 1 Shallow	HANSN01S	3/21/2019 11:16	0	1.4	19.7	78.9	-0.45	-0.45	62	62	0	0
Native Soil Extraction Well 1 Deep	HANSN01D	3/21/2019 11:13	0	1.1	20.2	78.7	-1.52	-1.52	61.3	61.3	0	0
Native Soil Extraction Well 2 Shallow	HANSN02S	3/21/2019 11:22	0	1.4	19.9	78.7	-0.34	-0.34	68.2	68.2	0	0
Native Soil Extraction Well 2 Deep	HANSN02D	3/21/2019 11:20	0	1.4	19.9	78.7	-0.69	-0.69	68.2	68.2	0	0
Native Soil Extraction Well 3 Shallow	HANSN03S	3/21/2019 11:28	0	0.1	20.9	79	-0.23	-0.23	66.7	66.7	0	0
Native Soil Extraction Well 3 Deep	HANSN03D	3/21/2019 11:25	0	0.1	20.9	79	-0.29	-0.29	67.8	67.8	0	0
Native Soil Extraction Well 4 Shallow	HANSN04S	3/21/2019 11:35	0	0.1	20.8	79.1	-0.02	-0.02	71.4	71.4	0	0
Native Soil Extraction Well 4 Deep	HANSN04D	3/21/2019 11:32	0	0.1	20.8	79.1	-0.02	-0.02	69.1	69.1	0	0
Native Soil Extraction Well 5 Shallow	HANSN05S	3/21/2019 11:41	0	0.1	20.9	79	-0.26	-0.26	66.2	66.2	0	0
Native Soil Extraction Well 5 Deep	HANSN05D	3/21/2019 11:38	0	0.1	20.8	79.1	-0.22	-0.22	67.6	67.6	0	0
Gas Probe 1	HANSGP01	3/21/2019 10:16	0	0.8	20.5	78.7	-0.1	-0.1	50.5	50.5	0	0
Gas Probe 2 Shallow	HANSGP2S	3/21/2019 10:33	0	0.1	21.1	78.8	0.02	0.02	53.1	53.1	0	0
Gas Probe 2 Middle	HANSGP2M	3/21/2019 10:30	0	0.9	19.8	79.3	-0.45	-0.45	53.1	53.1	0	0
Gas Probe 2 Deep	HANSGP2D	3/21/2019 10:28	0	0.1	21.1	78.8	-0.72	-0.72	53.3	53.3	0	0
Gas Probe 3	HANSGP03	3/21/2019 10:41	0	1.1	20.4	78.5	0.06	0.06	51.8	51.8	0	0
Gas Probe 4	HANSGP04	3/21/2019 11:10	0	1.6	20.1	78.3	0.01	0.01	60.3	60.3	0	0
Gas Probe 5	HANSGP05	3/21/2019 11:44	0	0.1	20.9	79	0.07	0.07	62.8	62.8	0	0
Gas Probe 6	HANSGP06	3/21/2019 9:58	0	0.1	20.6	79.3	-0.18	-0.18	48.5	48.5	0	0
Gas Probe 7	HANSGP07	3/21/2019 10:51	0	0.1	21.2	78.7	0.02	0.02	52.6	52.6	0	0

Notes

Flow rates measured using orifice plates (where installed).

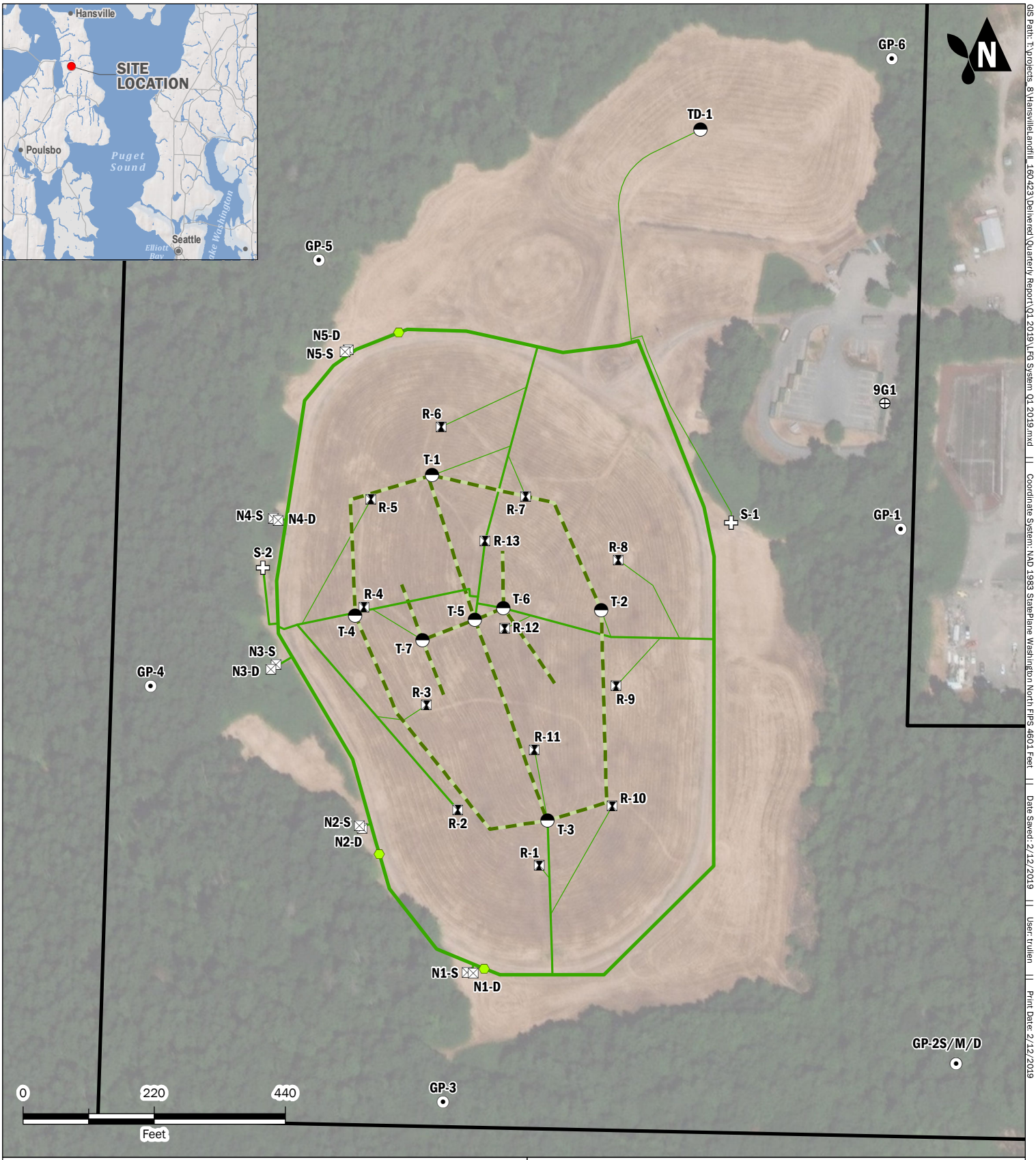
N/A = indicates parameter not measured.

inches H2O = inches water column

degrees F = degrees Fahrenheit

SCFM = standard cubic feet per minute

FIGURE



GIS Path: T:\projects_8\Hansville\Landfill_160423\Delivered\Quarterly Report\Q1 2019\LFG System Q1 2019.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2/12/2019 || User: trullen || Print Date: 2/12/2019

Exploration

- Condensate Sump
- Gas Detection Probe
- Gas Extraction Well (Native Soil Completion)
- Gas Extraction Well (in Refuse Completion)
- Trench Completion
- Well Geologic Control

Landfill Gas System

- LFG Pipe - 2"
- LFG Pipe - 4"
- LFG Pipe - 6"
- Trench
- LFG Valve
- Landfill Boundary

Landfill Gas System

First Quarter 2019 Environmental Monitoring Report
Hansville Landfill
Kitsap County, Washington

Aspect Consulting	FEB-2019	BY: MLK / RAP	FIGURE NO. A-1
	PROJECT NO. 160423	REVISED BY: ---	

ATTACHMENT B

Water Quality Results

TABLES

Table B-1. Water Level Elevations

Project No. 160423, Hansville Landfill, Hansville, WA

Well	Ground Elevation (ft NAVD88)	Top of Casing Elevation (ft NAVD88)	Screen Elevation (ft NAVD88)		Depth to Water (ft)	Water Level Elevation (ft NAVD88)
			Top	Bottom		
MW-5	363.7	366.9	244	234	98.10	268.8
MW-6	332.0	332.7	260	245	72.58	260.1
MW-7	344.3	346.0	259	244	83.55	262.5
MW-12I	245.6	248.1	217	207	9.39	238.7
MW-13D	258.1	260.4	205	195	10.38	250.0
MW-14	338.6	341.1	262	247	79.50	261.6

Notes

Depths to water collected January 16, 2019.

Elevations relative to North American Vertical Datum of 1988 (NAVD88).

ft - feet

Table B-2. Groundwater Quality Results

Project No. 160423, Hansville Landfill, Hansville, WA

		Location	MW-5	MW-6	MW-7	MW-12I	MW-13D	MW-14
		Date	01/16/2019	01/16/2019	01/16/2019	01/16/2019	01/16/2019	01/16/2019
Parameter	Units	Site Cleanup Level						
Field Parameters								
Dissolved Oxygen	mg/L		**8.82**	**0.32**	**1.36**	**0.47**	**0.17**	**0.51**
pH	pH units		**7.36**	**7.14**	**6.59**	**7.33**	**7.65**	**7.13**
Oxidation Reduction Potential	mV		**100.9**	**144.4**	**79.9**	**96.4**	**100.1**	**95.1**
Specific Conductivity	uS/cm		**146.8**	**332.7**	**228**	**147.7**	**184.1**	**205.8**
Temperature	deg C		**10.2**	**12.3**	**9.4**	**9.5**	**10.2**	**10.9**
Turbidity	NTU		**1.88**	**0.87**	**4.46**	**0.94**	**0.82**	**7.73**
Conventional Parameters								
Alkalinity	mg/L		**61**	**140**	**120**	**72**	**71**	**94**
Ammonia (as N)	mg/L		0.030 U	**0.88**	0.030 U	**0.063**	0.030 U	0.030 U
Bicarbonate	mg/L		**61**	**140**	**120**	**72**	**71**	**94**
Carbonate	mg/L		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chloride	mg/L		**1.6**	**7.0**	1.0 U	**1.9**	**5.1**	**3.8**
Nitrate (as N)	mg/L		**4.01**	**0.753**	**0.331**	0.100 U	0.100 U	**0.124**
Nitrite (as N)	mg/L		0.100 U	**0.246**	0.100 U	0.100 U	0.100 U	0.100 U
Sulfate	mg/L		**8.3**	**25**	**2.4**	**4.0**	**17**	**11**
Total Organic Carbon	mg/L		1.0 U	**1.6**	**1.9**	**3.0**	1.0 U	**1.9**
Dissolved Metals								
Arsenic	mg/L	0.005	**0.00207**	**0.00171**	**0.00127**	**0.00230**	**0.00473**	**0.0146**
Manganese	mg/L	2.24	**0.0010**	**0.4**	0.0010 U	**0.031**	**0.0065**	**1.6**
Volatile Organic Compounds (detected only)								
1,2-Dichloroethene (total)	ug/L		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**2.5**
cis-1,2-Dichloroethene	ug/L		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.5**
Vinyl Chloride	ug/L	0.025	0.020 U	**0.088**	0.020 U	**0.039**	0.020 U	**0.033**

Notes

Samples were collected on January 16, 2019.
Bold - Detected
Shaded - Exceeded Site Cleanup Level
U - Not detected at or above reporting limit
mV = millivolts
µS/cm = microSiemens per centimeter
deg C = degrees Celcius
NTU = Nephelometric Turbidity Units
mg/L = milligram per liter
µg/L = microgram per liter

Table B-3. Surface Water Quality Results

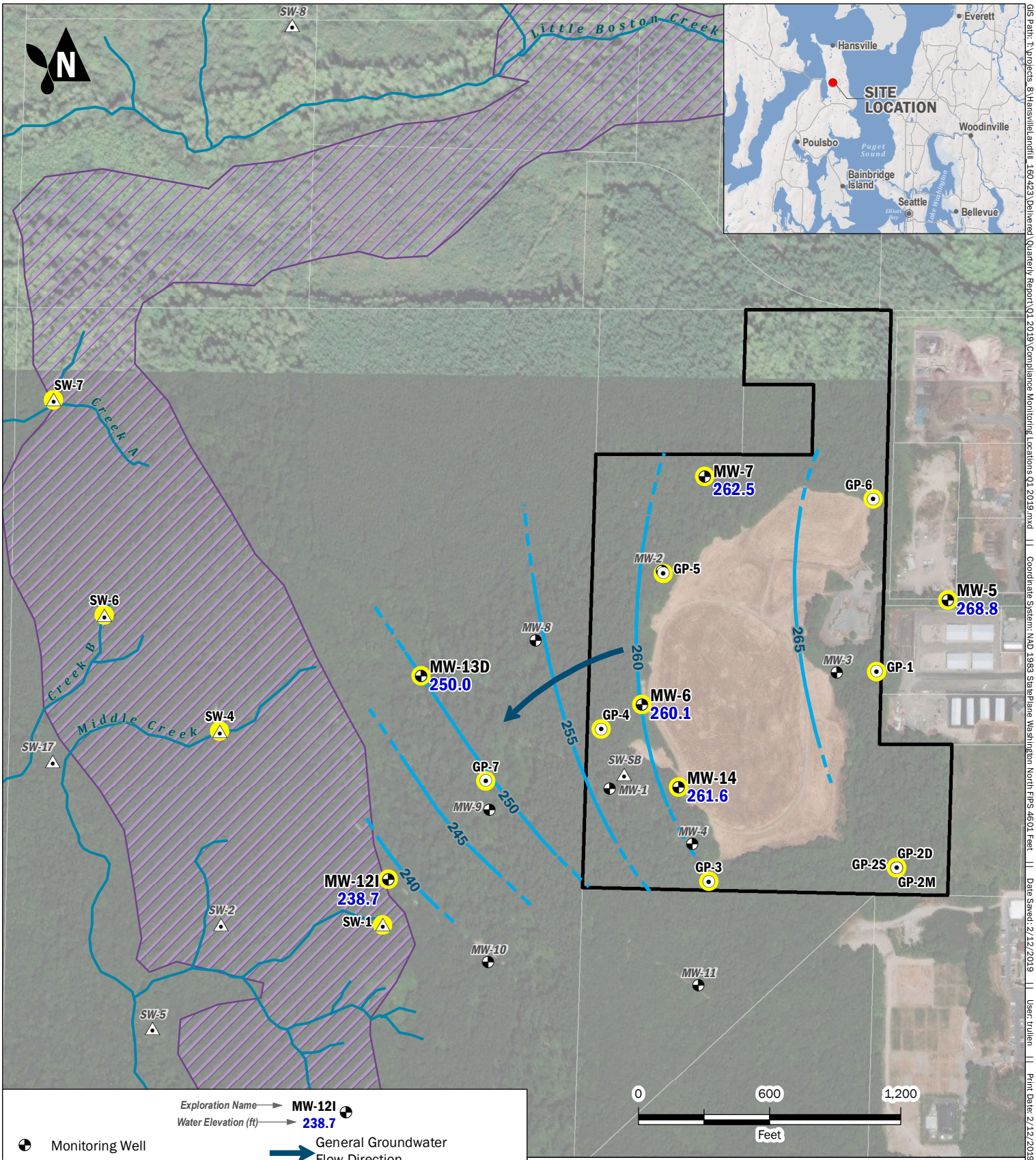
Project No. 160423, Hansville Landfill, Hansville, WA

		Location	SW-1	SW-4	SW-6	SW-7
		Date	01/16/2019	01/16/2019	01/16/2019	01/16/2019
Parameter	Units	Site Cleanup Level				
Field Parameters						
Dissolved Oxygen	mg/L		**11.19**	**10.39**	**10.34**	**11.81**
pH	pH units		**7.3**	**7.76**	**7.36**	**7.54**
Oxidation Reduction Potential	mV		**108.8**	**102.7**	**85**	**94.3**
Specific Conductivity	uS/cm		**167.3**	**307.7**	**105.8**	**124.9**
Temperature	deg C		**8.6**	**6.6**	**4.9**	**6.2**
Turbidity	NTU		**1.73**	**2.62**	**6.19**	**4.63**
Conventional Parameters						
Alkalinity	mg/L		**66**	**140**	**42**	**43**
Ammonia (as N)	mg/L		0.030 U	0.030 U	**0.039**	0.030 U
Bicarbonate	mg/L		**66**	**140**	**42**	**43**
Carbonate	mg/L		5.0 U	5.0 U	5.0 U	5.0 U
Chloride	mg/L		**4.0**	**12**	**3.7**	**3.7**
Nitrate (as N)	mg/L		**1.79**	**0.877**	**0.194**	**1.47**
Nitrite (as N)	mg/L		0.100 U	0.100 U	0.100 U	0.100 U
Sulfate	mg/L		**10**	**17**	**5.8**	**7.8**
Total Organic Carbon	mg/L		**2.8**	**10**	**21**	**9.8**
Dissolved Metals						
Arsenic	mg/L	0.005	**0.00160**	**0.00200**	**0.00259**	**0.00111**
Manganese	mg/L	2.24	**0.0020**	**0.051**	**0.051**	**0.0023**
Volatile Organic Compounds (detected only)						
1,2-Dichloroethene (total)	ug/L		2.0 U	2.0 U	2.0 U	2.0 U
cis-1,2-Dichloroethene	ug/L		1.0 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	ug/L	0.025	0.020 U	0.020 U	0.020 U	0.020 U

Notes

Samples were collected on January 16, 2019.
Bold - Detected
Shaded - Exceeded Site Cleanup Level
U - Not detected at or above reporting limit
mV = millivolts
µS/cm = microSiemens per centimeter
deg C = degrees Celcius
NTU = Nephelometric Turbidity Units
mg/L = milligram per liter
µg/L = microgram per liter

FIGURES



Exploration Name → MW-12I
Water Elevation (ft) → 238.7

- Monitoring Well
- Gas Detection Probe
- Surface Water Station
- Compliance Monitoring Location
- Inferred Water Elevation Contour (ft, dashed where inferred) *Measured January 16th, 2019*
- General Groundwater Flow Direction
- Approximate Area of Groundwater Discharge from Upper Aquifer
- Stream
- Landfill Boundary
- Tax Parcel

Note: Vertical datum is NAVD88. Approximate area of groundwater discharge from upper aquifer delineation from Remedial Investigation Report (Parametrix, 2006).

Compliance Monitoring Locations

First Quarter 2019 Environmental Monitoring Report
Hansville Landfill
Kitsap County, Washington

Aspect Consulting	FEB-2019	BY: MLK / RAP	FIGURE NO. B-1
	PROJECT NO. 160423	REVISED BY: ---	

GIS Path: T:\projects_8\Hansville\Landfill_160423\Delivered\Quarterly Report\Q1 2019\Compliance Monitoring Locations Q1 2019.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2/12/2019 || User: trullen || Print Date: 2/12/2019

ATTACHMENT C

Groundwater Statistics and Time-Series Plots

TABLE

Table C-1. Statistical Analysis

Project 160423, Hansville Landfill, Hansville, WA

Dissolved Arsenic Statistical Results

Well	Statistical Trend[1]	Mann-Kendall Test[2]				Sen's Slope	
		Test Value, Z	Critical Value	Number of data points, n	Statistical Significance	(ug/L per day)	(ug/L per year)
MW-5	--[3]	--	--	--	--	--	--
MW-6	--	--	--	--	--	--	--
MW-7	--	--	--	--	--		--
MW-12I	--	--	--	--	--	--	--
MW-13D	--	--	--	--	--		--
MW-14	Decreasing	-6.7	-1.96	48	Yes	-3.4E-06	-0.0012

Vinyl Chloride Statistical Results

Well	Statistical Trend[1]	Mann-Kendall Test[2]				Sen's Slope	
		Test Value, Z	Critical Value	Number of data points, n	Statistical Significance	(ug/L per day)	(ug/L per year)
MW-5	--[3]	--	--	--	--		--
MW-6	Decreasing	-6.1	-1.96	49	Yes	-7.0E-05	-0.025
MW-7	--	--	--	--	--		--
MW-12I	Decreasing	-7.0	-1.96	49	Yes	-1.1E-04	-0.039
MW-13D	--	--	--	--	--		--
MW-14	Decreasing	-8.1	-1.96	49	Yes	-1.1E-04	-0.039

Notes

1 - The Statistical Trend indicates:

"Non-significant" if the magnitude of the Test Value is less than the Critical Value,

"Increasing" if the magnitude of the Test Value is greater than the Critical Value and the Sen's Slope is positive, or

"Decreasing" if the magnitude of the Test Value is greater than the Critical Value and the Sen's Slope is negative.

2 - Mann-Kendall tests were performed with alpha = 0.05 (95% confidence level).

For N>40, Mann-Kendall uses an approximation of a normal distribution, represented by Test Value Z.

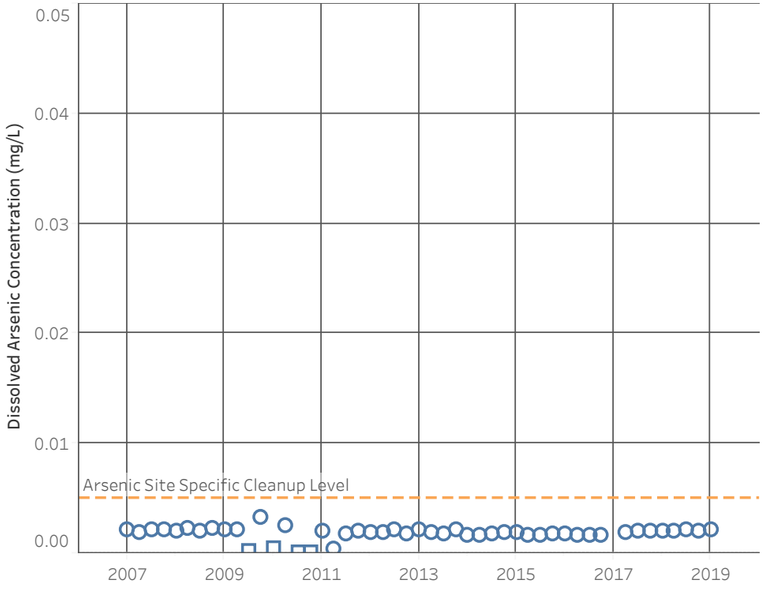
For N<=40, Mann-Kendall scores are reported as Test Value S.

3 - "--" Indicates most recent groundwater concentrations were below the Site-specific cleanup level.

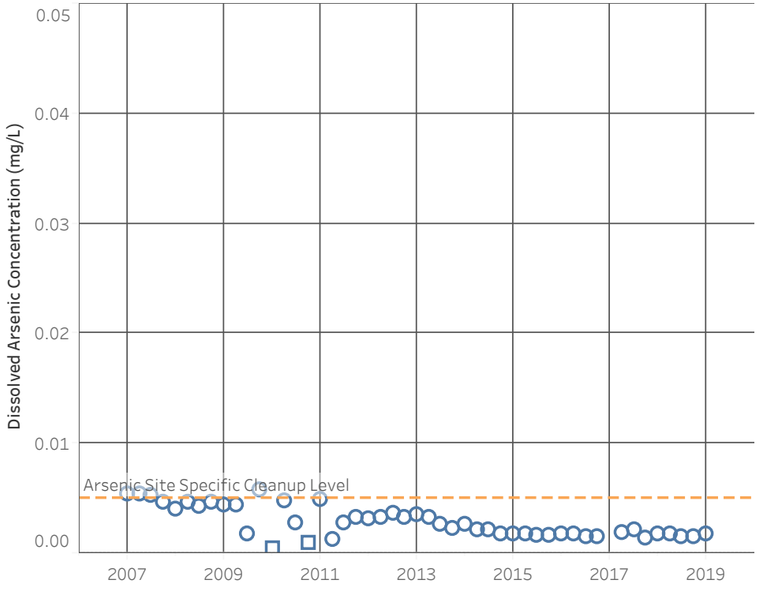
ug/L - micrograms per liter

FIGURES

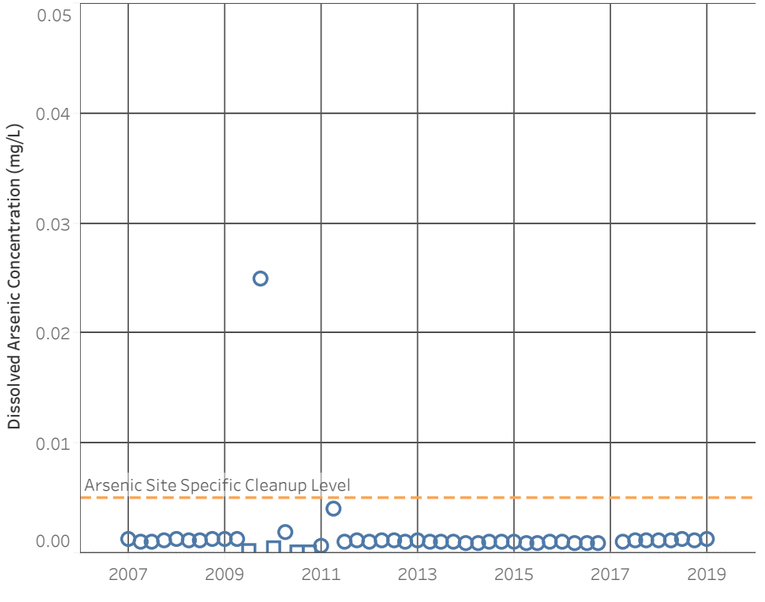
MW-5 (Background Well)



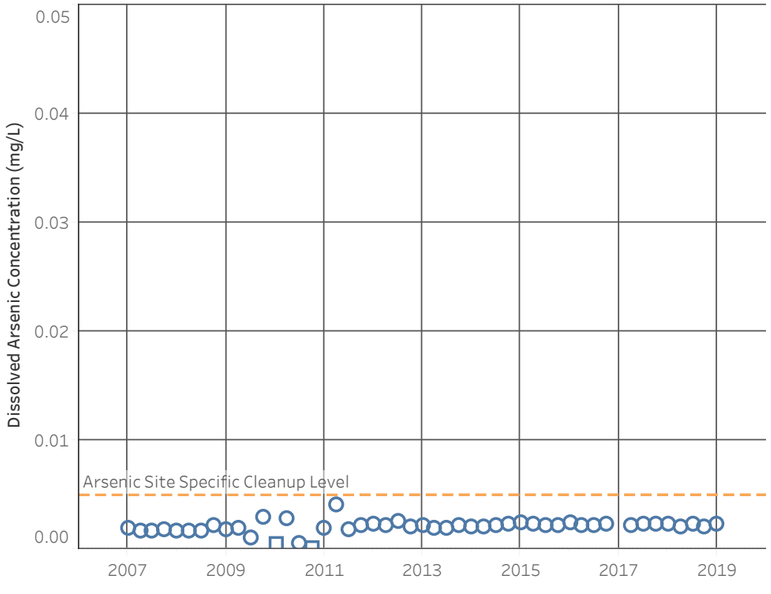
MW-6



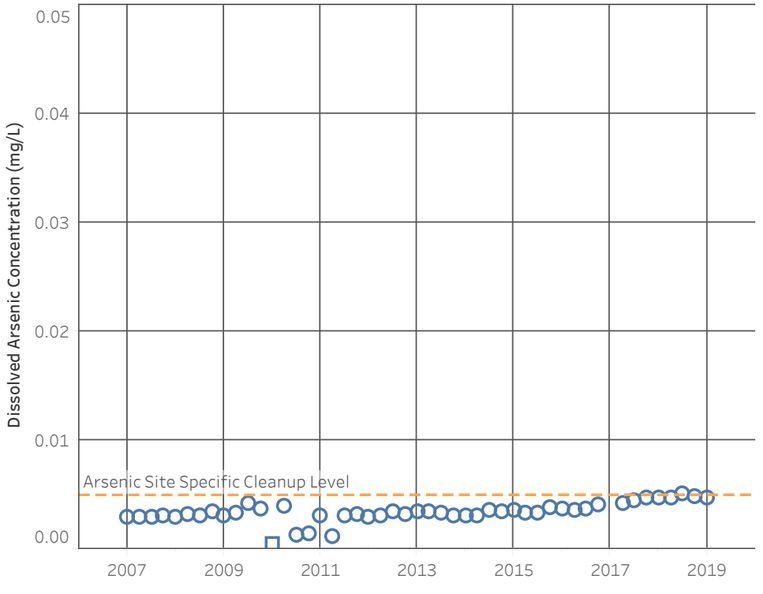
MW-7



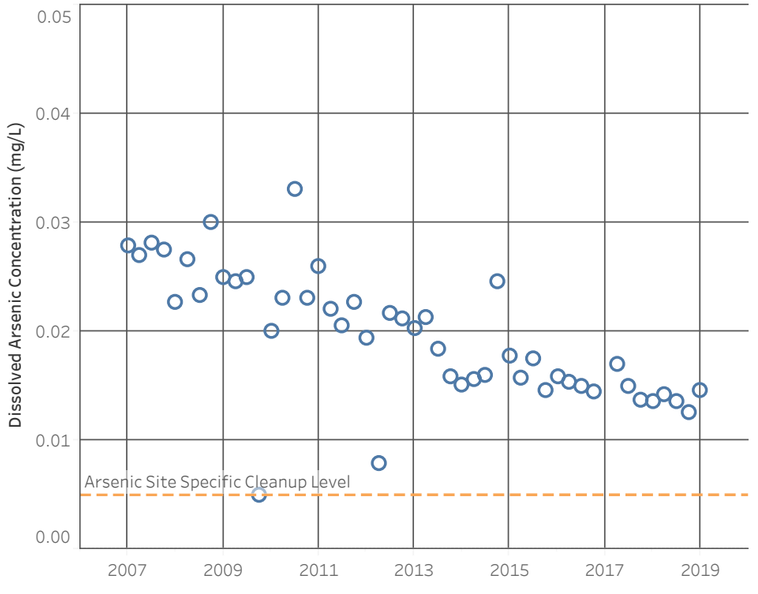
MW-12I



MW-13D



MW-14



Note: Non-detected values are shown at 1/2 the reporting limit.
Results from First Quarter 2017 were rejected. See text.

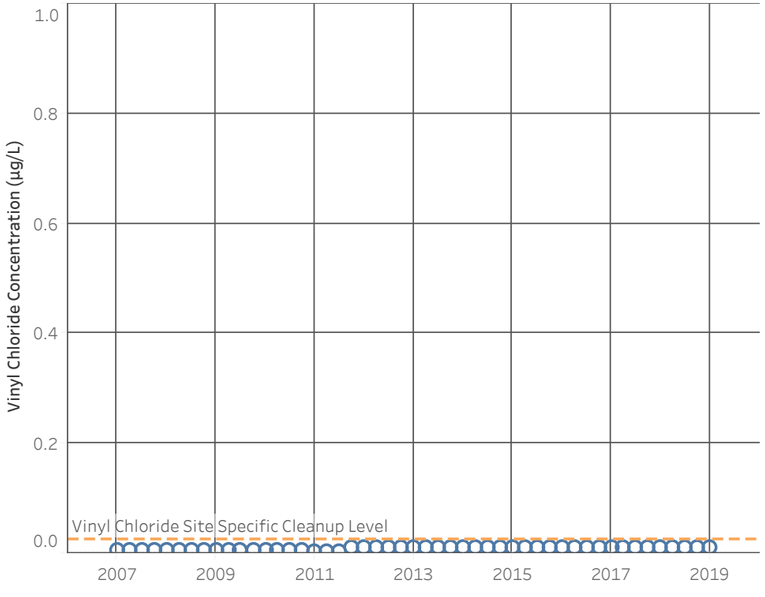
Result Flags
○ Detected □ U - Non-Detect

Aspect CONSULTING

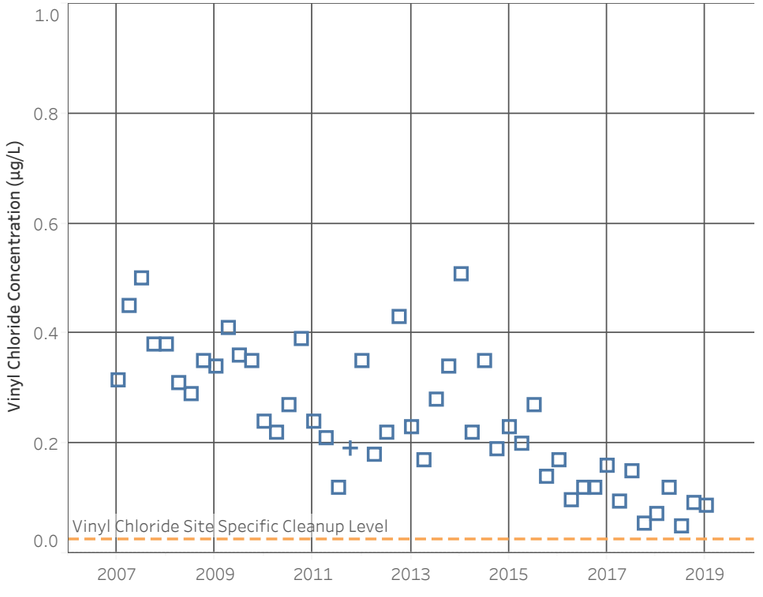
04/25/2019
Trend Plots (As)

Figure C-1 - Dissolved Arsenic Sampling Results
First Quarter 2019 Environmental Monitoring Report
Hansville Landfill
Kitsap County, WA

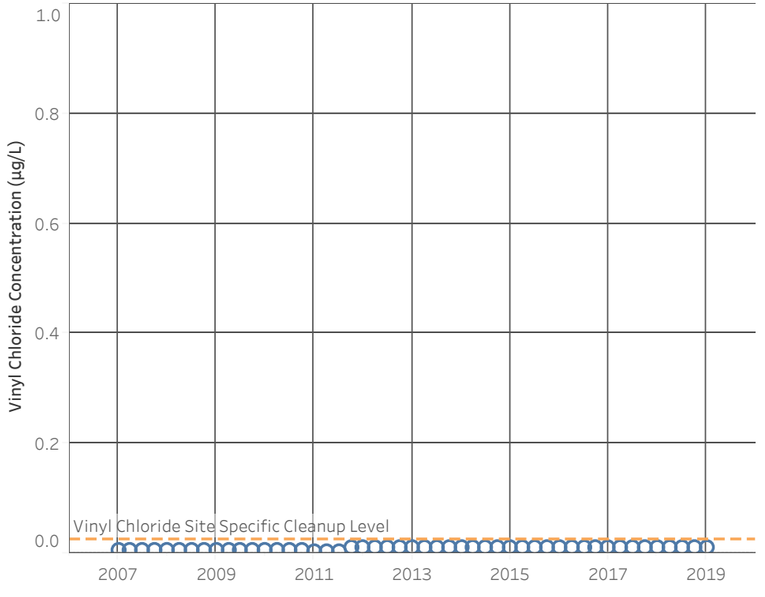
MW-5 (Background Well)



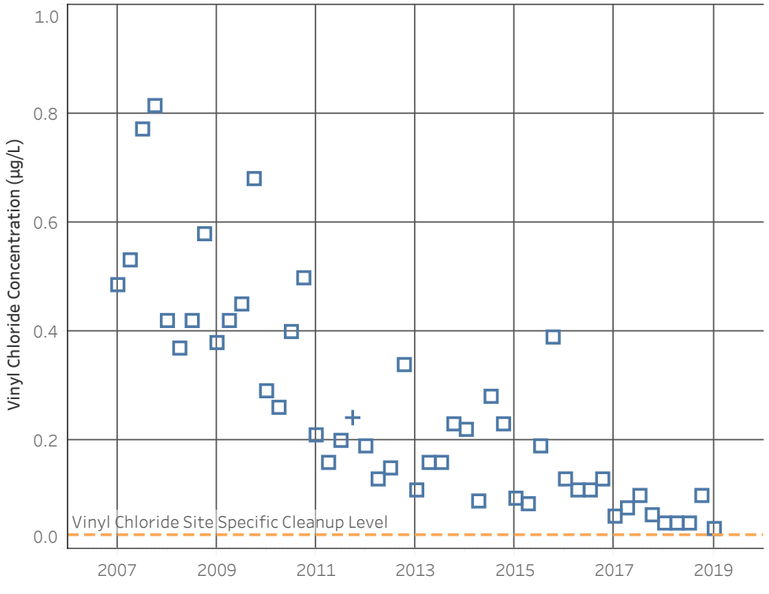
MW-6



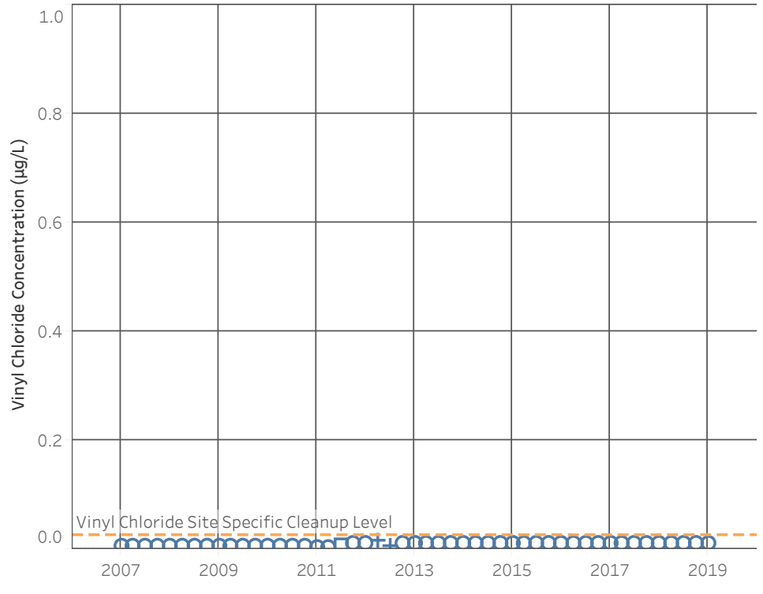
MW-7



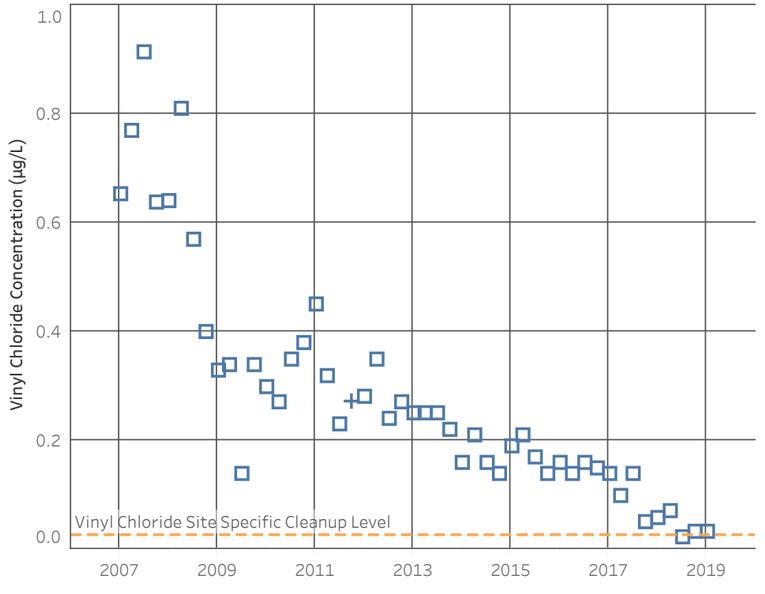
MW-12I



MW-13D



MW-14



Result Flags
□ Detected + J - Estimate ○ U - Non-Detect

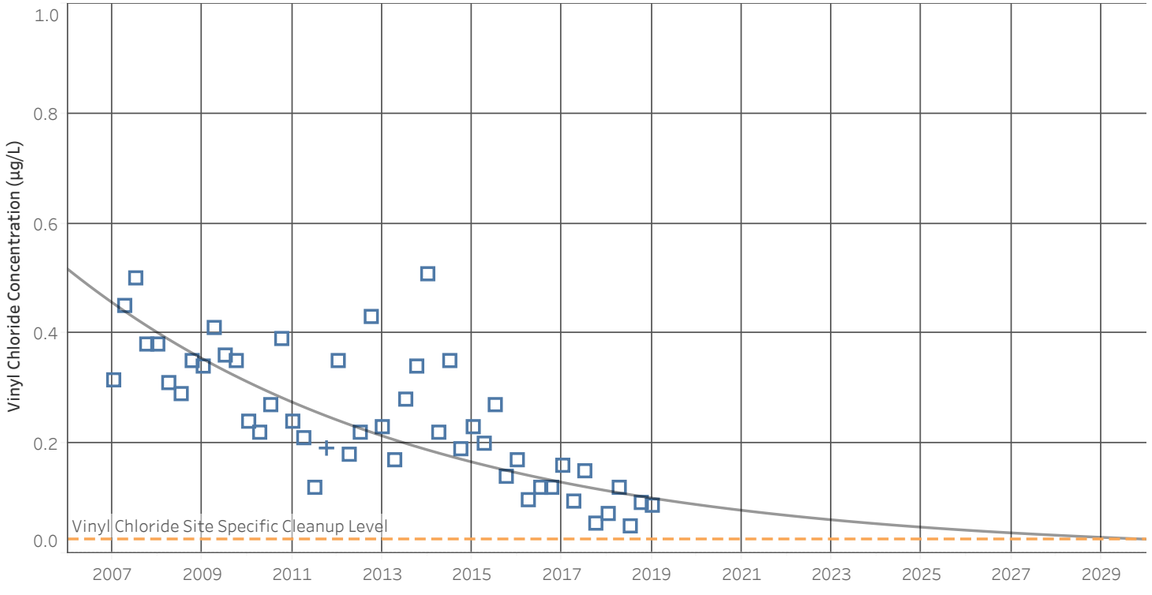
Note: Non-detected values are shown at 1/2 the reporting limit.

Aspect CONSULTING

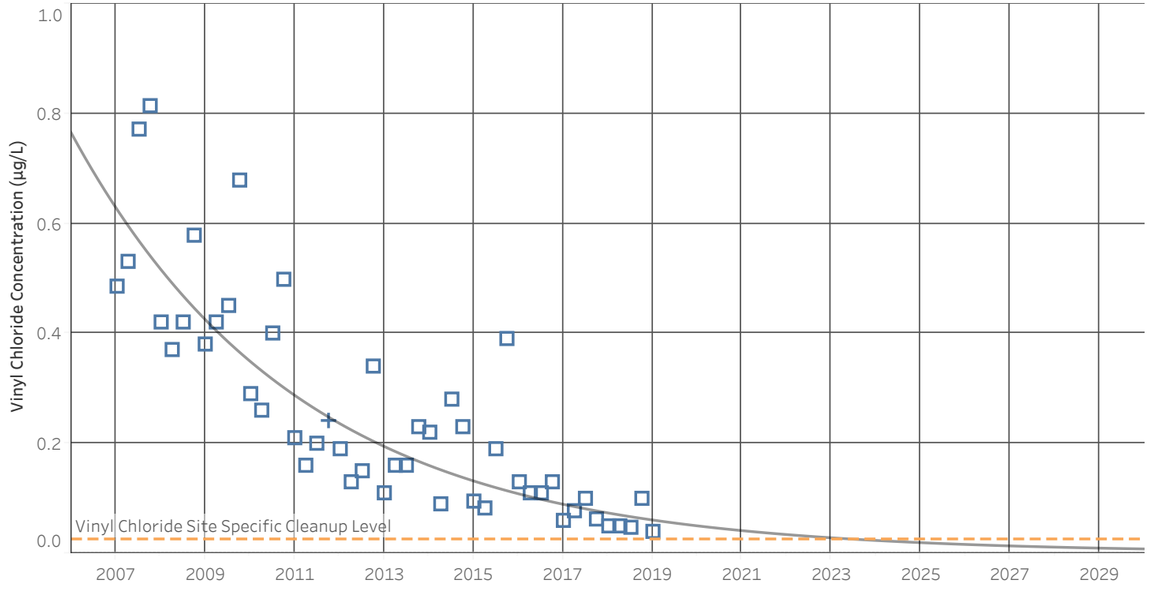
04/25/2019
Trend Plots (VC)

Figure C-2 - Vinyl Chloride Sampling Results
First Quarter 2019 Environmental Monitoring Report
Hansville Landfill
Kitsap County, WA

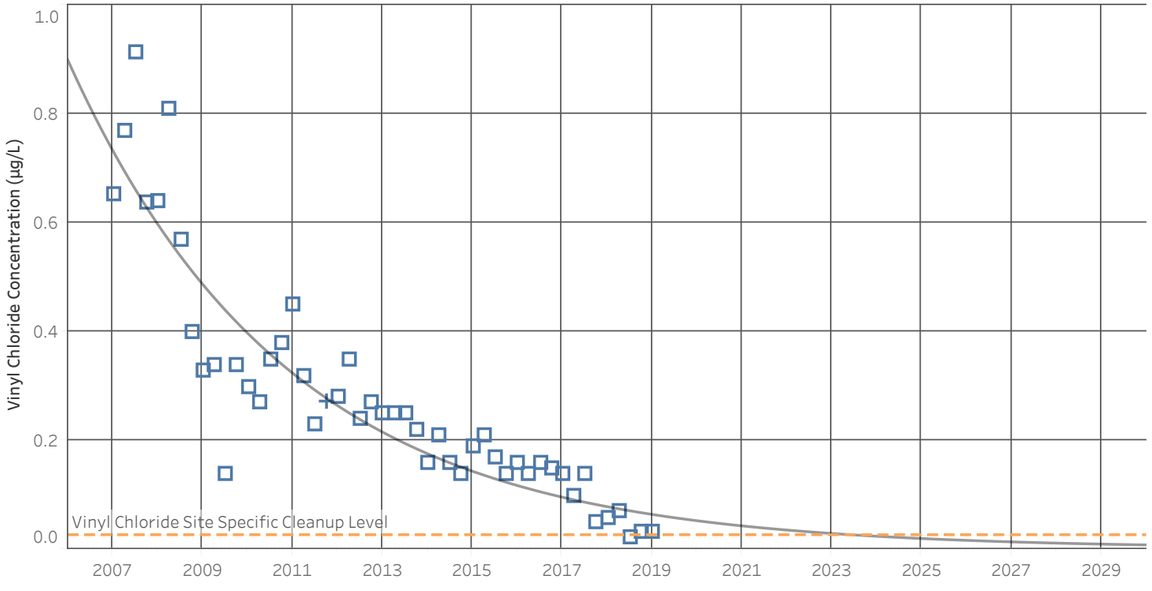
MW-6 Vinyl Chloride Trend



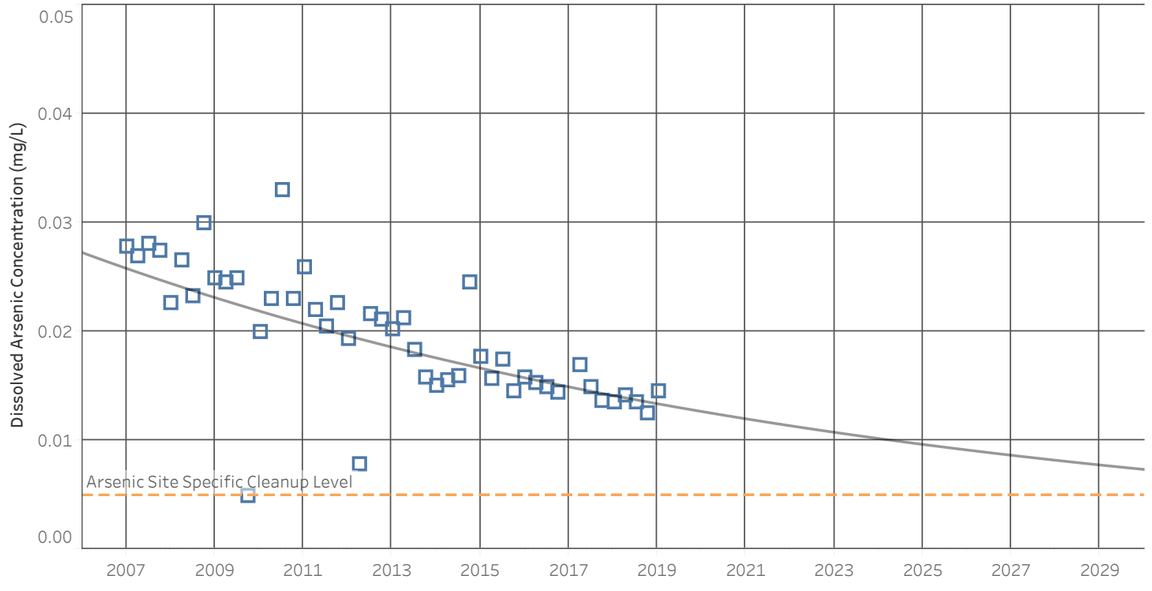
MW-12I Vinyl Chloride Trend



MW-14 Vinyl Chloride Trend



MW-14 Dissolved Arsenic Trend



Note: Non-detected values are shown at 1/2 the reporting limit.
Attentuation curves based on exponential least squares fit to the data.

Result Flags
□ Detected + J - Estimate ○ U - Non-Detect

Aspect CONSULTING

04/25/2019
Trend Plots (VC)

Figure C-3 - 10 Year Attenuation Curves
First Quarter 2019 Environmental Monitoring Report
Hansville Landfill
Kitsap County, WA

ATTACHMENT D

Field Forms and Laboratory Reports

Aspect CONSULTING

Sample number MW-5-01/16/19

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-5 Page: 1 of 1

Project Name: Hansville Landfill
Project Number: 160423
Date: 1/16/19
Sampled by: NHC
Measuring Point of Well: TOC
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)
Starting Water Level (ft TOC): 98.1
Casing Stickup (ft):
Total Depth (ft TOC):
Casing Diameter (inches):

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf
Sample Intake Depth (ft TOC):

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1349		~~0.08~~								Start
1354		0.1	98.1	9.0	159.2	6.43	6.71	107.1	4.92	
1359			98.1	9.7	145.1	6.07	6.64	106.9	3.85	
1404			98.1	10.3	146.0	7.83	7.11	102.8	4.22	
1409			98.1	10.2	146.5	7.28	7.28	100.9	2.97	
1414			98.1	10.2	146.8	8.72	7.35	100.8	2.27	
1417			98.1	10.2	146.8	8.56	7.35	101.1	1.83	
1420			98.1	10.2	146.8	8.52	7.36	100.9	1.88	Sample

Total Gallons Purged: 1.5
Total Casing Volumes Removed:
Ending Water Level (ft TOC):
Ending Total Depth (ft TOC):

SAMPLE INVENTORY

Time	Volume (mL)	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1425	500	Amber	1	N	Sulf.	clr		
	1000	poly	1	N	N			
	500	poly	1	N	N			
	40	VOA	6	N	HCl			
	500	poly	2	Y	HNO_3			
	250	poly	1	Y	N			

METHODS

Parameters measured with (instrument model & serial number): Orange YSI
Purging Equipment: DEDICATED BLADDER
Decon Equipment: ALC + H_2O
Disposal of Discharged Water: ONSITE
Observations/Comments:

Aspect CONSULTING

Sample number MW-6-011619

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-6 Page: 1 of ___

Project Name: Hansville Landfill
Date: 1/16/19
Sampled by: DW
Measuring Point of Well: TOC
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)

Project Number: 160423
Starting Water Level (ft TOC): 72.58
Casing Stickup (ft):
Total Depth (ft TOC):
Casing Diameter (inches): 2"

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

Sample Intake Depth (ft TOC): unknown

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1630	0	0.2	72.58							
1635			72.58	12.2	338.9	0.77	7.16	161.4	1.56	
1640			72.58	12.3	334.9	0.29	7.13	154.7	0.98	
1645			72.58	12.3	331.2	0.29	7.14	150.9	1.05	
1650			72.58	12.4	332.8	0.37	7.15	147.0	0.89	
1655			72.58	12.3	332.7	0.32	7.14	144.4	0.98	sample

Total Gallons Purged: 1.5
Total Casing Volumes Removed: ___
Ending Water Level (ft TOC): 72.58
Ending Total Depth (ft TOC): ___

SAMPLE INVENTORY

Time	Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
						Color	Turbidity & Sediment	
1700	500	amber	1	N	sulf.	clear	0.87	
	1000	poly	1	N	N			
	500	poly	1	N	N			
	40	VOA	6	N	HCl			
	500	poly	2	Y	HNO_3			
	250	poly	1	Y	N			

METHODS

Parameters measured with (instrument model & serial number): YSI-Red; Turb-Red; WLI-1506-wht
Purging Equipment: DEDICATED BLADDER Decon Equipment: ALC + H_2O
Disposal of Discharged Water: ONSITE
Observations/Comments:

Aspect CONSULTING

Sample number MW-7-011619

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-7 Page: 1 of 1

Project Name: Hansville Landfill
Project Number: 160423
Date: 1/16/19
Starting Water Level (ft TOC): 83.55
Sampled by: MLC
Casing Stickup (ft):
Measuring Point of Well: TOC
Total Depth (ft TOC):
Screened Interval (ft. TOC)
Casing Diameter (inches): 2
Filter Pack Interval (ft. TOC)

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf
Sample Intake Depth (ft TOC):

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1205		.09								Start
1210			83.55	9.4	301.3	4.06	6.79	89.6	53.4	
1215			83.55	9.4	230.6	1.39	6.64	82.2	6.80	
1220			83.55	9.4	228.9	1.29	6.62	79.5	4.81	
1225			83.55	9.4	228.0	1.36	6.59	79.9	4.46	sample

Total Gallons Purged: 1.5
Total Casing Volumes Removed:

Ending Water Level (ft TOC):
Ending Total Depth (ft TOC):

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1230	500	AMBER	1	–	SULF	clr		
	1000	POLY	1	–	–			
	500	POLY	1	–	–			
	40	VOA	3 6	–	HCl			
	500	POLY	2	YES	NITRIC			
	250	POLY	1	YES	–			

METHODS

Parameters measured with (instrument model & serial number): YSI orange
Purging Equipment: DEDICATED BLADDER Decon Equipment: ALC + H_2O
Disposal of Discharged Water: ONSITE
Observations/Comments:

Aspect CONSULTING

Sample number MW-12I-011619

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-12 I Page: 1 of ___

Project Name: Hansville Landfill
Project Number: 160423
Date: 1/16/19
Starting Water Level (ft TOC): 9.39
Sampled by: DW
Casing Stickup (ft):
Measuring Point of Well: TOC
Total Depth (ft TOC):
Screened Interval (ft. TOC)
Casing Diameter (inches):
Filter Pack Interval (ft. TOC)

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf
Sample Intake Depth (ft TOC):

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1401	0	0.2	9.45							Clear
1406			9.46	9.6	146.0	0.81	7.35	98.3	1.45	
1411			9.46	9.6	147.1	0.57	7.33	97.5	1.04	
1416			9.45	9.6	148.5	0.57	7.33	96.5	0.97	
1421			9.45	9.5	147.7	0.47	7.33	96.4	0.94	sample

Total Gallons Purged: 3.0
Total Casing Volumes Removed:
Ending Water Level (ft TOC): 9.40
Ending Total Depth (ft TOC):

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1425	500	amber	1	-	sulf	clear	0.94	
	1000	poly	1	-	-			
	500	poly	1	-	-			
	40	VOA	6	-	HCl			
	500	poly	2	yes	nitric			
	250	poly	1	yes	-			

METHODS

Parameters measured with (instrument model & serial number): YSI - Red ; WL - Blk/wht ; Turbidimeter - Red
Purging Equipment: DEDICATED BLADDER Decon Equipment: ALC + H_2O
Disposal of Discharged Water: ONSITE

Observations/Comments:

Aspect CONSULTING

Sample number MW-13D-011619

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-13 D Page: 1 of 1

Project Name: Hansville Landfill
Project Number: 160423
Date: 1/16/19
Starting Water Level (ft TOC): 10.38
Sampled by: DW
Casing Stickup (ft):
Measuring Point of Well: TOC
Total Depth (ft TOC):
Screened Interval (ft. TOC)
Casing Diameter (inches): 2"
Filter Pack Interval (ft. TOC)

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf
Sample Intake Depth (ft TOC):

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1515		0.3	10.38	8.7	179.5	5.56	7.52	111.4	0.80	
1520			10.68	10.1	183.4	0.33	7.63	105.1	2.81	
1525			10.71	10.2	183.9	0.19	7.65	103.3	1.38	
1530			10.74	10.2	183.9	0.16	7.65	101.5	0.92	
1535			10.68	10.2	184.1	0.17	7.65	100.1	0.82	

Total Gallons Purged: 2.5
Total Casing Volumes Removed:
Ending Water Level (ft TOC): 10.68
Ending Total Depth (ft TOC):

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1540	500	amber	1	-	sulf	clr	0.82	
↓	1000	poly	1	-	-	↓	↓	
	500	poly	1	-	-			
	40	VOA	6	-	HCl			
	500	poly	2	yes	nitric		↓	
↓	250	poly	1	yes	-	↓		

METHODS

Parameters measured with (instrument model & serial number): YSI RED, Turb - Red, WLI-13 blue/wht
Purging Equipment: DEDICATED BLADDER Decon Equipment: ALC + H_2O
Disposal of Discharged Water: ONSITE
Observations/Comments:

Aspect CONSULTING

Sample number MW-14-01/619

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-14 Page: 1 of 1

Project Name: Hansville Landfill
Date: 1/16/19
Sampled by: NHC
Measuring Point of Well: TOC
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)

Project Number: 160423
Starting Water Level (ft TOC): 79.5
Casing Stickup (ft):
Total Depth (ft TOC):
Casing Diameter (inches):

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

Sample Intake Depth (ft TOC):

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1515		0.1								start
1520			79.5	10.9	212.4	0.96	7.14	93.9	3.75	
1525			79.5	11.0	213.1	0.61	7.14	96.2	2.61	
1530			79.5	10.9	212.5	0.53	7.13	96.2	2.47	
1535			79.5	10.9	208.5	0.50	7.14	95.7	2.54	
1538			79.5	10.9	205.8	0.51	7.13	95.1	2.73	sample

Total Gallons Purged: 1.5
Total Casing Volumes Removed:
Ending Water Level (ft TOC):
Ending Total Depth (ft TOC):

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1605	500	Amber	1	-	sulf	clr		duplicate
	1000	poly	1	-	-			
	500	poly	1	-	-			
	40	VOA	6	-	HCl			
	500	poly	2	yes	nitric			
	250	poly	1	yes	-			

METHODS

Parameters measured with (instrument model & serial number): Orange YSI
Purging Equipment: DEDICATED BLADDER Decon Equipment: ALC + H_2O
Disposal of Discharged Water: ONSITE
Observations/Comments:

Aspect CONSULTING

Sample number SW-1-011619

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-1 Page: 1 of 1

Project Name: Hansville Landfill
Date: 1/16/19
Sampled by: JTL / DWU
Measuring Point of Well:
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)

Project Number: 160423
Starting Water Level (ft TOC):
Casing Stickup (ft):
Total Depth (ft TOC):
Casing Diameter (inches):

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

Sample Intake Depth (ft TOC):

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
0915				8.6	167.3	11.19	7.30	108.8	1.73	sample

Total Gallons Purged:
Total Casing Volumes Removed: surface water
Ending Water Level (ft TOC):
Ending Total Depth (ft TOC):

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
0915	500	amber	1	-	sulf	clr		
	1000	poly	1	-	-			
	500	poly	1	-	-			
	40	VOA	6	-	HCl			
	500	poly	2	yes	nitric			
	250	poly	1	yes	-			

METHODS

Parameters measured with (instrument model & serial number): YSI Red
Purging Equipment: PERISTALTIC White Decon Equipment: ALC + H_2O
Disposal of Discharged Water: ONSITE
Observations/Comments:

Aspect CONSULTING

Sample number SW-4-011619

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-4 Page: 1 of 1

Project Name: Hansville Landfill
Project Number: 160423
Date: 1/16/19
Sampled by: DWV
Measuring Point of Well:
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)
Starting Water Level (ft TOC):
Casing Stickup (ft):
Total Depth (ft TOC):
Casing Diameter (inches):

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

Sample Intake Depth (ft TOC):

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1030				6.6	307.7	10.39	7.76	102.7	2.62	

Total Gallons Purged:
Total Casing Volumes Removed:
Ending Water Level (ft TOC):
Ending Total Depth (ft TOC):

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
						Color	Turbidity & Sediment	
1030	500	amber	1	-	self	yellow	clr	
	1000	poly	1	-	-			
	500	poly	1	-	-			
	40	VOA	6	-	HCl			
	500	poly	2	yes	nitric			
	250	poly	1	yes	-			

METHODS

Parameters measured with (instrument model & serial number): YSI orange
Purging Equipment: PERISTALTIC Red
Decon Equipment: ALC + H_2O
Disposal of Discharged Water: ONSITE
Observations/Comments:

Aspect CONSULTING

Sample number SW-6-011619

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-6 Page: 1 of 1

Project Name: Hansville Landfill
Project Number: 160423
Date: 1/16/19
Sampled by: DWV JTL
Measuring Point of Well: —
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)
Starting Water Level (ft TOC): —
Casing Stickup (ft):
Total Depth (ft TOC):
Casing Diameter (inches):

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf
Sample Intake Depth (ft TOC):

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1130				4.9	105.8	10.34	7.36	85.0	6.14	

Total Gallons Purged:
Total Casing Volumes Removed:
Ending Water Level (ft TOC):
Ending Total Depth (ft TOC):

SAMPLE INVENTORY

Time	Volume (mL)	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
						Color	Turbidity & Sediment	
~~1115~~	500	amber	1	N	Salt	CLEAR		
1130	1000	poly	1	N	N			
|	500	poly	1	N	N			
|	40	VOA	6	N	HCl			
|	500	poly	2	Y	HNO_3			
V	250	poly	1	Y	N			

METHODS

Parameters measured with (instrument model & serial number): YSI RED
Purging Equipment: PERISTALTIC Decon Equipment: ALC + H_2O
Disposal of Discharged Water: ONSITE
Observations/Comments:

Aspect CONSULTING

Sample number SW-7-011619

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-7 Page: 1 of 1

Project Name: Hansville Landfill
Date: 1/16/19
Sampled by:
Measuring Point of Well:
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)

Project Number: 160423
Starting Water Level (ft TOC):
Casing Stickup (ft):
Total Depth (ft TOC):
Casing Diameter (inches):

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

Sample Intake Depth (ft TOC):

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1220				6.2	124.9	11.81	7.54	44.3	4.63	

Total Gallons Purged: Total Casing Volumes Removed:

Ending Water Level (ft TOC): Ending Total Depth (ft TOC):

SAMPLE INVENTORY

Time	Volume (mL)	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
						Color	Turbidity & Sediment	
1220	500	amber	1	N	soil.	Dem. lt. brn	4.63	
	1000	Poly	1	N	N			
	500	Poly	1	N	N			
	40	VOA	6	N	HCl			
	500	Poly	2	Y	HNO_3			
	250	Poly	1	Y	N			

METHODS

Parameters measured with (instrument model & serial number): YSI-Red; Portable turbidimeter-red
Purging Equipment: PERISTALTIC - wht Decon Equipment: ALC + H_2O
Disposal of Discharged Water: ONSITE

Observations/Comments:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-119289-1

Job Description: Hansville Landfill

For:
Aspect Consulting
350 Madison Ave N
Bainbridge Island, WA 98110

Attention: Ms. Meilani Lanier-Kamaha'o

Approved for release.
Betsy A Sara
Project Manager II
1/31/2019 6:20 PM

Betsy A Sara, Project Manager II
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0189
betsy.sara@testamericainc.com
01/31/2019

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

Table of Contents

CASE NARRATIVE

Client: Aspect Consulting

Project: Hansville Landfill

Report Number: 280-119289-1

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 some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Sample Receiving

The samples were received on 01/18/2019; the samples arrived in good condition and on ice. The temperatures of the coolers at receipt were 1.1º C, 1.4º C and 1.6º C.

Six hydrochloric preserved VOA vials for 8260C SIM Vinyl Chloride and 8260C full scan VOAs were received for all samples. However, 8260C full scan VOAs were not checked on the chain of custody. The samples were logged for all VOAs per the volume received.

Holding Times

All holding times were within established control limits.

Method Blanks

All Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

The Method 8260C (batch 480-456172) LCS recovery for 1,4-Dioxane was above control limits. Because the data are considered to be biased high and all associated samples were non-detect above the reporting limit for 1,4-Dioxane, corrective action was deemed unnecessary.

The Method 8260C (batch 480-456209) LCS recoveries for 1,4-Dioxane, Acrolein, tert-Butyl alcohol, and Dichlorodifluoromethane were above control limits. Because the data are considered to be biased high and all associated samples were non-detect above the reporting limits for 1,4-Dioxane, Acrolein, tert-Butyl alcohol, and Dichlorodifluoromethane, corrective action was deemed unnecessary.

All other Laboratory Control Samples were within established control limits.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited recoveries outside control limits for multiple Method 8260C spike compounds. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

Sample SW-7-011619 was selected to fulfill the laboratory batch quality control requirements for Method 8260C. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of multiple spike compounds outside control limits. In addition, the RPD results were outside the RPD limits for 1,4-Dioxane, tert-Butyl alcohol, and Isobutanol. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

The percent recoveries and/or relative percent difference of the MS/MSD performed on sample MW-20DD-011619 were outside control limits for Dissolved Manganese Method 6020 because the sample concentration was greater than four times the spike amount. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, no corrective action was taken.

All other MS and MSD samples were within established control limits.

Organics

The analytes Acrolein, Acrylonitrile and 2-chloroethyl vinyl ether cannot be reliably quantitated in acid preserved samples, therefore, the reporting limits for the analytes Acrolein, Acrylonitrile and 2-chloroethyl vinyl ether are not reliable or defensible.

Metals

The Method 6020 instrument blank for analytical batch 280-444962 contained 1.2 ug/L of Dissolved Manganese which is greater than the reporting limit (RL) of 1 ug/L, and were not reanalyzed because the samples are greater than ten times the instrument blank.

General Comments

The analyses for Method 8260C and Method 8260C SIM were performed by TestAmerica Buffalo. Their address and phone number are:
TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228
716-691-2600

The analysis for Nitrate, Nitrite, Ortho-phosphate Method 300.0, and Dissolved Arsenic Method 200.8 were performed by ARI. Their address and phone number are:
Analytical Resources, Inc.
4611 S.134th Place
Tukwila, WA 98168-3240
206-695-6200

EXECUTIVE SUMMARY - Detections

Client: Aspect Consulting Job Number: 280-119289-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-119289-1	**MW-7-011619**					
Sulfate		2.4		1.0	mg/L	300.0
Total Alkalinity		120		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		120		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		1.9		1.0	mg/L	SM 5310B
280-119289-2	**MW-5-011619**					
Chloride		1.6		1.0	mg/L	300.0
Sulfate		8.3		1.0	mg/L	300.0
Total Alkalinity		61		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		61		5.0	mg/L	SM 2320B
Dissolved						
Manganese		1.0		1.0	ug/L	6020
280-119289-3	**SW-1-011619**					
Chloride		4.0		1.0	mg/L	300.0
Sulfate		10		1.0	mg/L	300.0
Total Alkalinity		66		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		66		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		2.8		1.0	mg/L	SM 5310B
Dissolved						
Manganese		2.0		1.0	ug/L	6020
280-119289-4	**MW-12I-011619**					
Vinyl chloride		0.039		0.020	ug/L	8260C SIM
Chloride		1.9		1.0	mg/L	300.0
Sulfate		4.0		1.0	mg/L	300.0
Ammonia as N		0.063		0.030	mg/L	350.1
Total Alkalinity		72		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		72		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		3.0		1.0	mg/L	SM 5310B
Dissolved						
Manganese		31	^	1.0	ug/L	6020

EXECUTIVE SUMMARY - Detections

Client: Aspect Consulting Job Number: 280-119289-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-119289-5	**SW-4-011619**					
Chloride		12		1.0	mg/L	300.0
Sulfate		17		1.0	mg/L	300.0
Total Alkalinity		140		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		140		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		10		1.0	mg/L	SM 5310B
Dissolved						
Manganese		51	^	1.0	ug/L	6020
280-119289-6	**MW-13D-011619**					
Chloride		5.1		1.0	mg/L	300.0
Sulfate		17		1.0	mg/L	300.0
Total Alkalinity		71		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		71		5.0	mg/L	SM 2320B
Dissolved						
Manganese		6.5		1.0	ug/L	6020
280-119289-7	**SW-6-011619**					
Chloride		3.7		1.0	mg/L	300.0
Sulfate		5.8		1.0	mg/L	300.0
Ammonia as N		0.039		0.030	mg/L	350.1
Total Alkalinity		42		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		42		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		21		1.0	mg/L	SM 5310B
Dissolved						
Manganese		51	^	1.0	ug/L	6020
280-119289-8	**SW-7-011619**					
Chloride		3.7		1.0	mg/L	300.0
Sulfate		7.8		1.0	mg/L	300.0
Total Alkalinity		43		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		43		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		9.8		1.0	mg/L	SM 5310B
Dissolved						
Manganese		2.3		1.0	ug/L	6020

EXECUTIVE SUMMARY - Detections

Client: Aspect Consulting Job Number: 280-119289-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
280-119289-9	**MW-14-011619**					
1,2-Dichloroethene, Total		2.5		2.0	ug/L	8260C
cis-1,2-Dichloroethene		2.5		1.0	ug/L	8260C
Vinyl chloride		0.033		0.020	ug/L	8260C SIM
Chloride		3.8		1.0	mg/L	300.0
Sulfate		11		1.0	mg/L	300.0
Total Alkalinity		94		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		94		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		1.9		1.0	mg/L	SM 5310B
Dissolved						
Manganese		1600	^	1.0	ug/L	6020
280-119289-10	**MW-6-011619**					
Vinyl chloride		0.088		0.020	ug/L	8260C SIM
Chloride		7.0		1.0	mg/L	300.0
Sulfate		25		1.0	mg/L	300.0
Ammonia as N		0.88		0.030	mg/L	350.1
Total Alkalinity		140		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		140		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		1.6		1.0	mg/L	SM 5310B
Dissolved						
Manganese		400	^	1.0	ug/L	6020
280-119289-11	**MW-20DD-011619**					
1,2-Dichloroethene, Total		2.8		2.0	ug/L	8260C
cis-1,2-Dichloroethene		2.8		1.0	ug/L	8260C
Vinyl chloride		0.034		0.020	ug/L	8260C SIM
Chloride		3.9		1.0	mg/L	300.0
Sulfate		11		1.0	mg/L	300.0
Total Alkalinity		94		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity		94		5.0	mg/L	SM 2320B
Total Organic Carbon - Average		1.8		1.0	mg/L	SM 5310B
Dissolved						
Manganese		1500		1.0	ug/L	6020

METHOD SUMMARY

Client: Aspect Consulting Job Number: 280-119289-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Metals (ICP/MS)	TAL DEN	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Alkalinity	TAL DEN	SM SM 2320B	
Organic Carbon, Total (TOC)	TAL DEN	SM SM 5310B	
Volatile Organic Compounds by GC/MS	TAL BUF	SW846 8260C	
Purge and Trap	TAL BUF		SW846 5030C
Volatile Organic Compounds (GC/MS)	TAL BUF	SW846 8260C SIM	
Purge and Trap	TAL BUF		SW846 5030C
General Subcontract Method	SC0056	Subcontract	

Lab References:

SC0056 = Analytical Resources, Inc

TAL BUF = TestAmerica Buffalo

TAL DEN = TestAmerica Denver

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

METHOD / ANALYST SUMMARY

Client: Aspect Consulting Job Number: 280-119289-1

Method	Analyst	Analyst ID
SW846 8260C	Carroll, Nicole M	NMC
SW846 8260C	Milligan, Amanda E	AEM
SW846 8260C	Moffat, Alyssa M	AMM
SW846 8260C SIM	Farrell, Ryan J	RJF
SW846 6020	Diaz, Luis R	LRD
SW846 6020	Lackey, Cara M	CML
SW846 6020	Trudell, Lynn-Anne M	LMT
MCAWW 300.0	Phan, Thu L	TLP
MCAWW 350.1	Pedrick, Joshua A	JAP
SM SM 2320B	Barker, Scott G	SGB
SM SM 5310B	Loux, Lauren P	LPL

SAMPLE SUMMARY

Client: Aspect Consulting

Job Number: 280-119289-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-119289-1	MW-7-011619	Water	01/16/2019 1230	01/18/2019 0915
280-119289-2	MW-5-011619	Water	01/16/2019 1425	01/18/2019 0915
280-119289-3	SW-1-011619	Water	01/16/2019 0915	01/18/2019 0915
280-119289-4	MW-12I-011619	Water	01/16/2019 1425	01/18/2019 0915
280-119289-5	SW-4-011619	Water	01/16/2019 1030	01/18/2019 0915
280-119289-6	MW-13D-011619	Water	01/16/2019 1540	01/18/2019 0915
280-119289-7	SW-6-011619	Water	01/16/2019 1130	01/18/2019 0915
280-119289-8	SW-7-011619	Water	01/16/2019 1220	01/18/2019 0915
280-119289-9	MW-14-011619	Water	01/16/2019 1605	01/18/2019 0915
280-119289-10	MW-6-011619	Water	01/16/2019 1200	01/18/2019 0915
280-119289-11	MW-20DD-011619	Water	01/16/2019 0000	01/18/2019 0915
280-119289-12	TRIP BLANK	Water	01/16/2019 0000	01/18/2019 0915

SAMPLE RESULTS

Client: Aspect Consulting | Job Number: 280-119289-1

Client Sample ID: **MW-7-011619**

Lab Sample ID: 280-119289-1 | Date Sampled: 01/16/2019 1230
Client Matrix: Water | Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0689.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1432			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1432				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	*	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **MW-7-011619**

Lab Sample ID: 280-119289-1 Date Sampled: 01/16/2019 1230
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0689.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1432			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1432				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-7-011619

Lab Sample ID: 280-119289-1 Date Sampled: 01/16/2019 1230
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0689.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1432			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1432				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		77 - 120
4-Bromofluorobenzene (Surr)	101		73 - 120
Toluene-d8 (Surr)	105		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-7-011619

Lab Sample ID: 280-119289-1 Date Sampled: 01/16/2019 1230
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0689.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1432			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1432				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client: Aspect Consulting | Job Number: 280-119289-1

Client Sample ID: **MW-5-011619**

Lab Sample ID: 280-119289-2 | Date Sampled: 01/16/2019 1425
Client Matrix: Water | Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0690.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1455			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1455				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	*	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **MW-5-011619**

Lab Sample ID: 280-119289-2 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0690.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1455			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1455				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-5-011619

Lab Sample ID: 280-119289-2 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0690.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1455			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1455				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		77 - 120
4-Bromofluorobenzene (Surr)	100		73 - 120
Toluene-d8 (Surr)	103		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-5-011619

Lab Sample ID: 280-119289-2 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0690.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1455			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1455				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client: Aspect Consulting | Job Number: 280-119289-1

Client Sample ID: **SW-1-011619**

Lab Sample ID: 280-119289-3 | Date Sampled: 01/16/2019 0915
Client Matrix: Water | Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0691.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1518			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1518				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	*	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **SW-1-011619**

Lab Sample ID: 280-119289-3 Date Sampled: 01/16/2019 0915
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0691.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1518			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1518				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-1-011619

Lab Sample ID: 280-119289-3 Date Sampled: 01/16/2019 0915
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0691.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1518			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1518				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		77 - 120
4-Bromofluorobenzene (Surr)	101		73 - 120
Toluene-d8 (Surr)	105		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-1-011619

Lab Sample ID: 280-119289-3 Date Sampled: 01/16/2019 0915
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0691.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1518			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1518				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client Sample ID: **MW-12I-011619**

Lab Sample ID: 280-119289-4 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0692.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1541			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1541				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	*	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **MW-12I-011619**

Lab Sample ID: 280-119289-4 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0692.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1541			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1541				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: **MW-12I-011619**

Lab Sample ID: 280-119289-4 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0692.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1541			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1541				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		77 - 120
4-Bromofluorobenzene (Surr)	103		73 - 120
Toluene-d8 (Surr)	103		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: **MW-12I-011619**

Lab Sample ID: 280-119289-4 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0692.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1541			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1541				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client: Aspect Consulting | Job Number: 280-119289-1

Client Sample ID: **SW-4-011619**

Lab Sample ID: 280-119289-5 | Date Sampled: 01/16/2019 1030
Client Matrix: Water | Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0693.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1604			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1604				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	*	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **SW-4-011619**

Lab Sample ID: 280-119289-5 Date Sampled: 01/16/2019 1030
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0693.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1604			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1604				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-4-011619

Lab Sample ID: 280-119289-5 Date Sampled: 01/16/2019 1030
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0693.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1604			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1604				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		77 - 120
4-Bromofluorobenzene (Surr)	106		73 - 120
Toluene-d8 (Surr)	104		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-4-011619

Lab Sample ID: 280-119289-5 Date Sampled: 01/16/2019 1030
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0693.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1604			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1604				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client Sample ID: **MW-13D-011619**

Lab Sample ID: 280-119289-6 Date Sampled: 01/16/2019 1540
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0694.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1627			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1627				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	*	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **MW-13D-011619**

Lab Sample ID: 280-119289-6 Date Sampled: 01/16/2019 1540
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0694.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1627			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1627				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-13D-011619

Lab Sample ID: 280-119289-6 Date Sampled: 01/16/2019 1540
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0694.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1627			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1627				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		77 - 120
4-Bromofluorobenzene (Surr)	103		73 - 120
Toluene-d8 (Surr)	105		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-13D-011619

Lab Sample ID: 280-119289-6 Date Sampled: 01/16/2019 1540
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0694.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1627			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1627				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client Sample ID: **SW-6-011619**

Lab Sample ID: 280-119289-7 Date Sampled: 01/16/2019 1130
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0695.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1650			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1650				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	*	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **SW-6-011619**

Lab Sample ID: 280-119289-7 Date Sampled: 01/16/2019 1130
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0695.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1650			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1650				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-6-011619

Lab Sample ID: 280-119289-7 Date Sampled: 01/16/2019 1130
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0695.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1650			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1650				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		77 - 120
4-Bromofluorobenzene (Surr)	102		73 - 120
Toluene-d8 (Surr)	105		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-6-011619

Lab Sample ID: 280-119289-7 Date Sampled: 01/16/2019 1130
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0695.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1650			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1650				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client: Aspect Consulting | Job Number: 280-119289-1

Client Sample ID: **SW-7-011619**

Lab Sample ID: 280-119289-8 | Date Sampled: 01/16/2019 1220
Client Matrix: Water | Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7675.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1551			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1551				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	* F1 F2	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND	F1	5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND	* F1	20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND	* F1 F2	10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **SW-7-011619**

Lab Sample ID: 280-119289-8 Date Sampled: 01/16/2019 1220
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7675.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1551			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1551				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND	F1	1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND	* F1	1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND	F2	25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND	F1	1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-7-011619

Lab Sample ID: 280-119289-8 Date Sampled: 01/16/2019 1220
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7675.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1551			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1551				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		77 - 120
4-Bromofluorobenzene (Surr)	103		73 - 120
Toluene-d8 (Surr)	100		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-7-011619

Lab Sample ID: 280-119289-8 Date Sampled: 01/16/2019 1220
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7675.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1551			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1551				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client Sample ID: **MW-14-011619**

Lab Sample ID: 280-119289-9 Date Sampled: 01/16/2019 1605
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7676.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1615			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1615				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	2.5		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	*	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND	*	20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND	*	10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **MW-14-011619**

Lab Sample ID: 280-119289-9 Date Sampled: 01/16/2019 1605
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7676.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1615			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1615				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	2.5		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND	*	1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-14-011619

Lab Sample ID: 280-119289-9 Date Sampled: 01/16/2019 1605
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7676.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1615			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1615				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		77 - 120
4-Bromofluorobenzene (Surr)	101		73 - 120
Toluene-d8 (Surr)	99		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: **MW-14-011619**

Lab Sample ID: 280-119289-9 Date Sampled: 01/16/2019 1605
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7676.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1615			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1615				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client: Aspect Consulting | Job Number: 280-119289-1

Client Sample ID: **MW-6-011619**

Lab Sample ID: 280-119289-10 | Date Sampled: 01/16/2019 1200
Client Matrix: Water | Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7677.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1639			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1639				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	*	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND	*	20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND	*	10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client: Aspect Consulting | Job Number: 280-119289-1

Client Sample ID: **MW-6-011619**

Lab Sample ID: 280-119289-10 | Date Sampled: 01/16/2019 1200
Client Matrix: Water | Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7677.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1639			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1639				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND	*	1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-6-011619

Lab Sample ID: 280-119289-10 Date Sampled: 01/16/2019 1200
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7677.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1639			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1639				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		77 - 120
4-Bromofluorobenzene (Surr)	102		73 - 120
Toluene-d8 (Surr)	99		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-6-011619

Lab Sample ID: 280-119289-10 Date Sampled: 01/16/2019 1200
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7677.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1639			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1639				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client Sample ID: **MW-20DD-011619**

Lab Sample ID: 280-119289-11 Date Sampled: 01/16/2019 0000
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7678.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1703			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1703				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	2.8		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND	*	40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND	*	20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND	*	10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **MW-20DD-011619**

Lab Sample ID: 280-119289-11 Date Sampled: 01/16/2019 0000
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7678.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1703			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1703				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	2.8		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND	*	1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-20DD-011619

Lab Sample ID: 280-119289-11 Date Sampled: 01/16/2019 0000
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7678.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1703			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1703				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		77 - 120
4-Bromofluorobenzene (Surr)	99		73 - 120
Toluene-d8 (Surr)	95		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: **MW-20DD-011619**

Lab Sample ID: 280-119289-11 Date Sampled: 01/16/2019 0000
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	T7678.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1703			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1703				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 280-119289-12 Date Sampled: 01/16/2019 0000
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0669.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0448			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0448				

Analyte	Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND		40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0
Chloroethane	ND		1.0

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 280-119289-12 Date Sampled: 01/16/2019 0000
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0669.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0448			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0448				

Analyte	Result (ug/L)	Qualifier	RL
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 280-119289-12 Date Sampled: 01/16/2019 0000
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0669.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0448			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0448				

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	111		77 - 120
4-Bromofluorobenzene (Surr)	107		73 - 120
Toluene-d8 (Surr)	113		80 - 120

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 280-119289-12 Date Sampled: 01/16/2019 0000
Client Matrix: Water Date Received: 01/18/2019 0915

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	S0669.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0448			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0448				

Targeted Tentatively Identified Compounds

Cas Number	Analyte	Est. Result (ug/L)	Qualifier
67-72-1	Hexachloroethane TIC	ND	

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **MW-7-011619**

Lab Sample ID: 280-119289-1
Client Matrix: Water

Date Sampled: 01/16/2019 1230
Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8579.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 1724			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 1724				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	ND		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	101		50 - 150
TBA-d9 (Surr)	75		50 - 150

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-5-011619

Lab Sample ID: 280-119289-2 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8580.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 1748			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 1748				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	ND		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	100		50 - 150
TBA-d9 (Surr)	77		50 - 150

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-1-011619

Lab Sample ID: 280-119289-3 Date Sampled: 01/16/2019 0915
Client Matrix: Water Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8581.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 1812			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 1812				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	ND		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	100		50 - 150
TBA-d9 (Surr)	79		50 - 150

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-12I-011619

Lab Sample ID: 280-119289-4 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8582.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 1837			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 1837				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	0.039		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	100		50 - 150
TBA-d9 (Surr)	80		50 - 150

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-4-011619

Lab Sample ID: 280-119289-5 Date Sampled: 01/16/2019 1030
Client Matrix: Water Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8583.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 1901			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 1901				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	ND		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	99		50 - 150
TBA-d9 (Surr)	73		50 - 150

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-13D-011619

Lab Sample ID: 280-119289-6 Date Sampled: 01/16/2019 1540
Client Matrix: Water Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8584.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 1925			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 1925				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	ND		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	97		50 - 150
TBA-d9 (Surr)	73		50 - 150

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-6-011619

Lab Sample ID: 280-119289-7 Date Sampled: 01/16/2019 1130
Client Matrix: Water Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8585.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 1949			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 1949				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	ND		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	100		50 - 150
TBA-d9 (Surr)	71		50 - 150

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: SW-7-011619

Lab Sample ID: 280-119289-8 Date Sampled: 01/16/2019 1220
Client Matrix: Water Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8586.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 2013			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 2013				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	ND		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	98		50 - 150
TBA-d9 (Surr)	75		50 - 150

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-14-011619

Lab Sample ID: 280-119289-9 Date Sampled: 01/16/2019 1605
Client Matrix: Water Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8587.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 2038			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 2038				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	0.033		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	98		50 - 150
TBA-d9 (Surr)	75		50 - 150

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-6-011619

Lab Sample ID: 280-119289-10 Date Sampled: 01/16/2019 1200
Client Matrix: Water Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8588.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 2102			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 2102				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	0.088		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	102		50 - 150
TBA-d9 (Surr)	75		50 - 150

Client: Aspect Consulting Job Number: 280-119289-1

Client Sample ID: MW-20DD-011619

Lab Sample ID: 280-119289-11 Date Sampled: 01/16/2019 0000
Client Matrix: Water Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8589.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 2126			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 2126				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	0.034		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	100		50 - 150
TBA-d9 (Surr)	77		50 - 150

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **TRIP BLANK**

Lab Sample ID: 280-119289-12
Client Matrix: Water

Date Sampled: 01/16/2019 0000
Date Received: 01/18/2019 0915

8260C SIM Volatile Organic Compounds (GC/MS)

Analysis Method:	8260C SIM	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	J8590.D
Dilution:	1.0			Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 2150			Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 2150				

Analyte	Result (ug/L)	Qualifier	RL
Vinyl chloride	ND		0.020

Surrogate	%Rec	Qualifier	Acceptance Limits
Dibromofluoromethane (Surr)	100		50 - 150
TBA-d9 (Surr)	71		50 - 150

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **MW-7-011619**

Lab Sample ID: 280-119289-1
Client Matrix: Water

Date Sampled: 01/16/2019 1230
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-444962	Instrument ID:	MT_078
Prep Method:	3005A	Prep Batch:	280-444782	Lab File ID:	266SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2019 2324			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	ND		1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **MW-5-011619**

Lab Sample ID: 280-119289-2
Client Matrix: Water

Date Sampled: 01/16/2019 1425
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-444962	Instrument ID:	MT_078
Prep Method:	3005A	Prep Batch:	280-444782	Lab File ID:	271SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2019 2341			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	1.0		1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **SW-1-011619**

Lab Sample ID: 280-119289-3
Client Matrix: Water

Date Sampled: 01/16/2019 0915
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-445121	Instrument ID:	MT_078
Prep Method:	3005A	Prep Batch:	280-444782	Lab File ID:	048SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/22/2019 1558			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	2.0		1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **MW-12I-011619**

Lab Sample ID: 280-119289-4
Client Matrix: Water

Date Sampled: 01/16/2019 1425
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-444962	Instrument ID:	MT_078
Prep Method:	3005A	Prep Batch:	280-444782	Lab File ID:	275SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2019 2354			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	31	^	1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **SW-4-011619**

Lab Sample ID: 280-119289-5
Client Matrix: Water

Date Sampled: 01/16/2019 1030
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-444962	Instrument ID:	MT_078
Prep Method:	3005A	Prep Batch:	280-444782	Lab File ID:	276SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2019 2357			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	51	^	1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **MW-13D-011619**

Lab Sample ID: 280-119289-6
Client Matrix: Water

Date Sampled: 01/16/2019 1540
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-445121	Instrument ID:	MT_078
Prep Method:	3005A	Prep Batch:	280-444782	Lab File ID:	051SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/22/2019 1608			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	6.5		1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **SW-6-011619**

Lab Sample ID: 280-119289-7
Client Matrix: Water

Date Sampled: 01/16/2019 1130
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-444962	Instrument ID:	MT_078
Prep Method:	3005A	Prep Batch:	280-444782	Lab File ID:	278SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/22/2019 0004			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	51	^	1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **SW-7-011619**

Lab Sample ID: 280-119289-8
Client Matrix: Water

Date Sampled: 01/16/2019 1220
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-445121	Instrument ID:	MT_078
Prep Method:	3005A	Prep Batch:	280-444782	Lab File ID:	053SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/22/2019 1614			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	2.3		1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **MW-14-011619**

Lab Sample ID: 280-119289-9
Client Matrix: Water

Date Sampled: 01/16/2019 1605
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-444962	Instrument ID:	MT_078
Prep Method:	3005A	Prep Batch:	280-444782	Lab File ID:	280SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/22/2019 0011			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	1600	^	1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **MW-6-011619**

Lab Sample ID: 280-119289-10
Client Matrix: Water

Date Sampled: 01/16/2019 1200
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-444962	Instrument ID:	MT_078
Prep Method:	3005A	Prep Batch:	280-444782	Lab File ID:	281SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/22/2019 0014			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	400	^	1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Client Sample ID: **MW-20DD-011619**

Lab Sample ID: 280-119289-11
Client Matrix: Water

Date Sampled: 01/16/2019 0000
Date Received: 01/18/2019 0915

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	280-445417	Instrument ID:	MT_077
Prep Method:	3005A	Prep Batch:	280-445084	Lab File ID:	170SMPL.d
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	01/24/2019 2115			Final Weight/Volume:	50 mL
Prep Date:	01/23/2019 0711				

Analyte	Result (ug/L)	Qualifier	RL
Manganese	1500		1.0

General Chemistry

Client Sample ID: MW-7-011619

Lab Sample ID: 280-119289-1 Date Sampled: 01/16/2019 1230
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	ND		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2124					
Sulfate	2.4		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2124					
Ammonia as N	ND		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1220					
Total Alkalinity	120		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1548					
Bicarbonate Alkalinity	120		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1548					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1548					
Total Organic Carbon - Average	1.9		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/21/2019 2031					

General Chemistry

Client Sample ID: **MW-5-011619**

Lab Sample ID: 280-119289-2 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	1.6		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2238					
Sulfate	8.3		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2238					
Ammonia as N	ND		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1226					
Total Alkalinity	61		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1555					
Bicarbonate Alkalinity	61		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1555					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1555					
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/21/2019 2128					

General Chemistry

Client Sample ID: **SW-1-011619**

Lab Sample ID: 280-119289-3 Date Sampled: 01/16/2019 0915
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	4.0		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2257					
Sulfate	10		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2257					
Ammonia as N	ND		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1228					
Total Alkalinity	66		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1602					
Bicarbonate Alkalinity	66		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1602					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1602					
Total Organic Carbon - Average	2.8		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/21/2019 2149					

General Chemistry

Client Sample ID: MW-12I-011619

Lab Sample ID: 280-119289-4 Date Sampled: 01/16/2019 1425
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	1.9		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2316					
Sulfate	4.0		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2316					
Ammonia as N	0.063		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1230					
Total Alkalinity	72		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1609					
Bicarbonate Alkalinity	72		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1609					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1609					
Total Organic Carbon - Average	3.0		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/21/2019 2206					

General Chemistry

Client Sample ID: **SW-4-011619**

Lab Sample ID: 280-119289-5 Date Sampled: 01/16/2019 1030
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	12		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2334					
Sulfate	17		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2334					
Ammonia as N	ND		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1232					
Total Alkalinity	140		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1617					
Bicarbonate Alkalinity	140		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1617					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1617					
Total Organic Carbon - Average	10		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/21/2019 2223					

General Chemistry

Client Sample ID: MW-13D-011619

Lab Sample ID: 280-119289-6 Date Sampled: 01/16/2019 1540
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	5.1		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2353					
Sulfate	17		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/22/2019 2353					
Ammonia as N	ND		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1234					
Total Alkalinity	71		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1638					
Bicarbonate Alkalinity	71		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1638					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1638					
Total Organic Carbon - Average	ND		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/21/2019 2246					

General Chemistry

Client Sample ID: SW-6-011619

Lab Sample ID: 280-119289-7 Date Sampled: 01/16/2019 1130
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	3.7		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/23/2019 0012					
Sulfate	5.8		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/23/2019 0012					
Ammonia as N	0.039		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1236					
Total Alkalinity	42		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1645					
Bicarbonate Alkalinity	42		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1645					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1645					
Total Organic Carbon - Average	21		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/21/2019 2301					

General Chemistry

Client Sample ID: **SW-7-011619**

Lab Sample ID: 280-119289-8 Date Sampled: 01/16/2019 1220
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	3.7		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/23/2019 0108					
Sulfate	7.8		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/23/2019 0108					
Ammonia as N	ND		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1238					
Total Alkalinity	43		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1652					
Bicarbonate Alkalinity	43		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1652					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1652					
Total Organic Carbon - Average	9.8		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/21/2019 2358					

General Chemistry

Client Sample ID: **MW-14-011619**

Lab Sample ID: 280-119289-9 Date Sampled: 01/16/2019 1605
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	3.8		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/23/2019 0127					
Sulfate	11		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/23/2019 0127					
Ammonia as N	ND		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1252					
Total Alkalinity	94		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1659					
Bicarbonate Alkalinity	94		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1659					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1659					
Total Organic Carbon - Average	1.9		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/22/2019 0013					

General Chemistry

Client Sample ID: **MW-6-011619**

Lab Sample ID: 280-119289-10 Date Sampled: 01/16/2019 1200
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	7.0		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/23/2019 0145					
Sulfate	25		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/23/2019 0145					
Ammonia as N	0.88		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1254					
Total Alkalinity	140		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1706					
Bicarbonate Alkalinity	140		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1706					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1706					
Total Organic Carbon - Average	1.6		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/22/2019 0032					

General Chemistry

Client Sample ID: **MW-20DD-011619**

Lab Sample ID: 280-119289-11 Date Sampled: 01/16/2019 0000
Client Matrix: Water Date Received: 01/18/2019 0915

Analyte	Result	Qual	Units	RL	Dil	Method
Chloride	3.9		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/23/2019 0204					
Sulfate	11		mg/L	1.0	1.0	300.0
Analysis Batch: 280-444984	Analysis Date: 01/23/2019 0204					
Ammonia as N	ND		mg/L	0.030	1.0	350.1
Analysis Batch: 280-445196	Analysis Date: 01/23/2019 1256					
Total Alkalinity	94		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1713					
Bicarbonate Alkalinity	94		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1713					
Carbonate Alkalinity	ND		mg/L	5.0	1.0	SM 2320B
Analysis Batch: 280-444972	Analysis Date: 01/21/2019 1713					
Total Organic Carbon - Average	1.8		mg/L	1.0	1.0	SM 5310B
Analysis Batch: 280-444955	Analysis Date: 01/22/2019 0051					

DATA REPORTING QUALIFIERS

Client: Aspect Consulting Job Number: 280-119289-1

Lab Section	Qualifier	Description
GC/MS VOA		
	*	LCS or LCSD is outside acceptance limits.
	F1	MS and/or MSD Recovery is outside acceptance limits.
	F2	MS/MSD RPD exceeds control limits
	E	Result exceeded calibration range.
Metals		
	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

QUALITY CONTROL RESULTS

Client: Aspect Consulting Job Number: 280-119289-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:480-456133					
LCS 480-456133/5	Lab Control Sample	T	Water	8260C	
MB 480-456133/7	Method Blank	T	Water	8260C	
280-119289-12	TRIP BLANK	T	Water	8260C	
480-148181-H-1 MS	Matrix Spike	T	Water	8260C	
480-148181-H-1 MSD	Matrix Spike Duplicate	T	Water	8260C	
Analysis Batch:480-456172					
LCS 480-456172/5	Lab Control Sample	T	Water	8260C	
MB 480-456172/7	Method Blank	T	Water	8260C	
280-119289-1	MW-7-011619	T	Water	8260C	
280-119289-2	MW-5-011619	T	Water	8260C	
280-119289-3	SW-1-011619	T	Water	8260C	
280-119289-4	MW-12I-011619	T	Water	8260C	
280-119289-5	SW-4-011619	T	Water	8260C	
280-119289-6	MW-13D-011619	T	Water	8260C	
280-119289-7	SW-6-011619	T	Water	8260C	
480-148182-B-3 MS	Matrix Spike	T	Water	8260C	
480-148182-B-3 MSD	Matrix Spike Duplicate	T	Water	8260C	
Analysis Batch:480-456209					
LCS 480-456209/6	Lab Control Sample	T	Water	8260C	
MB 480-456209/8	Method Blank	T	Water	8260C	
280-119289-8	SW-7-011619	T	Water	8260C	
280-119289-8MS	Matrix Spike	T	Water	8260C	
280-119289-8MSD	Matrix Spike Duplicate	T	Water	8260C	
280-119289-9	MW-14-011619	T	Water	8260C	
280-119289-10	MW-6-011619	T	Water	8260C	
280-119289-11	MW-20DD-011619	T	Water	8260C	
Analysis Batch:480-456240					
LCS 480-456240/7	Lab Control Sample	T	Water	8260C SIM	
LCSD 480-456240/8	Lab Control Sample Duplicate	T	Water	8260C SIM	
MB 480-456240/10	Method Blank	T	Water	8260C SIM	
280-119289-1	MW-7-011619	T	Water	8260C SIM	
280-119289-2	MW-5-011619	T	Water	8260C SIM	
280-119289-3	SW-1-011619	T	Water	8260C SIM	
280-119289-4	MW-12I-011619	T	Water	8260C SIM	
280-119289-5	SW-4-011619	T	Water	8260C SIM	
280-119289-6	MW-13D-011619	T	Water	8260C SIM	
280-119289-7	SW-6-011619	T	Water	8260C SIM	
280-119289-8	SW-7-011619	T	Water	8260C SIM	
280-119289-9	MW-14-011619	T	Water	8260C SIM	
280-119289-10	MW-6-011619	T	Water	8260C SIM	
280-119289-11	MW-20DD-011619	T	Water	8260C SIM	
280-119289-12	TRIP BLANK	T	Water	8260C SIM	

Client: Aspect Consulting Job Number: 280-119289-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Client: Aspect Consulting Job Number: 280-119289-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-444782					
LCS 280-444782/2-A	Lab Control Sample	R	Water	3005A	
MB 280-444782/1-A	Method Blank	R	Water	3005A	
280-119289-1	MW-7-011619	D	Water	3005A	
280-119289-1MS	Matrix Spike	D	Water	3005A	
280-119289-1MSD	Matrix Spike Duplicate	D	Water	3005A	
280-119289-2	MW-5-011619	D	Water	3005A	
280-119289-3	SW-1-011619	D	Water	3005A	
280-119289-4	MW-12I-011619	D	Water	3005A	
280-119289-5	SW-4-011619	D	Water	3005A	
280-119289-6	MW-13D-011619	D	Water	3005A	
280-119289-7	SW-6-011619	D	Water	3005A	
280-119289-8	SW-7-011619	D	Water	3005A	
280-119289-9	MW-14-011619	D	Water	3005A	
280-119289-10	MW-6-011619	D	Water	3005A	
Analysis Batch:280-444962					
LCS 280-444782/2-A	Lab Control Sample	R	Water	6020	280-444782
MB 280-444782/1-A	Method Blank	R	Water	6020	280-444782
280-119289-1	MW-7-011619	D	Water	6020	280-444782
280-119289-1MS	Matrix Spike	D	Water	6020	280-444782
280-119289-1MSD	Matrix Spike Duplicate	D	Water	6020	280-444782
280-119289-2	MW-5-011619	D	Water	6020	280-444782
280-119289-4	MW-12I-011619	D	Water	6020	280-444782
280-119289-5	SW-4-011619	D	Water	6020	280-444782
280-119289-7	SW-6-011619	D	Water	6020	280-444782
280-119289-9	MW-14-011619	D	Water	6020	280-444782
280-119289-10	MW-6-011619	D	Water	6020	280-444782
Prep Batch: 280-445084					
LCS 280-445084/2-A	Lab Control Sample	R	Water	3005A	
MB 280-445084/1-A	Method Blank	R	Water	3005A	
280-119289-11	MW-20DD-011619	D	Water	3005A	
280-119289-11MS	Matrix Spike	D	Water	3005A	
280-119289-11MSD	Matrix Spike Duplicate	D	Water	3005A	
Analysis Batch:280-445121					
280-119289-3	SW-1-011619	D	Water	6020	280-444782
280-119289-6	MW-13D-011619	D	Water	6020	280-444782
280-119289-8	SW-7-011619	D	Water	6020	280-444782

Client: Aspect Consulting Job Number: 280-119289-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-445417					
LCS 280-445084/2-A	Lab Control Sample	R	Water	6020	280-445084
MB 280-445084/1-A	Method Blank	R	Water	6020	280-445084
280-119289-11	MW-20DD-011619	D	Water	6020	280-445084
280-119289-11MS	Matrix Spike	D	Water	6020	280-445084
280-119289-11MSD	Matrix Spike Duplicate	D	Water	6020	280-445084

Report Basis
D = Dissolved
R = Total Recoverable

Client: Aspect Consulting Job Number: 280-119289-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-444955					
LCS 280-444955/25	Lab Control Sample	T	Water	SM 5310B	
MB 280-444955/26	Method Blank	T	Water	SM 5310B	
280-119289-1	MW-7-011619	T	Water	SM 5310B	
280-119289-1MS	Matrix Spike	T	Water	SM 5310B	
280-119289-1MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
280-119289-2	MW-5-011619	T	Water	SM 5310B	
280-119289-3	SW-1-011619	T	Water	SM 5310B	
280-119289-4	MW-12I-011619	T	Water	SM 5310B	
280-119289-5	SW-4-011619	T	Water	SM 5310B	
280-119289-6	MW-13D-011619	T	Water	SM 5310B	
280-119289-7	SW-6-011619	T	Water	SM 5310B	
280-119289-8	SW-7-011619	T	Water	SM 5310B	
280-119289-9	MW-14-011619	T	Water	SM 5310B	
280-119289-10	MW-6-011619	T	Water	SM 5310B	
280-119289-11	MW-20DD-011619	T	Water	SM 5310B	
280-119289-11MS	Matrix Spike	T	Water	SM 5310B	
280-119289-11MSD	Matrix Spike Duplicate	T	Water	SM 5310B	
Analysis Batch:280-444972					
LCS 280-444972/4	Lab Control Sample	T	Water	SM 2320B	
MB 280-444972/5	Method Blank	T	Water	SM 2320B	
280-119202-A-5 DU	Duplicate	T	Water	SM 2320B	
280-119289-1	MW-7-011619	T	Water	SM 2320B	
280-119289-2	MW-5-011619	T	Water	SM 2320B	
280-119289-3	SW-1-011619	T	Water	SM 2320B	
280-119289-4	MW-12I-011619	T	Water	SM 2320B	
280-119289-5	SW-4-011619	T	Water	SM 2320B	
280-119289-6	MW-13D-011619	T	Water	SM 2320B	
280-119289-7	SW-6-011619	T	Water	SM 2320B	
280-119289-8	SW-7-011619	T	Water	SM 2320B	
280-119289-9	MW-14-011619	T	Water	SM 2320B	
280-119289-10	MW-6-011619	T	Water	SM 2320B	
280-119289-11	MW-20DD-011619	T	Water	SM 2320B	

Client: Aspect Consulting Job Number: 280-119289-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-444984					
LCS 280-444984/4	Lab Control Sample	T	Water	300.0	
LCSD 280-444984/5	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-444984/6	Method Blank	T	Water	300.0	
280-119289-1	MW-7-011619	T	Water	300.0	
280-119289-1DU	Duplicate	T	Water	300.0	
280-119289-1MS	Matrix Spike	T	Water	300.0	
280-119289-1MSD	Matrix Spike Duplicate	T	Water	300.0	
280-119289-2	MW-5-011619	T	Water	300.0	
280-119289-3	SW-1-011619	T	Water	300.0	
280-119289-4	MW-12I-011619	T	Water	300.0	
280-119289-5	SW-4-011619	T	Water	300.0	
280-119289-6	MW-13D-011619	T	Water	300.0	
280-119289-7	SW-6-011619	T	Water	300.0	
280-119289-8	SW-7-011619	T	Water	300.0	
280-119289-9	MW-14-011619	T	Water	300.0	
280-119289-10	MW-6-011619	T	Water	300.0	
280-119289-11	MW-20DD-011619	T	Water	300.0	
280-119289-11DU	Duplicate	T	Water	300.0	
280-119289-11MS	Matrix Spike	T	Water	300.0	
280-119289-11MSD	Matrix Spike Duplicate	T	Water	300.0	
Analysis Batch:280-445196					
LCS 280-445196/63	Lab Control Sample	T	Water	350.1	
LCSD 280-445196/19	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-445196/64	Method Blank	T	Water	350.1	
280-119289-1	MW-7-011619	T	Water	350.1	
280-119289-1MS	Matrix Spike	T	Water	350.1	
280-119289-1MSD	Matrix Spike Duplicate	T	Water	350.1	
280-119289-2	MW-5-011619	T	Water	350.1	
280-119289-3	SW-1-011619	T	Water	350.1	
280-119289-4	MW-12I-011619	T	Water	350.1	
280-119289-5	SW-4-011619	T	Water	350.1	
280-119289-6	MW-13D-011619	T	Water	350.1	
280-119289-7	SW-6-011619	T	Water	350.1	
280-119289-8	SW-7-011619	T	Water	350.1	
280-119289-9	MW-14-011619	T	Water	350.1	
280-119289-10	MW-6-011619	T	Water	350.1	
280-119289-11	MW-20DD-011619	T	Water	350.1	

Report Basis
T = Total

Client: Aspect Consulting

Job Number: 280-119289-1

Surrogate Recovery Report

8260C Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	TOL %Rec
280-119289-1	MW-7-011619	104	101	105
280-119289-2	MW-5-011619	104	100	103
280-119289-3	SW-1-011619	109	101	105
280-119289-4	MW-12I-011619	103	103	103
280-119289-5	SW-4-011619	102	106	104
280-119289-6	MW-13D-011619	102	103	105
280-119289-7	SW-6-011619	97	102	105
280-119289-8	SW-7-011619	102	103	100
280-119289-9	MW-14-011619	102	101	99
280-119289-10	MW-6-011619	103	102	99
280-119289-11	MW-20DD-011619	99	99	95
280-119289-12	TRIP BLANK	111	107	113
MB 480-456133/7		107	100	107
MB 480-456172/7		106	98	103
MB 480-456209/8		101	100	101
LCS 480-456133/5		106	98	104
LCS 480-456172/5		105	99	101
LCS 480-456209/6		105	107	105
280-119289-8 MS	SW-7-011619 MS	97	101	96
480-148181-H-1 MS		107	98	106
480-148182-B-3 MS		106	100	101
280-119289-8 MSD	SW-7-011619 MSD	99	102	98
480-148181-H-1 MSD		97	101	104
480-148182-B-3 MSD		120	117	111

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	77-120
BFB = 4-Bromofluorobenzene (Surr)	73-120
TOL = Toluene-d8 (Surr)	80-120

Surrogate Recovery Report

8260C SIM Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	TBA %Rec
280-119289-1	MW-7-011619	101	75
280-119289-2	MW-5-011619	100	77
280-119289-3	SW-1-011619	100	79
280-119289-4	MW-12I-011619	100	80
280-119289-5	SW-4-011619	99	73
280-119289-6	MW-13D-011619	97	73
280-119289-7	SW-6-011619	100	71
280-119289-8	SW-7-011619	98	75
280-119289-9	MW-14-011619	98	75
280-119289-10	MW-6-011619	102	75
280-119289-11	MW-20DD-011619	100	77
280-119289-12	TRIP BLANK	100	71
MB 480-456240/10		98	74
LCS 480-456240/7		110	81
LCSD 480-456240/8		106	80

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane (Surr)	50-150
TBA = TBA-d9 (Surr)	50-150

Method Blank - Batch: 480-456133

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-456133/7	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0651.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 2124	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/22/2019 2124				
Leach Date:	N/A				

Analyte	Result	Qual	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND		40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Method Blank - Batch: 480-456133

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-456133/7	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0651.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 2124	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/22/2019 2124				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Method Blank - Batch: 480-456133

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-456133/7	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0651.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 2124	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/22/2019 2124				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107	77 - 120
4-Bromofluorobenzene (Surr)	100	73 - 120
Toluene-d8 (Surr)	107	80 - 120

Lab Control Sample - Batch: 480-456133

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 480-456133/5	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0649.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 2038	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/22/2019 2038				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	25.0	23.4	93	80 - 120	
1,1,1-Trichloroethane	25.0	22.7	91	73 - 126	
1,1,2,2-Tetrachloroethane	25.0	24.4	98	76 - 120	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	21.5	86	61 - 148	
1,1,2-Trichloroethane	25.0	23.4	94	76 - 122	
1,1-Dichloroethane	25.0	23.5	94	77 - 120	
1,1-Dichloroethene	25.0	21.6	87	66 - 127	
1,1-Dichloropropene	25.0	23.1	93	72 - 122	
1,2,3-Trichlorobenzene	25.0	22.2	89	75 - 123	
1,2,3-Trichloropropane	25.0	24.8	99	68 - 122	
1,2,4-Trichlorobenzene	25.0	21.6	86	79 - 122	
1,2,4-Trimethylbenzene	25.0	23.7	95	76 - 121	
1,2-Dibromo-3-Chloropropane	25.0	21.5	86	56 - 134	
1,2-Dibromoethane (EDB)	25.0	24.2	97	77 - 120	
1,2-Dichlorobenzene	25.0	23.2	93	80 - 124	
1,2-Dichloroethane	25.0	24.0	96	75 - 120	
1,2-Dichloroethene, Total	50.0	45.9	92	72 - 124	
1,2-Dichloropropane	25.0	23.2	93	76 - 120	
1,3,5-Trimethylbenzene	25.0	24.1	96	77 - 121	
1,3-Dichlorobenzene	25.0	23.6	94	77 - 120	
1,3-Dichloropropane	25.0	24.5	98	75 - 120	
1,4-Dichlorobenzene	25.0	23.3	93	80 - 120	
1,4-Dioxane	500	746	149	50 - 150	
2,2-Dichloropropane	25.0	24.0	96	63 - 136	
2-Butanone (MEK)	125	152	121	57 - 140	
2-Chloroethyl vinyl ether	25.0	22.9	92	70 - 129	
2-Hexanone	125	137	109	65 - 127	
4-Methyl-2-pentanone (MIBK)	125	130	104	71 - 125	
Acetone	125	161	128	56 - 142	
Acrolein	125	130	104	52 - 143	
Acrylonitrile	250	262	105	63 - 125	
Benzene	25.0	23.8	95	71 - 124	
Bromobenzene	25.0	23.7	95	78 - 120	
Bromochloromethane	25.0	24.9	100	72 - 130	
Bromodichloromethane	25.0	24.4	97	80 - 122	
Bromoform	25.0	24.7	99	61 - 132	
Bromomethane	25.0	22.1	89	55 - 144	
Butyl alcohol, tert-	250	289	115	75 - 125	
Carbon disulfide	25.0	23.9	95	59 - 134	
Carbon tetrachloride	25.0	23.2	93	72 - 134	
Chlorobenzene	25.0	23.6	94	80 - 120	
Chloroethane	25.0	23.6	94	69 - 136	
Chloroform	25.0	24.0	96	73 - 127	
Chloromethane	25.0	25.9	104	68 - 124	
cis-1,2-Dichloroethene	25.0	23.2	93	74 - 124	
cis-1,3-Dichloropropene	25.0	24.3	97	74 - 124	

Client: Aspect Consulting

Job Number: 280-119289-1

Lab Control Sample - Batch: 480-456133

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 480-456133/5	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0649.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 2038	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/22/2019 2038				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyclohexane	25.0	20.8	83	59 - 135	
Dibromochloromethane	25.0	25.3	101	75 - 125	
Dibromomethane	25.0	24.2	97	76 - 127	
Dichlorodifluoromethane	25.0	23.2	93	59 - 135	
Dichlorofluoromethane	25.0	24.5	98	76 - 127	
Ethyl ether	25.0	23.2	93	76 - 123	
Ethylbenzene	25.0	22.8	91	77 - 123	
Hexachlorobutadiene	25.0	21.4	86	68 - 131	
Hexane	25.0	20.6	82	54 - 146	
Iodomethane	25.0	24.5	98	78 - 123	
Isobutanol	625	729	117	51 - 150	
Isopropylbenzene	25.0	23.3	93	77 - 122	
Methyl acetate	50.0	48.2	96	74 - 133	
Methyl tert-butyl ether	25.0	24.4	98	77 - 120	
Methylcyclohexane	25.0	21.2	85	68 - 134	
Methylene Chloride	25.0	25.6	103	75 - 124	
m-Xylene & p-Xylene	25.0	22.8	91	76 - 122	
Naphthalene	25.0	22.9	92	66 - 125	
n-Butylbenzene	25.0	22.7	91	71 - 128	
N-Propylbenzene	25.0	23.4	94	75 - 127	
o-Chlorotoluene	25.0	23.9	96	76 - 121	
o-Xylene	25.0	23.2	93	76 - 122	
p-Chlorotoluene	25.0	23.4	93	77 - 121	
p-Cymene	25.0	23.8	95	73 - 120	
sec-Butylbenzene	25.0	23.2	93	74 - 127	
Styrene	25.0	23.5	94	80 - 120	
tert-Butylbenzene	25.0	24.0	96	75 - 123	
Tetrachloroethene	25.0	23.2	93	74 - 122	
Tetrahydrofuran	50.0	48.1	96	62 - 132	
Toluene	25.0	23.0	92	80 - 122	
trans-1,2-Dichloroethene	25.0	22.7	91	73 - 127	
trans-1,3-Dichloropropene	25.0	23.5	94	80 - 120	
trans-1,4-Dichloro-2-butene	25.0	19.6	78	41 - 131	
Trichloroethene	25.0	22.8	91	74 - 123	
Trichlorofluoromethane	25.0	21.8	87	62 - 150	
Vinyl acetate	50.0	53.1	106	50 - 144	
Vinyl chloride	25.0	23.9	95	65 - 133	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106	77 - 120
4-Bromofluorobenzene (Surr)	98	73 - 120
Toluene-d8 (Surr)	104	80 - 120

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456133

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-148181-H-1 MS	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0670.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0511			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0511				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	480-148181-H-1 MSD	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0671.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0534			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0534				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	100	95	80 - 120	5	20		
1,1,1-Trichloroethane	104	91	73 - 126	13	15		
1,1,2,2-Tetrachloroethane	97	95	76 - 120	2	15		
1,1,2-Trichloro-1,2,2-trifluoroethane	110	97	61 - 148	12	20		
1,1,2-Trichloroethane	91	94	76 - 122	3	15		
1,1-Dichloroethane	101	90	77 - 120	11	20		
1,1-Dichloroethene	104	90	66 - 127	15	16		
1,1-Dichloropropene	99	93	72 - 122	6	20		
1,2,3-Trichlorobenzene	94	86	75 - 123	9	20		
1,2,3-Trichloropropane	94	92	68 - 122	2	14		
1,2,4-Trichlorobenzene	96	84	79 - 122	13	20		
1,2,4-Trimethylbenzene	99	97	76 - 121	3	20		
1,2-Dibromo-3-Chloropropane	87	79	56 - 134	9	15		
1,2-Dibromoethane (EDB)	94	99	77 - 120	6	15		
1,2-Dichlorobenzene	96	93	80 - 124	3	20		
1,2-Dichloroethane	95	92	75 - 120	4	20		
1,2-Dichloroethene, Total	100	91	72 - 124	10	20		
1,2-Dichloropropane	96	90	76 - 120	6	20		
1,3,5-Trimethylbenzene	101	96	77 - 121	5	20		
1,3-Dichlorobenzene	96	94	77 - 120	2	20		
1,3-Dichloropropane	95	99	75 - 120	4	20		
1,4-Dichlorobenzene	93	93	78 - 124	0	20		
2,2-Dichloropropane	95	86	63 - 136	9	20		
2-Butanone (MEK)	107	109	57 - 140	2	20		
2-Chloroethyl vinyl ether	82	93	70 - 129	13	20		
4-Methyl-2-pentanone (MIBK)	105	103	71 - 125	2	35		
Acetone	118	106	56 - 142	11	15		
Acrolein	100	91	52 - 143	10	20		
Acrylonitrile	103	95	63 - 125	8	20		
Benzene	99	94	71 - 124	5	13		
Bromobenzene	97	96	78 - 120	1	15		
Bromochloromethane	103	94	72 - 130	9	15		
Bromodichloromethane	96	92	80 - 122	3	15		

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456133

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-148181-H-1 MS	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0670.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0511			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0511				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	480-148181-H-1 MSD	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0671.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0534			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0534				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Bromoform	92	100	61 - 132	8	15		
Bromomethane	97	83	55 - 144	15	15		
Carbon tetrachloride	103	96	72 - 134	7	15		
Chlorobenzene	96	98	80 - 120	2	25		
Chloroethane	106	93	69 - 136	12	15		
Chloroform	101	90	73 - 127	11	20		
Chloromethane	114	101	68 - 124	12	15		
cis-1,2-Dichloroethene	102	92	74 - 124	10	15		
cis-1,3-Dichloropropene	88	90	74 - 124	2	15		
Dibromochloromethane	98	98	75 - 125	1	15		
Dibromomethane	94	91	76 - 127	3	15		
Dichlorodifluoromethane	123	114	59 - 135	8	20		
Dichlorofluoromethane	107	96	76 - 127	12	20		
Ethyl ether	96	88	76 - 123	9	20		
Ethylbenzene	97	96	77 - 123	1	15		
Hexachlorobutadiene	91	85	68 - 131	7	20		
Isopropylbenzene	100	96	77 - 122	5	20		
Methyl tert-butyl ether	101	87	77 - 120	14	37		
Methylene Chloride	107	95	75 - 124	12	15		
m-Xylene & p-Xylene	95	94	76 - 122	1	16		
Naphthalene	98	90	66 - 125	9	20		
n-Butylbenzene	96	93	71 - 128	3	15		
N-Propylbenzene	98	97	75 - 127	2	15		
o-Chlorotoluene	101	98	76 - 121	3	20		
o-Xylene	97	94	76 - 122	3	16		
p-Chlorotoluene	96	99	77 - 121	3	15		
p-Cymene	97	95	73 - 120	2	20		
sec-Butylbenzene	100	95	74 - 127	4	15		
Styrene	95	96	80 - 120	2	20		
tert-Butylbenzene	103	99	75 - 123	4	15		
Tetrachloroethene	102	99	74 - 122	3	20		
Tetrahydrofuran	92	90	62 - 132	2	25		
Toluene	98	98	80 - 122	1	15		

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456133

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-148181-H-1 MS	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0670.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0511			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0511				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	480-148181-H-1 MSD	Analysis Batch:	480-456133	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0671.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0534			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0534				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
trans-1,2-Dichloroethene	99	90	73 - 127	9	20		
trans-1,3-Dichloropropene	85	93	80 - 120	9	15		
Trichloroethene	97	93	74 - 123	4	16		
Trichlorofluoromethane	108	99	62 - 150	9	20		
Vinyl chloride	111	103	65 - 133	8	15		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	107	97	77 - 120
4-Bromofluorobenzene (Surr)	98	101	73 - 120
Toluene-d8 (Surr)	106	104	80 - 120

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456133

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-148181-H-1 MS	Units: ug/L	
Client Matrix:	Water		
Dilution:	100		
Analysis Date:	01/23/2019 0511		
Prep Date:	01/23/2019 0511		
Leach Date:	N/A		

MSD Lab Sample ID:	480-148181-H-1 MSD
Client Matrix:	Water
Dilution:	100
Analysis Date:	01/23/2019 0534
Prep Date:	01/23/2019 0534
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
1,1,1,2-Tetrachloroethane	ND	2500	2500	2500	2370
1,1,1-Trichloroethane	ND	2500	2500	2590	2260
1,1,2,2-Tetrachloroethane	ND	2500	2500	2430	2370
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	2500	2500	2750	2440
1,1,2-Trichloroethane	ND	2500	2500	2280	2350
1,1-Dichloroethane	ND	2500	2500	2560	2290
1,1-Dichloroethene	ND	2500	2500	2590	2240
1,1-Dichloropropene	ND	2500	2500	2480	2330
1,2,3-Trichlorobenzene	ND	2500	2500	2350	2150
1,2,3-Trichloropropane	ND	2500	2500	2350	2310
1,2,4-Trichlorobenzene	ND	2500	2500	2400	2100
1,2,4-Trimethylbenzene	ND	2500	2500	2490	2420
1,2-Dibromo-3-Chloropropane	ND	2500	2500	2180	1980
1,2-Dibromoethane (EDB)	ND	2500	2500	2350	2480
1,2-Dichlorobenzene	ND	2500	2500	2400	2320
1,2-Dichloroethane	ND	2500	2500	2380	2290
1,2-Dichloroethene, Total	ND	5000	5000	5010	4540
1,2-Dichloropropane	ND	2500	2500	2400	2260
1,3,5-Trimethylbenzene	ND	2500	2500	2510	2400
1,3-Dichlorobenzene	ND	2500	2500	2400	2340
1,3-Dichloropropane	ND	2500	2500	2380	2470
1,4-Dichlorobenzene	ND	2500	2500	2340	2330
2,2-Dichloropropane	ND	2500	2500	2360	2160
2-Butanone (MEK)	ND	12500	12500	13400	13600
2-Chloroethyl vinyl ether	ND	2500	2500	2040	2320
4-Methyl-2-pentanone (MIBK)	ND	12500	12500	13100	12900
Acetone	ND	12500	12500	14700	13200
Acrolein	ND	12500	12500	12500	11300
Acrylonitrile	ND	25000	25000	25800	23800
Benzene	ND	2500	2500	2530	2410
Bromobenzene	ND	2500	2500	2430	2400
Bromochloromethane	ND	2500	2500	2570	2340
Bromodichloromethane	ND	2500	2500	2390	2310
Bromoform	ND	2500	2500	2300	2490
Bromomethane	ND	2500	2500	2430	2090
Carbon tetrachloride	ND	2500	2500	2570	2390
Chlorobenzene	ND	2500	2500	2390	2440
Chloroethane	ND	2500	2500	2640	2330
Chloroform	ND	2500	2500	2530	2260
Chloromethane	ND	2500	2500	2840	2520
cis-1,2-Dichloroethene	ND	2500	2500	2540	2290
cis-1,3-Dichloropropene	ND	2500	2500	2200	2240
Dibromochloromethane	ND	2500	2500	2440	2460

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456133

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-148181-H-1 MS	Units: ug/L	
Client Matrix:	Water		
Dilution:	100		
Analysis Date:	01/23/2019 0511		
Prep Date:	01/23/2019 0511		
Leach Date:	N/A		

MSD Lab Sample ID:	480-148181-H-1 MSD
Client Matrix:	Water
Dilution:	100
Analysis Date:	01/23/2019 0534
Prep Date:	01/23/2019 0534
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Dibromomethane	ND	2500	2500	2340	2270
Dichlorodifluoromethane	ND	2500	2500	3080	2840
Dichlorofluoromethane	ND	2500	2500	2690	2390
Ethyl ether	ND	2500	2500	2410	2190
Ethylbenzene	ND	2500	2500	2430	2410
Hexachlorobutadiene	ND	2500	2500	2280	2130
Isopropylbenzene	ND	2500	2500	2510	2400
Methyl tert-butyl ether	ND	2500	2500	2510	2190
Methylene Chloride	ND	2500	2500	2670	2370
m-Xylene & p-Xylene	ND	2500	2500	2370	2350
Naphthalene	ND	2500	2500	2450	2240
n-Butylbenzene	ND	2500	2500	2390	2330
N-Propylbenzene	ND	2500	2500	2460	2420
o-Chlorotoluene	ND	2500	2500	2520	2450
o-Xylene	ND	2500	2500	2410	2350
p-Chlorotoluene	ND	2500	2500	2410	2470
p-Cymene	ND	2500	2500	2430	2380
sec-Butylbenzene	ND	2500	2500	2490	2380
Styrene	ND	2500	2500	2360	2410
tert-Butylbenzene	ND	2500	2500	2590	2490
Tetrachloroethene	ND	2500	2500	2550	2490
Tetrahydrofuran	ND	5000	5000	4730	4640
Toluene	ND	2500	2500	2460	2440
trans-1,2-Dichloroethene	ND	2500	2500	2470	2250
trans-1,3-Dichloropropene	ND	2500	2500	2120	2330
Trichloroethene	ND	2500	2500	2420	2320
Trichlorofluoromethane	ND	2500	2500	2700	2470
Vinyl chloride	ND	2500	2500	2790	2570

Client: Aspect Consulting

Job Number: 280-119289-1

Method Blank - Batch: 480-456172

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-456172/7	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0680.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1044	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1044				
Leach Date:	N/A				

Analyte	Result	Qual	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND		40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Method Blank - Batch: 480-456172

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-456172/7	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0680.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1044	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1044				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Method Blank - Batch: 480-456172

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-456172/7	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0680.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1044	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1044				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106	77 - 120
4-Bromofluorobenzene (Surr)	98	73 - 120
Toluene-d8 (Surr)	103	80 - 120

Lab Control Sample - Batch: 480-456172

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 480-456172/5	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0678.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0958	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0958				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	25.0	23.6	94	80 - 120	
1,1,1-Trichloroethane	25.0	22.6	90	73 - 126	
1,1,2,2-Tetrachloroethane	25.0	24.6	99	76 - 120	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.5	98	61 - 148	
1,1,2-Trichloroethane	25.0	24.7	99	76 - 122	
1,1-Dichloroethane	25.0	22.9	92	77 - 120	
1,1-Dichloroethene	25.0	23.0	92	66 - 127	
1,1-Dichloropropene	25.0	24.0	96	72 - 122	
1,2,3-Trichlorobenzene	25.0	21.5	86	75 - 123	
1,2,3-Trichloropropane	25.0	25.1	101	68 - 122	
1,2,4-Trichlorobenzene	25.0	20.8	83	79 - 122	
1,2,4-Trimethylbenzene	25.0	23.3	93	76 - 121	
1,2-Dibromo-3-Chloropropane	25.0	19.8	79	56 - 134	
1,2-Dibromoethane (EDB)	25.0	24.9	100	77 - 120	
1,2-Dichlorobenzene	25.0	22.7	91	80 - 124	
1,2-Dichloroethane	25.0	24.4	98	75 - 120	
1,2-Dichloroethene, Total	50.0	45.1	90	72 - 124	
1,2-Dichloropropane	25.0	23.7	95	76 - 120	
1,3,5-Trimethylbenzene	25.0	23.4	94	77 - 121	
1,3-Dichlorobenzene	25.0	23.9	95	77 - 120	
1,3-Dichloropropane	25.0	25.5	102	75 - 120	
1,4-Dichlorobenzene	25.0	23.6	94	80 - 120	
1,4-Dioxane	500	771	154	50 - 150	*
2,2-Dichloropropane	25.0	22.8	91	63 - 136	
2-Butanone (MEK)	125	155	124	57 - 140	
2-Chloroethyl vinyl ether	25.0	27.3	109	70 - 129	
2-Hexanone	125	149	119	65 - 127	
4-Methyl-2-pentanone (MIBK)	125	133	106	71 - 125	
Acetone	125	157	125	56 - 142	
Acrolein	125	126	101	52 - 143	
Acrylonitrile	250	255	102	63 - 125	
Benzene	25.0	24.0	96	71 - 124	
Bromobenzene	25.0	24.3	97	78 - 120	
Bromochloromethane	25.0	24.5	98	72 - 130	
Bromodichloromethane	25.0	25.1	100	80 - 122	
Bromoform	25.0	26.6	106	61 - 132	
Bromomethane	25.0	20.0	80	55 - 144	
Butyl alcohol, tert-	250	277	111	75 - 125	
Carbon disulfide	25.0	23.7	95	59 - 134	
Carbon tetrachloride	25.0	23.5	94	72 - 134	
Chlorobenzene	25.0	23.7	95	80 - 120	
Chloroethane	25.0	22.0	88	69 - 136	
Chloroform	25.0	23.6	94	73 - 127	
Chloromethane	25.0	23.2	93	68 - 124	
cis-1,2-Dichloroethene	25.0	23.1	92	74 - 124	
cis-1,3-Dichloropropene	25.0	25.5	102	74 - 124	

Client: Aspect Consulting

Job Number: 280-119289-1

Lab Control Sample - Batch: 480-456172

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 480-456172/5	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0678.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0958	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 0958				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyclohexane	25.0	22.9	92	59 - 135	
Dibromochloromethane	25.0	25.3	101	75 - 125	
Dibromomethane	25.0	24.2	97	76 - 127	
Dichlorodifluoromethane	25.0	22.7	91	59 - 135	
Dichlorofluoromethane	25.0	22.5	90	76 - 127	
Ethyl ether	25.0	22.4	90	76 - 123	
Ethylbenzene	25.0	23.6	94	77 - 123	
Hexachlorobutadiene	25.0	19.8	79	68 - 131	
Hexane	25.0	23.3	93	54 - 146	
Iodomethane	25.0	23.7	95	78 - 123	
Isobutanol	625	723	116	51 - 150	
Isopropylbenzene	25.0	23.1	92	77 - 122	
Methyl acetate	50.0	47.4	95	74 - 133	
Methyl tert-butyl ether	25.0	23.1	93	77 - 120	
Methylcyclohexane	25.0	22.2	89	68 - 134	
Methylene Chloride	25.0	23.8	95	75 - 124	
m-Xylene & p-Xylene	25.0	23.1	93	76 - 122	
Naphthalene	25.0	21.9	88	66 - 125	
n-Butylbenzene	25.0	22.1	88	71 - 128	
N-Propylbenzene	25.0	23.8	95	75 - 127	
o-Chlorotoluene	25.0	24.1	97	76 - 121	
o-Xylene	25.0	22.8	91	76 - 122	
p-Chlorotoluene	25.0	24.4	97	77 - 121	
p-Cymene	25.0	23.2	93	73 - 120	
sec-Butylbenzene	25.0	22.6	91	74 - 127	
Styrene	25.0	23.8	95	80 - 120	
tert-Butylbenzene	25.0	23.1	92	75 - 123	
Tetrachloroethene	25.0	24.5	98	74 - 122	
Tetrahydrofuran	50.0	49.8	100	62 - 132	
Toluene	25.0	23.7	95	80 - 122	
trans-1,2-Dichloroethene	25.0	22.0	88	73 - 127	
trans-1,3-Dichloropropene	25.0	24.6	99	80 - 120	
trans-1,4-Dichloro-2-butene	25.0	23.2	93	41 - 131	
Trichloroethene	25.0	23.6	94	74 - 123	
Trichlorofluoromethane	25.0	22.5	90	62 - 150	
Vinyl acetate	50.0	56.0	112	50 - 144	
Vinyl chloride	25.0	22.6	91	65 - 133	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	105	77 - 120
4-Bromofluorobenzene (Surr)	99	73 - 120
Toluene-d8 (Surr)	101	80 - 120

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456172

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-148182-B-3 MS	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0696.D
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1713			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1713				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	480-148182-B-3 MSD	Analysis Batch:	480-456172	Instrument ID:	HP5973S
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	S0697.D
Dilution:	4.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1736			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1736				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,2,4-Trimethylbenzene	70	73	76 - 121	4	20	F1	F1
1,3,5-Trimethylbenzene	62	65	77 - 121	2	20	F1	F1
Benzene	69	75	71 - 124	9	13	F1	
Ethylbenzene	52	63	77 - 123	7	15	F1	F1
Isopropylbenzene	62	65	77 - 122	3	20	F1	F1
Methyl tert-butyl ether	68	75	77 - 120	9	37	F1	F1
m-Xylene & p-Xylene	51	65	76 - 122	9	16	F1	F1
Naphthalene	66	73	66 - 125	7	20		
n-Butylbenzene	63	67	71 - 128	5	15	F1	F1
N-Propylbenzene	57	60	75 - 127	2	15	F1	F1
o-Xylene	65	74	76 - 122	12	16	F1	F1
p-Cymene	69	73	73 - 120	6	20	F1	
sec-Butylbenzene	66	70	74 - 127	5	15	F1	F1
tert-Butylbenzene	73	77	75 - 123	6	15	F1	
Toluene	69	78	80 - 122	12	15	F1	F1

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	106	120	77 - 120
4-Bromofluorobenzene (Surr)	100	117	73 - 120
Toluene-d8 (Surr)	101	111	80 - 120

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456172

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	480-148182-B-3 MS	Units: ug/L	MSD Lab Sample ID:	480-148182-B-3 MSD	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	4.0		Dilution:	4.0	
Analysis Date:	01/23/2019 1713		Analysis Date:	01/23/2019 1736	
Prep Date:	01/23/2019 1713		Prep Date:	01/23/2019 1736	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
1,2,4-Trimethylbenzene	27	100	100	96.7	F1	101	F1
1,3,5-Trimethylbenzene	73	100	100	135	F1	138	F1
Benzene	ND	100	100	68.6	F1	75.2	
Ethylbenzene	110	100	100	159	F1	170	F1
Isopropylbenzene	60	100	100	123	F1	126	F1
Methyl tert-butyl ether	ND	100	100	68.1	F1	74.7	F1
m-Xylene & p-Xylene	88	100	100	139	F1	153	F1
Naphthalene	42	100	100	108		115	
n-Butylbenzene	16	100	100	78.3	F1	82.2	F1
N-Propylbenzene	120	100	100	173	F1	176	F1
o-Xylene	6.7	100	100	72.0	F1	81.2	F1
p-Cymene	ND	100	100	71.4	F1	75.5	
sec-Butylbenzene	8.1	100	100	74.4	F1	77.9	F1
tert-Butylbenzene	ND	100	100	73.0	F1	77.1	
Toluene	ND	100	100	71.7	F1	81.0	F1

Method Blank - Batch: 480-456209

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-456209/8	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7667.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1113	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1113				
Leach Date:	N/A				

Analyte	Result	Qual	RL
1,1,1,2-Tetrachloroethane	ND		1.0
1,1,1-Trichloroethane	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0
1,1,2-Trichloroethane	ND		1.0
1,1-Dichloroethane	ND		1.0
1,1-Dichloroethene	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0
1,2,3-Trichloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		1.0
1,2,4-Trimethylbenzene	ND		1.0
1,2-Dibromo-3-Chloropropane	ND		1.0
1,2-Dibromoethane (EDB)	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dichloroethane	ND		1.0
1,2-Dichloroethene, Total	ND		2.0
1,2-Dichloropropane	ND		1.0
1,3,5-Trichlorobenzene	ND		1.0
1,3,5-Trimethylbenzene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,3-Dichloropropane	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,4-Dioxane	ND		40
2,2-Dichloropropane	ND		1.0
2-Butanone (MEK)	ND		10
2-Chloroethyl vinyl ether	ND		5.0
2-Hexanone	ND		5.0
4-Methyl-2-pentanone (MIBK)	ND		5.0
Acetone	ND		10
Acetonitrile	ND		15
Acrolein	ND		20
Acrylonitrile	ND		5.0
Benzene	ND		1.0
Bromobenzene	ND		1.0
Bromochloromethane	ND		1.0
Bromodichloromethane	ND		1.0
Bromoform	ND		1.0
Bromomethane	ND		1.0
Butyl alcohol, n-	ND		40
Butyl alcohol, tert-	ND		10
Carbon disulfide	ND		1.0
Carbon tetrachloride	ND		1.0
Chlorobenzene	ND		1.0
Chlorodifluoromethane	ND		1.0

Method Blank - Batch: 480-456209

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-456209/8	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7667.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1113	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1113				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Chloroethane	ND		1.0
Chloroform	ND		1.0
Chloromethane	ND		1.0
cis-1,2-Dichloroethene	ND		1.0
cis-1,3-Dichloropropene	ND		1.0
Cyclohexane	ND		1.0
Dibromochloromethane	ND		1.0
Dibromomethane	ND		1.0
Dichlorodifluoromethane	ND		1.0
Dichlorofluoromethane	ND		1.0
Ethyl acetate	ND		1.0
Ethyl ether	ND		1.0
Ethyl tert-butyl ether	ND		1.0
Ethylbenzene	ND		1.0
Hexachlorobutadiene	ND		2.0
Hexane	ND		10
Iodomethane	ND		1.0
Isobutanol	ND		25
Isopropyl ether	ND		1.0
Isopropylbenzene	ND		1.0
Methacrylonitrile	ND		5.0
Methyl acetate	ND		2.5
Methyl tert-butyl ether	ND		1.0
Methylcyclohexane	ND		1.0
Methylene Chloride	ND		1.0
m-Xylene & p-Xylene	ND		2.0
Naphthalene	ND		1.0
n-Butylbenzene	ND		1.0
N-Propylbenzene	ND		1.0
o-Chlorotoluene	ND		1.0
o-Xylene	ND		1.0
p-Chlorotoluene	ND		1.0
p-Cymene	ND		1.0
sec-Butylbenzene	ND		1.0
Styrene	ND		1.0
Tert-amyl methyl ether	ND		1.0
tert-Butylbenzene	ND		1.0
Tetrachloroethene	ND		1.0
Tetrahydrofuran	ND		5.0
Toluene	ND		1.0
trans-1,2-Dichloroethene	ND		1.0
trans-1,3-Dichloropropene	ND		1.0
trans-1,4-Dichloro-2-butene	ND		1.0
Trichloroethene	ND		1.0
Trichlorofluoromethane	ND		1.0

Client: Aspect Consulting

Job Number: 280-119289-1

Method Blank - Batch: 480-456209

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 480-456209/8	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7667.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1113	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1113				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Vinyl acetate	ND		5.0
Vinyl chloride	ND		1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101	77 - 120
4-Bromofluorobenzene (Surr)	100	73 - 120
Toluene-d8 (Surr)	101	80 - 120

Lab Control Sample - Batch: 480-456209

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 480-456209/6	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7665.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1026	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1026				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1,2-Tetrachloroethane	25.0	25.5	102	80 - 120	
1,1,1-Trichloroethane	25.0	24.9	100	73 - 126	
1,1,2,2-Tetrachloroethane	25.0	24.6	99	76 - 120	
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	26.5	106	61 - 148	
1,1,2-Trichloroethane	25.0	25.8	103	76 - 122	
1,1-Dichloroethane	25.0	23.5	94	77 - 120	
1,1-Dichloroethene	25.0	24.2	97	66 - 127	
1,1-Dichloropropene	25.0	24.2	97	72 - 122	
1,2,3-Trichlorobenzene	25.0	24.6	98	75 - 123	
1,2,3-Trichloropropane	25.0	24.1	96	68 - 122	
1,2,4-Trichlorobenzene	25.0	24.6	98	79 - 122	
1,2,4-Trimethylbenzene	25.0	24.2	97	76 - 121	
1,2-Dibromo-3-Chloropropane	25.0	25.6	102	56 - 134	
1,2-Dibromoethane (EDB)	25.0	24.9	100	77 - 120	
1,2-Dichlorobenzene	25.0	23.6	94	80 - 124	
1,2-Dichloroethane	25.0	24.0	96	75 - 120	
1,2-Dichloroethene, Total	50.0	47.6	95	72 - 124	
1,2-Dichloropropane	25.0	24.0	96	76 - 120	
1,3,5-Trimethylbenzene	25.0	23.8	95	77 - 121	
1,3-Dichlorobenzene	25.0	23.8	95	77 - 120	
1,3-Dichloropropane	25.0	24.9	100	75 - 120	
1,4-Dichlorobenzene	25.0	24.0	96	80 - 120	
1,4-Dioxane	500	755	151	50 - 150	*
2,2-Dichloropropane	25.0	24.0	96	63 - 136	
2-Butanone (MEK)	125	134	107	57 - 140	
2-Chloroethyl vinyl ether	25.0	27.2	109	70 - 129	
2-Hexanone	125	143	114	65 - 127	
4-Methyl-2-pentanone (MIBK)	125	135	108	71 - 125	
Acetone	125	134	107	56 - 142	
Acrolein	125	498	398	52 - 143	*
Acrylonitrile	250	264	106	63 - 125	
Benzene	25.0	23.9	96	71 - 124	
Bromobenzene	25.0	23.6	94	78 - 120	
Bromochloromethane	25.0	25.4	102	72 - 130	
Bromodichloromethane	25.0	24.5	98	80 - 122	
Bromoform	25.0	27.9	112	61 - 132	
Bromomethane	25.0	25.0	100	55 - 144	
Butyl alcohol, tert-	250	347	139	75 - 125	*
Carbon disulfide	25.0	24.4	98	59 - 134	
Carbon tetrachloride	25.0	25.5	102	72 - 134	
Chlorobenzene	25.0	24.1	96	80 - 120	
Chloroethane	25.0	26.1	105	69 - 136	
Chloroform	25.0	23.1	92	73 - 127	
Chloromethane	25.0	26.5	106	68 - 124	
cis-1,2-Dichloroethene	25.0	24.3	97	74 - 124	
cis-1,3-Dichloropropene	25.0	25.2	101	74 - 124	

Client: Aspect Consulting

Job Number: 280-119289-1

Lab Control Sample - Batch: 480-456209

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 480-456209/6	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7665.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1026	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1026				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyclohexane	25.0	24.6	99	59 - 135	
Dibromochloromethane	25.0	27.2	109	75 - 125	
Dibromomethane	25.0	24.5	98	76 - 127	
Dichlorodifluoromethane	25.0	34.3	137	59 - 135	*
Dichlorofluoromethane	25.0	24.2	97	76 - 127	
Ethyl ether	25.0	23.2	93	76 - 123	
Ethylbenzene	25.0	23.5	94	77 - 123	
Hexachlorobutadiene	25.0	23.9	95	68 - 131	
Hexane	25.0	25.0	100	54 - 146	
Iodomethane	25.0	25.3	101	78 - 123	
Isobutanol	625	882	141	51 - 150	
Isopropylbenzene	25.0	23.5	94	77 - 122	
Methyl acetate	50.0	47.1	94	74 - 133	
Methyl tert-butyl ether	25.0	24.7	99	77 - 120	
Methylcyclohexane	25.0	25.7	103	68 - 134	
Methylene Chloride	25.0	24.5	98	75 - 124	
m-Xylene & p-Xylene	25.0	23.5	94	76 - 122	
Naphthalene	25.0	25.6	102	66 - 125	
n-Butylbenzene	25.0	24.4	98	71 - 128	
N-Propylbenzene	25.0	23.8	95	75 - 127	
o-Chlorotoluene	25.0	23.8	95	76 - 121	
o-Xylene	25.0	23.4	94	76 - 122	
p-Chlorotoluene	25.0	26.5	106	77 - 121	
p-Cymene	25.0	24.7	99	73 - 120	
sec-Butylbenzene	25.0	24.6	98	74 - 127	
Styrene	25.0	24.8	99	80 - 120	
tert-Butylbenzene	25.0	24.5	98	75 - 123	
Tetrachloroethene	25.0	25.0	100	74 - 122	
Tetrahydrofuran	50.0	48.6	97	62 - 132	
Toluene	25.0	23.7	95	80 - 122	
trans-1,2-Dichloroethene	25.0	23.3	93	73 - 127	
trans-1,3-Dichloropropene	25.0	24.8	99	80 - 120	
trans-1,4-Dichloro-2-butene	25.0	23.4	93	41 - 131	
Trichloroethene	25.0	23.4	94	74 - 123	
Trichlorofluoromethane	25.0	28.5	114	62 - 150	
Vinyl acetate	50.0	53.0	106	50 - 144	
Vinyl chloride	25.0	28.2	113	65 - 133	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	105	77 - 120
4-Bromofluorobenzene (Surr)	107	73 - 120
Toluene-d8 (Surr)	105	80 - 120

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456209

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	280-119289-8	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7679.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1727			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1727				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	280-119289-8	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7680.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1751			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1751				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1,2-Tetrachloroethane	109	115	80 - 120	5	20		
1,1,1-Trichloroethane	113	117	73 - 126	3	15		
1,1,2,2-Tetrachloroethane	112	111	76 - 120	1	15		
1,1,2-Trichloro-1,2,2-trifluoroethane	123	129	61 - 148	5	20		
1,1,2-Trichloroethane	111	112	76 - 122	1	15		
1,1-Dichloroethane	105	113	77 - 120	7	20		
1,1-Dichloroethene	114	114	66 - 127	0	16		
1,1-Dichloropropene	113	117	72 - 122	4	20		
1,2,3-Trichlorobenzene	114	117	75 - 123	2	20		
1,2,3-Trichloropropane	111	107	68 - 122	3	14		
1,2,4-Trichlorobenzene	112	114	79 - 122	2	20		
1,2,4-Trimethylbenzene	112	113	76 - 121	0	20		
1,2-Dibromo-3-Chloropropane	110	113	56 - 134	3	15		
1,2-Dibromoethane (EDB)	108	112	77 - 120	3	15		
1,2-Dichlorobenzene	109	110	80 - 124	1	20		
1,2-Dichloroethane	106	105	75 - 120	1	20		
1,2-Dichloroethene, Total	108	110	72 - 124	2	20		
1,2-Dichloropropane	107	107	76 - 120	1	20		
1,3,5-Trimethylbenzene	112	115	77 - 121	3	20		
1,3-Dichlorobenzene	112	111	77 - 120	1	20		
1,3-Dichloropropane	107	107	75 - 120	0	20		
1,4-Dichlorobenzene	110	111	78 - 124	1	20		
1,4-Dioxane	60	169	50 - 150	96	20		F1 F2
2,2-Dichloropropane	109	111	63 - 136	2	20		
2-Butanone (MEK)	109	115	57 - 140	6	20		
2-Chloroethyl vinyl ether	0	0	70 - 129	NC	20	F1	F1
2-Hexanone	117	120	65 - 127	3	15		
4-Methyl-2-pentanone (MIBK)	113	114	71 - 125	1	35		
Acetone	103	108	56 - 142	5	15		
Acrolein	444	458	52 - 143	3	20	E F1	E F1
Acrylonitrile	105	111	63 - 125	5	20		
Benzene	109	112	71 - 124	3	13		
Bromobenzene	110	110	78 - 120	0	15		

Client: Aspect Consulting Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456209

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	280-119289-8	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7679.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1727			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1727				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	280-119289-8	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7680.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1751			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1751				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Bromochloromethane	111	116	72 - 130	4	15		
Bromodichloromethane	108	111	80 - 122	3	15		
Bromoform	112	115	61 - 132	3	15		
Bromomethane	126	125	55 - 144	1	15		
Butyl alcohol, tert-	96	133	75 - 125	32	15		F1 F2
Carbon disulfide	108	111	59 - 134	3	15		
Carbon tetrachloride	117	123	72 - 134	5	15		
Chlorobenzene	107	110	80 - 120	3	25		
Chloroethane	126	125	69 - 136	1	15		
Chloroform	103	105	73 - 127	2	20		
Chloromethane	127	132	68 - 124	4	15	F1	F1
cis-1,2-Dichloroethene	108	110	74 - 124	2	15		
cis-1,3-Dichloropropene	107	112	74 - 124	4	15		
Cyclohexane	114	117	59 - 135	2	20		
Dibromochloromethane	110	114	75 - 125	4	15		
Dibromomethane	106	109	76 - 127	3	15		
Dichlorodifluoromethane	147	161	59 - 135	9	20	F1	F1
Dichlorofluoromethane	111	117	76 - 127	6	20		
Ethyl ether	105	108	76 - 123	2	20		
Ethylbenzene	105	108	77 - 123	2	15		
Hexachlorobutadiene	116	120	68 - 131	3	20		
Hexane	117	122	54 - 146	4			
Iodomethane	113	117	78 - 123	3	20		
Isobutanol	92	133	51 - 150	37	20		F2
Isopropylbenzene	112	114	77 - 122	1	20		
Methyl acetate	95	96	74 - 133	1	20		
Methyl tert-butyl ether	109	110	77 - 120	1	37		
Methylcyclohexane	121	126	68 - 134	4	20		
Methylene Chloride	109	112	75 - 124	3	15		
m-Xylene & p-Xylene	105	107	76 - 122	2	16		
Naphthalene	114	115	66 - 125	1	20		
n-Butylbenzene	117	117	71 - 128	0	15		
N-Propylbenzene	113	115	75 - 127	2	15		

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456209

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	280-119289-8	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7679.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1727			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1727				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	280-119289-8	Analysis Batch:	480-456209	Instrument ID:	HP5975T
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	T7680.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 1751			Final Weight/Volume:	5 mL
Prep Date:	01/23/2019 1751				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
o-Chlorotoluene	112	112	76 - 121	0	20		
o-Xylene	104	107	76 - 122	2	16		
p-Chlorotoluene	108	109	77 - 121	1	15		
p-Cymene	118	119	73 - 120	1	20		
sec-Butylbenzene	116	119	74 - 127	3	15		
Styrene	110	112	80 - 120	2	20		
tert-Butylbenzene	121	120	75 - 123	0	15		
Tetrachloroethene	112	118	74 - 122	5	20		
Tetrahydrofuran	100	102	62 - 132	2	25		
Toluene	106	108	80 - 122	2	15		
trans-1,2-Dichloroethene	109	110	73 - 127	1	20		
trans-1,3-Dichloropropene	107	111	80 - 120	4	15		
trans-1,4-Dichloro-2-butene	100	99	41 - 131	1	20		
Trichloroethene	109	111	74 - 123	2	16		
Trichlorofluoromethane	134	139	62 - 150	4	20		
Vinyl acetate	111	114	50 - 144	3	23		
Vinyl chloride	138	141	65 - 133	2	15	F1	F1

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97	99	77 - 120
4-Bromofluorobenzene (Surr)	101	102	73 - 120
Toluene-d8 (Surr)	96	98	80 - 120

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456209

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	280-119289-8	Units: ug/L	MSD Lab Sample ID:	280-119289-8	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	01/23/2019 1727		Analysis Date:	01/23/2019 1751	
Prep Date:	01/23/2019 1727		Prep Date:	01/23/2019 1751	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
1,1,1,2-Tetrachloroethane	ND	25.0	25.0	27.4		28.8	
1,1,1-Trichloroethane	ND	25.0	25.0	28.3		29.3	
1,1,2,2-Tetrachloroethane	ND	25.0	25.0	27.9		27.8	
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	25.0	25.0	30.7		32.3	
1,1,2-Trichloroethane	ND	25.0	25.0	27.7		27.9	
1,1-Dichloroethane	ND	25.0	25.0	26.4		28.2	
1,1-Dichloroethene	ND	25.0	25.0	28.4		28.5	
1,1-Dichloropropene	ND	25.0	25.0	28.3		29.3	
1,2,3-Trichlorobenzene	ND	25.0	25.0	28.5		29.2	
1,2,3-Trichloropropane	ND	25.0	25.0	27.7		26.8	
1,2,4-Trichlorobenzene	ND	25.0	25.0	27.9		28.4	
1,2,4-Trimethylbenzene	ND	25.0	25.0	28.1		28.2	
1,2-Dibromo-3-Chloropropane	ND	25.0	25.0	27.4		28.3	
1,2-Dibromoethane (EDB)	ND	25.0	25.0	27.1		27.9	
1,2-Dichlorobenzene	ND	25.0	25.0	27.1		27.4	
1,2-Dichloroethane	ND	25.0	25.0	26.6		26.3	
1,2-Dichloroethene, Total	ND	50.0	50.0	54.2		55.2	
1,2-Dichloropropane	ND	25.0	25.0	26.7		26.9	
1,3,5-Trimethylbenzene	ND	25.0	25.0	28.0		28.7	
1,3-Dichlorobenzene	ND	25.0	25.0	28.0		27.6	
1,3-Dichloropropane	ND	25.0	25.0	26.9		26.8	
1,4-Dichlorobenzene	ND	25.0	25.0	27.5		27.7	
1,4-Dioxane	ND	500	500	299		845	F1 F2
2,2-Dichloropropane	ND	25.0	25.0	27.3		27.8	
2-Butanone (MEK)	ND	125	125	136		144	
2-Chloroethyl vinyl ether	ND	25.0	25.0	ND	F1	ND	F1
2-Hexanone	ND	125	125	146		150	
4-Methyl-2-pentanone (MIBK)	ND	125	125	141		142	
Acetone	ND	125	125	128		135	
Acrolein	ND	125	125	555	E F1	572	E F1
Acrylonitrile	ND	250	250	263		277	
Benzene	ND	25.0	25.0	27.3		28.0	
Bromobenzene	ND	25.0	25.0	27.4		27.5	
Bromochloromethane	ND	25.0	25.0	27.7		28.9	
Bromodichloromethane	ND	25.0	25.0	27.0		27.7	
Bromoform	ND	25.0	25.0	27.9		28.7	
Bromomethane	ND	25.0	25.0	31.5		31.3	
Butyl alcohol, tert-	ND	250	250	240		332	F1 F2
Carbon disulfide	ND	25.0	25.0	27.0		27.8	
Carbon tetrachloride	ND	25.0	25.0	29.2		30.7	
Chlorobenzene	ND	25.0	25.0	26.7		27.5	
Chloroethane	ND	25.0	25.0	31.6		31.2	
Chloroform	ND	25.0	25.0	25.7		26.4	

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 480-456209

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	280-119289-8	Units: ug/L	MSD Lab Sample ID:	280-119289-8	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	01/23/2019 1727		Analysis Date:	01/23/2019 1751	
Prep Date:	01/23/2019 1727		Prep Date:	01/23/2019 1751	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Chloromethane	ND	25.0	25.0	31.7	F1	33.0	F1
cis-1,2-Dichloroethene	ND	25.0	25.0	27.0		27.6	
cis-1,3-Dichloropropene	ND	25.0	25.0	26.8		27.9	
Cyclohexane	ND	25.0	25.0	28.5		29.2	
Dibromochloromethane	ND	25.0	25.0	27.6		28.6	
Dibromomethane	ND	25.0	25.0	26.4		27.3	
Dichlorodifluoromethane	ND	25.0	25.0	36.8	F1	40.2	F1
Dichlorofluoromethane	ND	25.0	25.0	27.6		29.2	
Ethyl ether	ND	25.0	25.0	26.3		27.0	
Ethylbenzene	ND	25.0	25.0	26.3		26.9	
Hexachlorobutadiene	ND	25.0	25.0	29.1		29.9	
Hexane	ND	25.0	25.0	29.2		30.5	
Iodomethane	ND	25.0	25.0	28.3		29.2	
Isobutanol	ND	625	625	573		829	F2
Isopropylbenzene	ND	25.0	25.0	28.0		28.4	
Methyl acetate	ND	50.0	50.0	47.6		48.0	
Methyl tert-butyl ether	ND	25.0	25.0	27.3		27.4	
Methylcyclohexane	ND	25.0	25.0	30.3		31.5	
Methylene Chloride	ND	25.0	25.0	27.1		28.0	
m-Xylene & p-Xylene	ND	25.0	25.0	26.2		26.7	
Naphthalene	ND	25.0	25.0	28.5		28.8	
n-Butylbenzene	ND	25.0	25.0	29.3		29.4	
N-Propylbenzene	ND	25.0	25.0	28.3		28.8	
o-Chlorotoluene	ND	25.0	25.0	28.0		28.0	
o-Xylene	ND	25.0	25.0	26.0		26.7	
p-Chlorotoluene	ND	25.0	25.0	27.1		27.2	
p-Cymene	ND	25.0	25.0	29.4		29.7	
sec-Butylbenzene	ND	25.0	25.0	29.0		29.8	
Styrene	ND	25.0	25.0	27.5		28.0	
tert-Butylbenzene	ND	25.0	25.0	30.2		30.1	
Tetrachloroethene	ND	25.0	25.0	28.0		29.6	
Tetrahydrofuran	ND	50.0	50.0	50.1		51.1	
Toluene	ND	25.0	25.0	26.6		27.0	
trans-1,2-Dichloroethene	ND	25.0	25.0	27.2		27.6	
trans-1,3-Dichloropropene	ND	25.0	25.0	26.6		27.6	
trans-1,4-Dichloro-2-butene	ND	25.0	25.0	25.1		24.9	
Trichloroethene	ND	25.0	25.0	27.2		27.7	
Trichlorofluoromethane	ND	25.0	25.0	33.5		34.7	
Vinyl acetate	ND	50.0	50.0	55.3		57.2	
Vinyl chloride	ND	25.0	25.0	34.5	F1	35.3	F1

Method Blank - Batch: 480-456240

Method: 8260C SIM
Preparation: 5030C

Lab Sample ID:	MB 480-456240/10	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J8576.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 1559	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 1559				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Vinyl chloride	ND		0.020

Surrogate	% Rec	Acceptance Limits
Dibromofluoromethane (Surr)	98	50 - 150
TBA-d9 (Surr)	74	50 - 150

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 480-456240

Method: 8260C SIM
Preparation: 5030C

LCS Lab Sample ID:	LCS 480-456240/7	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J8573.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 1447	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 1447				25 mL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 480-456240/8	Analysis Batch:	480-456240	Instrument ID:	HP5973J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	J8574.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2019 1511	Units:	ug/L	Final Weight/Volume:	25 mL
Prep Date:	01/23/2019 1511				25 mL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Vinyl chloride	128	124	50 - 150	3	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Dibromofluoromethane (Surr)	110	106	50 - 150
TBA-d9 (Surr)	81	80	50 - 150

Client: Aspect Consulting

Job Number: 280-119289-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 480-456240

Method: 8260C SIM
Preparation: 5030C

LCS Lab Sample ID:	LCS 480-456240/7	Units: ug/L		LCSD Lab Sample ID:	LCSD 480-456240/8
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2019 1447			Analysis Date:	01/23/2019 1511
Prep Date:	01/23/2019 1447			Prep Date:	01/23/2019 1511
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Vinyl chloride	0.200	0.200	0.256	0.248

Client: Aspect Consulting Job Number: 280-119289-1

Method Blank - Batch: 280-444782

Method: 6020
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 280-444782/1-A	Analysis Batch:	280-444962	Instrument ID:	MT_078
Client Matrix:	Water	Prep Batch:	280-444782	Lab File ID:	264_BLK.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2019 2317	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Manganese	ND		1.0

Lab Control Sample - Batch: 280-444782

Method: 6020
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 280-444782/2-A	Analysis Batch:	280-444962	Instrument ID:	MT_078
Client Matrix:	Water	Prep Batch:	280-444782	Lab File ID:	265_LCS.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2019 2320	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Manganese	40.0	39.2	98	85 - 117	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-444782

Method: 6020
Preparation: 3005A
Dissolved

MS Lab Sample ID:	280-119289-1	Analysis Batch:	280-444962	Instrument ID:	MT_078
Client Matrix:	Water	Prep Batch:	280-444782	Lab File ID:	268SMPL.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2019 2330			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				
Leach Date:	N/A				

MSD Lab Sample ID:	280-119289-1	Analysis Batch:	280-444962	Instrument ID:	MT_078
Client Matrix:	Water	Prep Batch:	280-444782	Lab File ID:	269SMPL.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/21/2019 2334			Final Weight/Volume:	50 mL
Prep Date:	01/21/2019 0722				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Manganese	102	98	85 - 117	4	20		

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-444782

Method: 6020
Preparation: 3005A
Dissolved

MS Lab Sample ID:	280-119289-1	Units: ug/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/21/2019 2330		
Prep Date:	01/21/2019 0722		
Leach Date:	N/A		

MSD Lab Sample ID:	280-119289-1
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/21/2019 2334
Prep Date:	01/21/2019 0722
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Manganese	ND	40.0	40.0	40.8	39.3

Client: Aspect Consulting Job Number: 280-119289-1

Method Blank - Batch: 280-445084

Method: 6020
Preparation: 3005A
Total Recoverable

Lab Sample ID:	MB 280-445084/1-A	Analysis Batch:	280-445417	Instrument ID:	MT_077
Client Matrix:	Water	Prep Batch:	280-445084	Lab File ID:	168_BLK.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/24/2019 2107	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/23/2019 0711				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Manganese	ND		1.0

Lab Control Sample - Batch: 280-445084

Method: 6020
Preparation: 3005A
Total Recoverable

Lab Sample ID:	LCS 280-445084/2-A	Analysis Batch:	280-445417	Instrument ID:	MT_077
Client Matrix:	Water	Prep Batch:	280-445084	Lab File ID:	169_LCS.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/24/2019 2111	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	01/23/2019 0711				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Manganese	40.0	38.7	97	85 - 117	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-445084

Method: 6020
Preparation: 3005A
Dissolved

MS Lab Sample ID:	280-119289-11	Analysis Batch:	280-445417	Instrument ID:	MT_077
Client Matrix:	Water	Prep Batch:	280-445084	Lab File ID:	172SMPL.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/24/2019 2123			Final Weight/Volume:	50 mL
Prep Date:	01/23/2019 0711				
Leach Date:	N/A				

MSD Lab Sample ID:	280-119289-11	Analysis Batch:	280-445417	Instrument ID:	MT_077
Client Matrix:	Water	Prep Batch:	280-445084	Lab File ID:	173SMPL.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/24/2019 2126			Final Weight/Volume:	50 mL
Prep Date:	01/23/2019 0711				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Manganese	74	65	85 - 117	0	20	4	4

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-445084

Method: 6020
Preparation: 3005A
Dissolved

MS Lab Sample ID:	280-119289-11	Units: ug/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/24/2019 2123		
Prep Date:	01/23/2019 0711		
Leach Date:	N/A		

MSD Lab Sample ID:	280-119289-11
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/24/2019 2126
Prep Date:	01/23/2019 0711
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Manganese	1500	40.0	40.0	1560	4	1550	4

Method Blank - Batch: 280-444984

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 280-444984/6	Analysis Batch:	280-444984	Instrument ID:	WC_IonChrom12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	06.0000.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 1154	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Chloride	ND		1.0
Sulfate	ND		1.0

Method Reporting Limit Check - Batch: 280-444984

Method: 300.0
Preparation: N/A

Lab Sample ID:	MRL 280-444984/3	Analysis Batch:	280-444984	Instrument ID:	WC_IonChrom12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	03.0000.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 1058	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	2.50	ND	90	50 - 150	
Sulfate	2.50	ND	93	50 - 150	

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-444984

Method: 300.0
Preparation: N/A

LCS Lab Sample ID:	LCS 280-444984/4	Analysis Batch:	280-444984	Instrument ID:	WC_IonChrom12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	04.0000.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 1117	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				25 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-444984/5	Analysis Batch:	280-444984	Instrument ID:	WC_IonChrom12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	05.0000.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 1136	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				25 uL
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chloride	100	100	90 - 110	0	10		
Sulfate	99	99	90 - 110	0	10		

Client: Aspect Consulting

Job Number: 280-119289-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-444984

Method: 300.0
Preparation: N/A

LCS Lab Sample ID:	LCS 280-444984/4	Units: mg/L	LCSD Lab Sample ID:	LCSD 280-444984/5
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Analysis Date:	01/22/2019 1117		Analysis Date:	01/22/2019 1136
Prep Date:	N/A		Prep Date:	N/A
Leach Date:	N/A		Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chloride	100	100	100	100
Sulfate	100	100	99.4	99.4

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-444984

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-119289-1	Analysis Batch:	280-444984	Instrument ID:	WC_IonChrom12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	09.0000.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 2201			Final Weight/Volume:	5 mL
Prep Date:	N/A				25 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-119289-1	Analysis Batch:	280-444984	Instrument ID:	WC_IonChrom12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	10.0000.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 2219			Final Weight/Volume:	5 mL
Prep Date:	N/A				25 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	110	110	80 - 120	0	20		
Sulfate	108	108	80 - 120	0	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-444984

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-119289-11	Analysis Batch:	280-444984	Instrument ID:	WC_IonChrom12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	24.0000.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0242			Final Weight/Volume:	5 mL
Prep Date:	N/A				25 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-119289-11	Analysis Batch:	280-444984	Instrument ID:	WC_IonChrom12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	25.0000.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0300			Final Weight/Volume:	5 mL
Prep Date:	N/A				25 uL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	107	112	80 - 120	4	20		
Sulfate	101	107	80 - 120	3	20		

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-444984

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-119289-1	Units: mg/L		MSD Lab Sample ID:	280-119289-1
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/22/2019 2201			Analysis Date:	01/22/2019 2219
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chloride	ND	25.0	25.0	28.1	28.2
Sulfate	2.4	25.0	25.0	29.4	29.4

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-444984

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-119289-11	Units: mg/L		MSD Lab Sample ID:	280-119289-11
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2019 0242			Analysis Date:	01/23/2019 0300
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chloride	3.9	25.0	25.0	30.7	31.8
Sulfate	11	25.0	25.0	36.8	38.1

Client: Aspect Consulting

Job Number: 280-119289-1

Duplicate - Batch: 280-444984

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-119289-1	Analysis Batch:	280-444984	Instrument ID:	WC_IonChrom12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	08.0000.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/22/2019 2142	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				25 uL
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	ND	ND	NC	15	
Sulfate	2.4	2.41	0.3	15	

Duplicate - Batch: 280-444984

Method: 300.0
Preparation: N/A

Lab Sample ID:	280-119289-11	Analysis Batch:	280-444984	Instrument ID:	WC_IonChrom12
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	23.0000.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	01/23/2019 0223	Units:	mg/L	Final Weight/Volume:	5 mL
Prep Date:	N/A				25 uL
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	3.9	3.88	0.5	15	
Sulfate	11	11.5	0.4	15	

Client: Aspect Consulting Job Number: 280-119289-1

Method Blank - Batch: 280-445196

Method: 350.1
Preparation: N/A

Lab Sample ID:	MB 280-445196/64	Analysis Batch:	280-445196	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\012319.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/23/2019 1218	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Ammonia as N	ND		0.030

Lab Control Sample - Batch: 280-445196

Method: 350.1
Preparation: N/A

Lab Sample ID:	LCS 280-445196/63	Analysis Batch:	280-445196	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\012319.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/23/2019 1216	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ammonia as N	2.50	2.60	104	90 - 110	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-445196

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-119289-1	Analysis Batch:	280-445196	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\012319.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/23/2019 1222			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-119289-1	Analysis Batch:	280-445196	Instrument ID:	WC_Alp 3
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\012319.RS
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10 mL
Analysis Date:	01/23/2019 1224			Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia as N	105	110	90 - 110	5	10		

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-445196

Method: 350.1
Preparation: N/A

MS Lab Sample ID:	280-119289-1	Units: mg/L	MSD Lab Sample ID:	280-119289-1	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	01/23/2019 1222		Analysis Date:	01/23/2019 1224	
Prep Date:	N/A		Prep Date:	N/A	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia as N	ND	1.00	1.00	1.05	1.10

Client: Aspect Consulting

Job Number: 280-119289-1

Method Blank - Batch: 280-444972

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	MB 280-444972/5	Analysis Batch:	280-444972	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	alk 012119.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/21/2019 1508	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Total Alkalinity	ND		5.0
Bicarbonate Alkalinity	ND		5.0
Carbonate Alkalinity	ND		5.0

Lab Control Sample - Batch: 280-444972

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	LCS 280-444972/4	Analysis Batch:	280-444972	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	alk 012119.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/21/2019 1503	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Alkalinity	200	191	96	89 - 109	

Duplicate - Batch: 280-444972

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	280-119202-A-5 DU	Analysis Batch:	280-444972	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	alk 012119.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/21/2019 1523	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Alkalinity	150	141	5	10	

Client: Aspect Consulting

Job Number: 280-119289-1

Method Blank - Batch: 280-444955

Method: SM 5310B
Preparation: N/A

Lab Sample ID:	MB 280-444955/26	Analysis Batch:	280-444955	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	012119.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/21/2019 1926	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Total Organic Carbon - Average	ND		1.0

Lab Control Sample - Batch: 280-444955

Method: SM 5310B
Preparation: N/A

Lab Sample ID:	LCS 280-444955/25	Analysis Batch:	280-444955	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	012119.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/21/2019 1906	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Organic Carbon - Average	25.0	23.7	95	88 - 112	

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-444955

Method: SM 5310B
Preparation: N/A

MS Lab Sample ID:	280-119289-1	Analysis Batch:	280-444955	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	012119.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/21/2019 2051			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-119289-1	Analysis Batch:	280-444955	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	012119.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/21/2019 2108			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Total Organic Carbon - Average	99	99	88 - 112	0	15		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-444955

Method: SM 5310B
Preparation: N/A

MS Lab Sample ID:	280-119289-11	Analysis Batch:	280-444955	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	012119.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/22/2019 0110			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-119289-11	Analysis Batch:	280-444955	Instrument ID:	WC_SHI2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	012119.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/22/2019 0133			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Total Organic Carbon - Average	93	97	88 - 112	4	15		

Client: Aspect Consulting

Job Number: 280-119289-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-444955

Method: SM 5310B
Preparation: N/A

MS Lab Sample ID:	280-119289-1	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/21/2019 2051		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-119289-1
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/21/2019 2108
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Total Organic Carbon - Average	1.9	25.0	25.0	26.8	26.7

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-444955

Method: SM 5310B
Preparation: N/A

MS Lab Sample ID:	280-119289-11	Units: mg/L	
Client Matrix:	Water		
Dilution:	1.0		
Analysis Date:	01/22/2019 0110		
Prep Date:	N/A		
Leach Date:	N/A		

MSD Lab Sample ID:	280-119289-11
Client Matrix:	Water
Dilution:	1.0
Analysis Date:	01/22/2019 0133
Prep Date:	N/A
Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Total Organic Carbon - Average	1.8	25.0	25.0	25.0	26.1

Client: Aspect Consulting Job Number: 280-119289-1

Laboratory Chronicle

Lab ID: 280-119289-1 **Client ID: MW-7-011619**

Sample Date/Time: 01/16/2019 12:30 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-1		480-456172		01/23/2019 14:32	1	TAL BUF	NMC
A:8260C	280-119289-D-1		480-456172		01/23/2019 14:32	1	TAL BUF	NMC
P:5030C	280-119289-I-1		480-456240		01/23/2019 17:24	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-1		480-456240		01/23/2019 17:24	1	TAL BUF	RJF
P:3005A	280-119289-C-1-A		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-1-A		280-444962	280-444782	01/21/2019 23:24	1	TAL DEN	LMT
A:300.0	280-119289-A-1		280-444984		01/22/2019 21:24	1	TAL DEN	TLP
A:350.1	280-119289-B-1		280-445196		01/23/2019 12:20	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-1		280-444972		01/21/2019 15:48	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-1		280-444955		01/21/2019 20:31	1	TAL DEN	LPL

Lab ID: 280-119289-1 MS **Client ID: MW-7-011619**

Sample Date/Time: 01/16/2019 12:30 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-119289-C-1-B MS		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-1-B MS		280-444962	280-444782	01/21/2019 23:30	1	TAL DEN	LMT
A:300.0	280-119289-A-1 MS		280-444984		01/22/2019 22:01	1	TAL DEN	TLP
A:350.1	280-119289-B-1 MS		280-445196		01/23/2019 12:22	1	TAL DEN	JAP
A:SM 5310B	280-119289-B-1 MS		280-444955		01/21/2019 20:51	1	TAL DEN	LPL

Lab ID: 280-119289-1 MSD **Client ID: MW-7-011619**

Sample Date/Time: 01/16/2019 12:30 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-119289-C-1-C MSD		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-1-C MSD		280-444962	280-444782	01/21/2019 23:34	1	TAL DEN	LMT
A:300.0	280-119289-A-1 MSD		280-444984		01/22/2019 22:19	1	TAL DEN	TLP
A:350.1	280-119289-B-1 MSD		280-445196		01/23/2019 12:24	1	TAL DEN	JAP
A:SM 5310B	280-119289-B-1 MSD		280-444955		01/21/2019 21:08	1	TAL DEN	LPL

Lab ID: 280-119289-1 DU **Client ID: MW-7-011619**

Sample Date/Time: 01/16/2019 12:30 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-119289-A-1 DU		280-444984		01/22/2019 21:42	1	TAL DEN	TLP

Client: Aspect Consulting Job Number: 280-119289-1

Laboratory Chronicle

Lab ID: 280-119289-2 **Client ID: MW-5-011619**

Sample Date/Time: 01/16/2019 14:25 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-2		480-456172		01/23/2019 14:55	1	TAL BUF	NMC
A:8260C	280-119289-D-2		480-456172		01/23/2019 14:55	1	TAL BUF	NMC
P:5030C	280-119289-I-2		480-456240		01/23/2019 17:48	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-2		480-456240		01/23/2019 17:48	1	TAL BUF	RJF
P:3005A	280-119289-C-2-A		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-2-A		280-444962	280-444782	01/21/2019 23:41	1	TAL DEN	LMT
A:300.0	280-119289-A-2		280-444984		01/22/2019 22:38	1	TAL DEN	TLP
A:350.1	280-119289-B-2		280-445196		01/23/2019 12:26	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-2		280-444972		01/21/2019 15:55	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-2		280-444955		01/21/2019 21:28	1	TAL DEN	LPL

Lab ID: 280-119289-3 **Client ID: SW-1-011619**

Sample Date/Time: 01/16/2019 09:15 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-3		480-456172		01/23/2019 15:18	1	TAL BUF	NMC
A:8260C	280-119289-D-3		480-456172		01/23/2019 15:18	1	TAL BUF	NMC
P:5030C	280-119289-I-3		480-456240		01/23/2019 18:12	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-3		480-456240		01/23/2019 18:12	1	TAL BUF	RJF
P:3005A	280-119289-C-3-A		280-445121	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-3-A		280-445121	280-444782	01/22/2019 15:58	1	TAL DEN	CML
A:300.0	280-119289-A-3		280-444984		01/22/2019 22:57	1	TAL DEN	TLP
A:350.1	280-119289-B-3		280-445196		01/23/2019 12:28	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-3		280-444972		01/21/2019 16:02	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-3		280-444955		01/21/2019 21:49	1	TAL DEN	LPL

Lab ID: 280-119289-4 **Client ID: MW-12I-011619**

Sample Date/Time: 01/16/2019 14:25 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-4		480-456172		01/23/2019 15:41	1	TAL BUF	NMC
A:8260C	280-119289-D-4		480-456172		01/23/2019 15:41	1	TAL BUF	NMC
P:5030C	280-119289-I-4		480-456240		01/23/2019 18:37	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-4		480-456240		01/23/2019 18:37	1	TAL BUF	RJF
P:3005A	280-119289-C-4-A		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-4-A		280-444962	280-444782	01/21/2019 23:54	1	TAL DEN	LMT
A:300.0	280-119289-A-4		280-444984		01/22/2019 23:16	1	TAL DEN	TLP
A:350.1	280-119289-B-4		280-445196		01/23/2019 12:30	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-4		280-444972		01/21/2019 16:09	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-4		280-444955		01/21/2019 22:06	1	TAL DEN	LPL

Client: Aspect Consulting Job Number: 280-119289-1

Laboratory Chronicle

Lab ID: 280-119289-5 **Client ID: SW-4-011619**

Sample Date/Time: 01/16/2019 10:30 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-5		480-456172		01/23/2019 16:04	1	TAL BUF	NMC
A:8260C	280-119289-D-5		480-456172		01/23/2019 16:04	1	TAL BUF	NMC
P:5030C	280-119289-I-5		480-456240		01/23/2019 19:01	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-5		480-456240		01/23/2019 19:01	1	TAL BUF	RJF
P:3005A	280-119289-C-5-A		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-5-A		280-444962	280-444782	01/21/2019 23:57	1	TAL DEN	LMT
A:300.0	280-119289-A-5		280-444984		01/22/2019 23:34	1	TAL DEN	TLP
A:350.1	280-119289-B-5		280-445196		01/23/2019 12:32	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-5		280-444972		01/21/2019 16:17	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-5		280-444955		01/21/2019 22:23	1	TAL DEN	LPL

Lab ID: 280-119289-6 **Client ID: MW-13D-011619**

Sample Date/Time: 01/16/2019 15:40 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-6		480-456172		01/23/2019 16:27	1	TAL BUF	NMC
A:8260C	280-119289-D-6		480-456172		01/23/2019 16:27	1	TAL BUF	NMC
P:5030C	280-119289-I-6		480-456240		01/23/2019 19:25	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-6		480-456240		01/23/2019 19:25	1	TAL BUF	RJF
P:3005A	280-119289-C-6-A		280-445121	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-6-A		280-445121	280-444782	01/22/2019 16:08	1	TAL DEN	CML
A:300.0	280-119289-A-6		280-444984		01/22/2019 23:53	1	TAL DEN	TLP
A:350.1	280-119289-B-6		280-445196		01/23/2019 12:34	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-6		280-444972		01/21/2019 16:38	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-6		280-444955		01/21/2019 22:46	1	TAL DEN	LPL

Lab ID: 280-119289-7 **Client ID: SW-6-011619**

Sample Date/Time: 01/16/2019 11:30 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-7		480-456172		01/23/2019 16:50	1	TAL BUF	NMC
A:8260C	280-119289-D-7		480-456172		01/23/2019 16:50	1	TAL BUF	NMC
P:5030C	280-119289-I-7		480-456240		01/23/2019 19:49	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-7		480-456240		01/23/2019 19:49	1	TAL BUF	RJF
P:3005A	280-119289-C-7-A		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-7-A		280-444962	280-444782	01/22/2019 00:04	1	TAL DEN	LMT
A:300.0	280-119289-A-7		280-444984		01/23/2019 00:12	1	TAL DEN	TLP
A:350.1	280-119289-B-7		280-445196		01/23/2019 12:36	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-7		280-444972		01/21/2019 16:45	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-7		280-444955		01/21/2019 23:01	1	TAL DEN	LPL

Client: Aspect Consulting Job Number: 280-119289-1

Laboratory Chronicle

Lab ID: 280-119289-8 **Client ID: SW-7-011619**

Sample Date/Time: 01/16/2019 12:20 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-8		480-456209		01/23/2019 15:51	1	TAL BUF	AEM
A:8260C	280-119289-D-8		480-456209		01/23/2019 15:51	1	TAL BUF	AEM
P:5030C	280-119289-I-8		480-456240		01/23/2019 20:13	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-8		480-456240		01/23/2019 20:13	1	TAL BUF	RJF
P:3005A	280-119289-C-8-A		280-445121	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-8-A		280-445121	280-444782	01/22/2019 16:14	1	TAL DEN	CML
A:300.0	280-119289-A-8		280-444984		01/23/2019 01:08	1	TAL DEN	TLP
A:350.1	280-119289-B-8		280-445196		01/23/2019 12:38	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-8		280-444972		01/21/2019 16:52	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-8		280-444955		01/21/2019 23:58	1	TAL DEN	LPL

Lab ID: 280-119289-8 MS **Client ID: SW-7-011619**

Sample Date/Time: 01/16/2019 12:20 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-8 MS		480-456209		01/23/2019 17:27	1	TAL BUF	AEM
A:8260C	280-119289-D-8 MS		480-456209		01/23/2019 17:27	1	TAL BUF	AEM

Lab ID: 280-119289-8 MSD **Client ID: SW-7-011619**

Sample Date/Time: 01/16/2019 12:20 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-8 MSD		480-456209		01/23/2019 17:51	1	TAL BUF	AEM
A:8260C	280-119289-D-8 MSD		480-456209		01/23/2019 17:51	1	TAL BUF	AEM

Lab ID: 280-119289-9 **Client ID: MW-14-011619**

Sample Date/Time: 01/16/2019 16:05 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-9		480-456209		01/23/2019 16:15	1	TAL BUF	AEM
A:8260C	280-119289-D-9		480-456209		01/23/2019 16:15	1	TAL BUF	AEM
P:5030C	280-119289-I-9		480-456240		01/23/2019 20:38	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-9		480-456240		01/23/2019 20:38	1	TAL BUF	RJF
P:3005A	280-119289-C-9-A		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-9-A		280-444962	280-444782	01/22/2019 00:11	1	TAL DEN	LMT
A:300.0	280-119289-A-9		280-444984		01/23/2019 01:27	1	TAL DEN	TLP
A:350.1	280-119289-B-9		280-445196		01/23/2019 12:52	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-9		280-444972		01/21/2019 16:59	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-9		280-444955		01/22/2019 00:13	1	TAL DEN	LPL

Client: Aspect Consulting Job Number: 280-119289-1

Laboratory Chronicle

Lab ID: 280-119289-10 **Client ID: MW-6-011619**

Sample Date/Time: 01/16/2019 12:00 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-10		480-456209		01/23/2019 16:39	1	TAL BUF	AEM
A:8260C	280-119289-D-10		480-456209		01/23/2019 16:39	1	TAL BUF	AEM
P:5030C	280-119289-I-10		480-456240		01/23/2019 21:02	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-10		480-456240		01/23/2019 21:02	1	TAL BUF	RJF
P:3005A	280-119289-C-10-A		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	280-119289-C-10-A		280-444962	280-444782	01/22/2019 00:14	1	TAL DEN	LMT
A:300.0	280-119289-A-10		280-444984		01/23/2019 01:45	1	TAL DEN	TLP
A:350.1	280-119289-B-10		280-445196		01/23/2019 12:54	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-10		280-444972		01/21/2019 17:06	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-10		280-444955		01/22/2019 00:32	1	TAL DEN	LPL

Lab ID: 280-119289-11 **Client ID: MW-20DD-011619**

Sample Date/Time: 01/16/2019 00:00 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-D-11		480-456209		01/23/2019 17:03	1	TAL BUF	AEM
A:8260C	280-119289-D-11		480-456209		01/23/2019 17:03	1	TAL BUF	AEM
P:5030C	280-119289-G-11		480-456240		01/23/2019 21:26	1	TAL BUF	RJF
A:8260C SIM	280-119289-G-11		480-456240		01/23/2019 21:26	1	TAL BUF	RJF
P:3005A	280-119289-C-11-A		280-445417	280-445084	01/23/2019 07:11	1	TAL DEN	MRJ
A:6020	280-119289-C-11-A		280-445417	280-445084	01/24/2019 21:15	1	TAL DEN	LRD
A:300.0	280-119289-A-11		280-444984		01/23/2019 02:04	1	TAL DEN	TLP
A:350.1	280-119289-B-11		280-445196		01/23/2019 12:56	1	TAL DEN	JAP
A:SM 2320B	280-119289-A-11		280-444972		01/21/2019 17:13	1	TAL DEN	SGB
A:SM 5310B	280-119289-B-11		280-444955		01/22/2019 00:51	1	TAL DEN	LPL

Lab ID: 280-119289-11 MS **Client ID: MW-20DD-011619**

Sample Date/Time: 01/16/2019 00:00 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-119289-C-11-B MS		280-445417	280-445084	01/23/2019 07:11	1	TAL DEN	MRJ
A:6020	280-119289-C-11-B MS		280-445417	280-445084	01/24/2019 21:23	1	TAL DEN	LRD
A:300.0	280-119289-A-11 MS		280-444984		01/23/2019 02:42	1	TAL DEN	TLP
A:SM 5310B	280-119289-B-11 MS		280-444955		01/22/2019 01:10	1	TAL DEN	LPL

Client: Aspect Consulting Job Number: 280-119289-1

Laboratory Chronicle

Lab ID: 280-119289-11 MSD **Client ID: MW-20DD-011619**

Sample Date/Time: 01/16/2019 00:00 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-119289-C-11-C MSD		280-445417	280-445084	01/23/2019 07:11	1	TAL DEN	MRJ
A:6020	280-119289-C-11-C MSD		280-445417	280-445084	01/24/2019 21:26	1	TAL DEN	LRD
A:300.0	280-119289-A-11 MSD		280-444984		01/23/2019 03:00	1	TAL DEN	TLP
A:SM 5310B	280-119289-B-11 MSD		280-444955		01/22/2019 01:33	1	TAL DEN	LPL

Lab ID: 280-119289-11 DU **Client ID: MW-20DD-011619**

Sample Date/Time: 01/16/2019 00:00 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-119289-A-11 DU		280-444984		01/23/2019 02:23	1	TAL DEN	TLP

Lab ID: 280-119289-12 **Client ID: TRIP BLANK**

Sample Date/Time: 01/16/2019 00:00 Received Date/Time: 01/18/2019 09:15

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	280-119289-A-12		480-456133		01/23/2019 04:48	1	TAL BUF	AMM
A:8260C	280-119289-A-12		480-456133		01/23/2019 04:48	1	TAL BUF	AMM
P:5030C	280-119289-I-12		480-456240		01/23/2019 21:50	1	TAL BUF	RJF
A:8260C SIM	280-119289-I-12		480-456240		01/23/2019 21:50	1	TAL BUF	RJF

Client: Aspect Consulting Job Number: 280-119289-1

Laboratory Chronicle

Lab ID: MB **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	MB 480-456133/7		480-456133		01/22/2019 21:24	1	TAL BUF	AMM
A:8260C	MB 480-456133/7		480-456133		01/22/2019 21:24	1	TAL BUF	AMM
P:5030C	MB 480-456172/7		480-456172		01/23/2019 10:44	1	TAL BUF	NMC
A:8260C	MB 480-456172/7		480-456172		01/23/2019 10:44	1	TAL BUF	NMC
P:5030C	MB 480-456209/8		480-456209		01/23/2019 11:13	1	TAL BUF	AEM
A:8260C	MB 480-456209/8		480-456209		01/23/2019 11:13	1	TAL BUF	AEM
P:5030C	MB 480-456240/10		480-456240		01/23/2019 15:59	1	TAL BUF	RJF
A:8260C SIM	MB 480-456240/10		480-456240		01/23/2019 15:59	1	TAL BUF	RJF
P:3005A	MB 280-444782/1-A		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	MB 280-444782/1-A		280-444962	280-444782	01/21/2019 23:17	1	TAL DEN	LMT
P:3005A	MB 280-445084/1-A		280-445417	280-445084	01/23/2019 07:11	1	TAL DEN	MRJ
A:6020	MB 280-445084/1-A		280-445417	280-445084	01/24/2019 21:07	1	TAL DEN	LRD
A:300.0	MB 280-444984/6		280-444984		01/22/2019 11:54	1	TAL DEN	TLP
A:350.1	MB 280-445196/64		280-445196		01/23/2019 12:18	1	TAL DEN	JAP
A:SM 2320B	MB 280-444972/5		280-444972		01/21/2019 15:08	1	TAL DEN	SGB
A:SM 5310B	MB 280-444955/26		280-444955		01/21/2019 19:26	1	TAL DEN	LPL

Lab ID: LCS **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	LCS 480-456133/5		480-456133		01/22/2019 20:38	1	TAL BUF	AMM
A:8260C	LCS 480-456133/5		480-456133		01/22/2019 20:38	1	TAL BUF	AMM
P:5030C	LCS 480-456172/5		480-456172		01/23/2019 09:58	1	TAL BUF	NMC
A:8260C	LCS 480-456172/5		480-456172		01/23/2019 09:58	1	TAL BUF	NMC
P:5030C	LCS 480-456209/6		480-456209		01/23/2019 10:26	1	TAL BUF	AEM
A:8260C	LCS 480-456209/6		480-456209		01/23/2019 10:26	1	TAL BUF	AEM
P:5030C	LCS 480-456240/7		480-456240		01/23/2019 14:47	1	TAL BUF	RJF
A:8260C SIM	LCS 480-456240/7		480-456240		01/23/2019 14:47	1	TAL BUF	RJF
P:3005A	LCS 280-444782/2-A		280-444962	280-444782	01/21/2019 07:22	1	TAL DEN	MRJ
A:6020	LCS 280-444782/2-A		280-444962	280-444782	01/21/2019 23:20	1	TAL DEN	LMT
P:3005A	LCS 280-445084/2-A		280-445417	280-445084	01/23/2019 07:11	1	TAL DEN	MRJ
A:6020	LCS 280-445084/2-A		280-445417	280-445084	01/24/2019 21:11	1	TAL DEN	LRD
A:300.0	LCS 280-444984/4		280-444984		01/22/2019 11:17	1	TAL DEN	TLP
A:350.1	LCS 280-445196/63		280-445196		01/23/2019 12:16	1	TAL DEN	JAP
A:SM 2320B	LCS 280-444972/4		280-444972		01/21/2019 15:03	1	TAL DEN	SGB
A:SM 5310B	LCS 280-444955/25		280-444955		01/21/2019 19:06	1	TAL DEN	LPL

Client: Aspect Consulting Job Number: 280-119289-1

Laboratory Chronicle

Lab ID: LCSD **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	LCSD 480-456240/8		480-456240		01/23/2019 15:11	1	TAL BUF	RJF
A:8260C SIM	LCSD 480-456240/8		480-456240		01/23/2019 15:11	1	TAL BUF	RJF
A:300.0	LCSD 280-444984/5		280-444984		01/22/2019 11:36	1	TAL DEN	TLP
A:350.1	LCSD 280-445196/19		280-445196		01/23/2019 10:48	1	TAL DEN	JAP

Lab ID: MRL **Client ID: N/A**

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	MRL 280-444984/3		280-444984		01/22/2019 10:58	1	TAL DEN	TLP

Lab ID: MS **Client ID: N/A**

Sample Date/Time: 01/21/2019 10:15 Received Date/Time: 01/22/2019 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-148181-H-1 MS		480-456133		01/23/2019 05:11	100	TAL BUF	AMM
A:8260C	480-148181-H-1 MS		480-456133		01/23/2019 05:11	100	TAL BUF	AMM
P:5030C	480-148182-B-3 MS		480-456172		01/23/2019 17:13	4	TAL BUF	NMC
A:8260C	480-148182-B-3 MS		480-456172		01/23/2019 17:13	4	TAL BUF	NMC

Lab ID: MSD **Client ID: N/A**

Sample Date/Time: 01/21/2019 10:15 Received Date/Time: 01/22/2019 09:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030C	480-148181-H-1 MSD		480-456133		01/23/2019 05:34	100	TAL BUF	AMM
A:8260C	480-148181-H-1 MSD		480-456133		01/23/2019 05:34	100	TAL BUF	AMM
P:5030C	480-148182-B-3 MSD		480-456172		01/23/2019 17:36	4	TAL BUF	NMC
A:8260C	480-148182-B-3 MSD		480-456172		01/23/2019 17:36	4	TAL BUF	NMC

Lab ID: DU **Client ID: N/A**

Sample Date/Time: 01/15/2019 11:34 Received Date/Time: 01/16/2019 08:45

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2320B	280-119202-A-5 DU		280-444972		01/21/2019 15:23	1	TAL DEN	SGB

Lab References:
TAL BUF = TestAmerica Buffalo
TAL DEN = TestAmerica Denver

Analytical Resources, Incorporated
Analytical Chemists and Consultants

31 January 2019

Betsy Sara
Test America - Denver
4955 Yarrow Street
Arvada, CO 80002

RE: Hansville

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
19A0223	N/A

Amanda Volgardsen

Digitally signed by Amanda Volgardsen
DN: c=US, st=Washington, l=Tukwila, o=Analytical Resources, Inc., ou=Project Manager, cn=Amanda Volgardsen, email=amanda.volgardsen@arilabs.com
Date: 2019.01.31 15:42:30 -08'00'

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006

PJLA Testing
Accreditation # 66169

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Denver #280

Chain of Custody Record

Cooler ~~#3~~ 1/1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information 19A0223	Sampler: NaHyung Choi	Lab PM: Sara, Betsy A	Carrier Tracking No(s):
Client Contact: Meilani Lanier-Kamahaio	Phone: 206-413-5408	E-Mail: betsy.sara@testamericainc.com	COC No: 280-23414-6845.1
Company: Aspect Consulting, LLC			Page: 1/1
Address: 350 Madison Ave N	Due Date Requested:		Job #: 160423
City: Bainbridge Island	TAT Requested (days):		
State, Zip: WA, 98110			
Phone:	PO #: Purchase Order not required		
Email: mlkamahac@aspectconsulting.com	WO #:		
Project Name: Hansville Landfill	Project #:skip sites/events 28006013 - 1Q Sampling		
Site: Washington	SSOW#:		

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C SIM - Vinyl Chloride (TA Buffalo)	Dissolved Metals	Ammonia/TOC	Alks/Cl/SO4	Ortho-phosphate (field filtered) - Direct sub to ARI	Dissolved Arsenice (Direct sub to ARI)	8260C - Full Scan VOA (TA Buffalo)	Nitrate/Nitrite (IC) - Direct sub to ARI	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	D	S	N	N	D	A	N		
MW-7-011619	1/16/19	1230		W	Y							V	V	V		
MW-5-011619		1425										V	V	V		
SW-1-011619		0915										V	V	V		Diss As,NO3,NO2,o-phos subbed direct to ARI
MW-12I-011619		1425										V	V	V		
SW-4-011619		1030										V	V	V		
MW-13D-011619		1540										V	V	V		
SW-6-011619		1130										V	V	V		
SW-7-011619		1220										V	V	V		
MW-14-011619		1605										V	V	V		
MW-6-011619		1200										V	V	V		
MW20DD-011619		-										V	V	V		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Nate W	Date/Time: 10:30 1/17/19	Company: Aspect	Received by:	Date/Time: 1/17/19 1114	Company: ARI
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: -0.8°C

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-7-011619	19A0223-01	Water	16-Jan-2019 12:30	17-Jan-2019 11:14
MW-5-011619	19A0223-02	Water	16-Jan-2019 14:25	17-Jan-2019 11:14
SW-1-011619	19A0223-03	Water	16-Jan-2019 09:15	17-Jan-2019 11:14
MW-12I-011619	19A0223-04	Water	16-Jan-2019 14:25	17-Jan-2019 11:14
SW-4-011619	19A0223-05	Water	16-Jan-2019 10:30	17-Jan-2019 11:14
MW-13D-011619	19A0223-06	Water	16-Jan-2019 15:40	17-Jan-2019 11:14
SW-6-011619	19A0223-07	Water	16-Jan-2019 11:30	17-Jan-2019 11:14
SW-7-011619	19A0223-08	Water	16-Jan-2019 12:20	17-Jan-2019 11:14
MW-14-011619	19A0223-09	Water	16-Jan-2019 16:05	17-Jan-2019 11:14
MW-6-011619	19A0223-10	Water	16-Jan-2019 12:00	17-Jan-2019 11:14
MW20DD-011619	19A0223-11	Water	16-Jan-2019 00:00	17-Jan-2019 11:14

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

Work Order Case Narrative

Sample receipt

Samples as listed on the preceding page were received January 17, 2019 under ARI work order 19A0223. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Dissolved Arsenic - EPA Method 200.8

The samples were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank was clean at the reporting limits.

The LCS percent recoveries were within control limits.

A matrix spike and duplicate were prepared in conjunction with sample MW-7-011619. The matrix spike percent recovery and duplicate RPD were within QC limits.

Anions - EPA Method 300.0

The samples were prepared and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank was clean at the reporting limits.

The LCS percent recoveries were within control limits.

A matrix spike and duplicate were prepared in conjunction with sample MW-7-011619. The matrix spike percent recoveries and duplicate RPD were with QC limits.

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

WORK ORDER

19A0223

Client: Test America - Denver	**Project Manager:** Amanda Volgardsen
Project: Hansville	**Project Number:** [none]

Preservation Confirmation

Container ID	Container Type		pH
19A0223-01 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-01 B	Miscellaneous Container		
19A0223-01 C	Miscellaneous Container		
19A0223-02 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-02 B	Miscellaneous Container		
19A0223-02 C	Miscellaneous Container		
19A0223-03 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-03 B	Miscellaneous Container		
19A0223-03 C	Miscellaneous Container		
19A0223-04 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-04 B	Miscellaneous Container		
19A0223-04 C	Miscellaneous Container		
19A0223-05 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-05 B	Miscellaneous Container		
19A0223-05 C	Miscellaneous Container		
19A0223-06 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-06 B	Miscellaneous Container		
19A0223-06 C	Miscellaneous Container		
19A0223-07 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-07 B	Miscellaneous Container		
19A0223-07 C	Miscellaneous Container		
19A0223-08 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-08 B	Miscellaneous Container		
19A0223-08 C	Miscellaneous Container		
19A0223-09 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-09 B	Miscellaneous Container		
19A0223-09 C	Miscellaneous Container		
19A0223-10 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-10 B	Miscellaneous Container		
19A0223-10 C	Miscellaneous Container		
19A0223-11 A	Miscellaneous Container	HNO_3	<2 pass
19A0223-11 B	Miscellaneous Container		
19A0223-11 C	Miscellaneous Container		
19A0223-12 A	VOA Vial, Clear, 40 mL, HCL		bubble
19A0223-12 B	VOA Vial, Clear, 40 mL, HCL		bubble

Reviewed By

Date

WORK ORDER

19A0223

Client: Test America - Denver	**Project Manager: Amanda Volgardsen**
Project: Hansville	**Project Number: [none]**

19A0223-12 C VOA Vial, Clear, 40 mL, HCL

HVB
Preservation Confirmed By

1/17/19
Date

Reviewed By

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Aspect ~~Test America Denver~~ Project Name: Hansville Landfill

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 19A0223 Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	~~NO~~ JUB
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) -0.8
Time 1114

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: D0052086

Cooler Accepted by: JUB Date: 11/17/19 Time: 1114

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		_____

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JUB Date: 11/17/19 Time: 1156 Labels checked by: JBL

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
* MW-6-011619	MW-6-011619		
@ 1700	@ 1200		

Additional Notes, Discrepancies, & Resolutions: * Time on CoC & bottle don't match
VOAs have bubbles, will mark on pres sheet.
TripBlanks not listed on CoC.
# of Containers not listed on CoC.

By: JUB Date: 11/17/19

* ortho phos analysis not checked on CoC, but received bottles w/ that as a requested analysis.

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-7-011619

19A0223-01 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 12:30

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 18:10

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-01 A 01

Preparation Batch: BHA0759 — Sample Size: 25 mL

Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.00127**	mg/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-7-011619

19A0223-01 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 12:30

Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 14:42

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-01 C

Preparation Batch: BHA0454 — Sample Size: 5 mL

Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	**0.331**	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	U

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-5-011619

19A0223-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 14:25

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 17:47

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-02 A 01

Preparation Batch: BHA0759 — Sample Size: 25 mL

Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.00207**	mg/L	

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-5-011619

19A0223-02 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 14:25

Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 15:32

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-02 C

Preparation Batch: BHA0454 — Sample Size: 5 mL

Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	U

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-5-011619

19A0223-02RE1 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 14:25
Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 19:44

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-02RE1 C
Preparation Batch: BHA0454 — Sample Size: 5 mL
Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	2	0.200	0.200	**4.01**	mg/L	D

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

SW-1-011619

19A0223-03 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 09:15

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 17:51

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-03 A 01

Preparation Batch: BHA0759 — Sample Size: 25 mL

Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.00160**	mg/L	

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

SW-1-011619

19A0223-03 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 09:15
Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 15:49

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-03 C
Preparation Batch: BHA0454 — Sample Size: 5 mL
Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	**1.79**	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	U

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-12I-011619

19A0223-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 14:25
Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 17:56

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-04 A 01
Preparation Batch: BHA0759 — Sample Size: 25 mL
Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.00230**	mg/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-12I-011619

19A0223-04 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 14:25
Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 16:06

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-04 C
Preparation Batch: BHA0454 — Sample Size: 5 mL
Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	U

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

SW-4-011619

19A0223-05 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 10:30

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 18:01

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-05 A 01

Preparation Batch: BHA0759 — Sample Size: 25 mL

Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.00200**	mg/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

SW-4-011619

19A0223-05 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 10:30

Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 16:22

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-05 C

Preparation Batch: BHA0454 — Sample Size: 5 mL

Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	**0.877**	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	U

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-13D-011619

19A0223-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 15:40

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 18:05

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-06 A 01

Preparation Batch: BHA0759 — Sample Size: 25 mL

Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.00473**	mg/L	

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-13D-011619

19A0223-06 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 15:40

Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 16:39

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-06 C

Preparation Batch: BHA0454 — Sample Size: 5 mL

Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	**0.14**	mg/L	

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

SW-6-011619

19A0223-07 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 11:30

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 18:47

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-07 A 01

Preparation Batch: BHA0759 — Sample Size: 25 mL

Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.00259**	mg/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

SW-6-011619

19A0223-07 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 11:30

Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 16:56

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-07 C

Preparation Batch: BHA0454 — Sample Size: 5 mL

Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	**0.194**	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	U

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

SW-7-011619

19A0223-08 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 12:20

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 18:51

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-08 A 01

Preparation Batch: BHA0759 — Sample Size: 25 mL

Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.00111**	mg/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

SW-7-011619

19A0223-08 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 12:20

Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 17:13

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-08 C

Preparation Batch: BHA0454 — Sample Size: 5 mL

Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	**1.47**	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	U

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-14-011619

19A0223-09 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 16:05

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 18:56

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-09 A 01

Preparation Batch: BHA0759 — Sample Size: 25 mL

Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.0146**	mg/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-14-011619

19A0223-09 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 16:05
Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 18:03

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-09 C
Preparation Batch: BHA0454 — Sample Size: 5 mL
Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	**0.124**	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	**0.14**	mg/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-6-011619

19A0223-10 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 12:00

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 19:01

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-10 A 01

Preparation Batch: BHA0759 — Sample Size: 25 mL

Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.00171**	mg/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW-6-011619

19A0223-10 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 12:00

Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 18:20

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-10 C

Preparation Batch: BHA0454 — Sample Size: 5 mL

Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	**0.753**	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	**0.246**	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	U

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW20DD-011619

19A0223-11 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 01/16/2019 00:00

Instrument: ICPMS2 Analyst: MCB — Analyzed: 01/29/2019 19:05

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 19A0223-11 A 01

Preparation Batch: BHA0759 — Sample Size: 25 mL

Prepared: 29-Jan-2019 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	**0.0144**	mg/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

MW20DD-011619

19A0223-11 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 01/16/2019 00:00

Instrument: DX500 Analyst: KOTT — Analyzed: 01/17/2019 18:37

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 19A0223-11 C

Preparation Batch: BHA0454 — Sample Size: 5 mL

Prepared: 17-Jan-2019 — Final Volume: 5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	**0.125**	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	**0.14**	mg/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BHA0759 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS2 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BHA0759-BLK1)					Prepared: 29-Jan-2019 Analyzed: 29-Jan-2019 17:37						
Arsenic, Dissolved	75a	ND	0.000200	mg/L							U
LCS (BHA0759-BS1)					Prepared: 29-Jan-2019 Analyzed: 29-Jan-2019 17:42						
Arsenic, Dissolved	75a	0.0247	0.000200	mg/L	0.0250		98.9	80-120			
Duplicate (BHA0759-DUP1)		**Source: 19A0223-01**			Prepared: 29-Jan-2019 Analyzed: 29-Jan-2019 18:15						
Arsenic, Dissolved	75a	0.00129	0.000200	mg/L		0.00127			1.09	20	
Matrix Spike (BHA0759-MS1)		**Source: 19A0223-01**			Prepared: 29-Jan-2019 Analyzed: 29-Jan-2019 18:19						
Arsenic, Dissolved	75a	0.0260	0.000200	mg/L	0.0250	0.00127	98.9	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

Wet Chemistry - Quality Control

Batch BHA0454 - No Prep Wet Chem

Instrument: DX500 Analyst: KOTT

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BHA0454-BLK1)				Prepared: 17-Jan-2019 Analyzed: 17-Jan-2019 19:10							
Nitrate-N	ND	0.100	0.100	mg/L							U
Nitrite-N	ND	0.100	0.100	mg/L							U
Orthophosphorus	ND	0.10	0.10	mg/L							U
LCS (BHA0454-BS1)				Prepared: 17-Jan-2019 Analyzed: 17-Jan-2019 19:27							
Nitrate-N	1.55	0.100	0.100	mg/L	1.50		103	90-110			
Nitrite-N	1.51	0.100	0.100	mg/L	1.50		100	90-110			
Orthophosphorus	1.55	0.10	0.10	mg/L	1.50		103	90-110			
Duplicate (BHA0454-DUP1)		**Source: 19A0223-01**		Prepared: 17-Jan-2019 Analyzed: 17-Jan-2019 14:58							
Nitrate-N	0.330	0.100	0.100	mg/L		0.331			0.30	20	
Nitrite-N	ND	0.100	0.100	mg/L		ND					U
Orthophosphorus	ND	0.10	0.10	mg/L		ND					U
Matrix Spike (BHA0454-MS1)		**Source: 19A0223-01**		Prepared: 17-Jan-2019 Analyzed: 17-Jan-2019 15:15							
Nitrate-N	2.41	0.100	0.100	mg/L	2.00	0.331	104	75-125			
Nitrite-N	2.06	0.100	0.100	mg/L	2.00	ND	103	75-125			
Orthophosphorus	1.86	0.10	0.10	mg/L	2.00	ND	93.2	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

Certified Analyses included in this Report

Analyte	Certifications
EPA 200.8 UCT-KED in Water	
Arsenic-75a	NELAP,WADOE,WA-DW,DoD-ELAP
EPA 300.0 in Water	
Nitrate-N	DoD-ELAP,WADOE,WA-DW,NELAP
Nitrite-N	DoD-ELAP,WADOE,WA-DW,NELAP
Orthophosphorus	DoD-ELAP,WADOE,WA-DW,NELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	02/07/2019
CALAP	California Department of Public Health CAELAP	2748	06/30/2019
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	01/01/2021
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-011	05/12/2019
WADOE	WA Dept of Ecology	C558	06/30/2019
WA-DW	Ecology - Drinking Water	C558	06/30/2019

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 28006013 - 1Q Sampling	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	31-Jan-2019 15:37

Notes and Definitions

D	The reported value is from a dilution
J	Estimated concentration value detected below the reporting limit.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

estAmerica Denver
55 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Denver #280

Chain of Custody Record

Cooler 1/3

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Na Hyung Choi	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-23414-6845.1
Client Contact: Meilani Lanier-Kamaha'o	Phone: 206-443-5408	E-Mail: betsy.sara@testamericainc.com		Page: 1/1
Company: Aspect Consulting, LLC				Job #: 160423

Address: 350 Madison Ave N	Due Date Requested:
City: Bainbridge Island	TAT Requested (days):
State, Zip: WA, 98110	
Phone:	PO #: Purchase Order not required
Email: mlkamahao@aspectconsulting.com	WO #:
Project Name: Hansville Landfill	Project #:skip sites/events 28006013 - 1Q Sampling
Site: Washington	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C SIM - Vinyl Chloride (TA Buffalo)	Dissolved Metals	Ammonia/TOC	Alks/Cl/SO4	Ortho-phosphate (field filtered) - Direct sub to ARI	Dissolved Arsenice (Direct sub to ARI)	8260C - Full Scan VOA (TA Buffalo)	Nitrate/Nitrite (IC) - Direct sub to ARI	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	A	D	S	N	N	D	A	N	X	
MW-7-011619	1/16/19	1230		W	Y		✓	✓	✓	✓						
MW-5-011619		1425					✓	✓	✓	✓						
SW-1-011619		0915					✓	✓	✓	✓						Diss As,NO3,NO2,o-phos subbed direct to ARI
MW-12I-011619		1425					✓	✓	✓	✓						Run only 1 trip blank
SW-4-011619		1030					✓	✓	✓	✓						
MW-13D-011619		1540					✓	✓	✓	✓						
SW-6-011619		1130					✓	✓	✓	✓						
SW-7-011619		1220					✓	✓	✓	✓						
MW-14-011619		1605					✓	✓	✓	✓						
MW-6-011619		1200					✓	✓	✓	✓						
MW20DD-011619	↓	—		↓	↓		✓	✓	✓	✓						

280-119289 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Nathan	Date/Time: 10:30 1/17/2019	Company: Aspect	Received by:	Date/Time: 1/18/19 0915	Company: FedEx
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 0.4, 0.6, 0.1, +1.0, IR5, Xfer by FDP 1-18-19

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-469586.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: betsy.sara@testamericainc.com	State of Origin: Washington	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 280-119289-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 1/25/2019			
City: Amherst	TAT Requested (days):			
State, Zip: NY, 14228-2298				
Phone: 716-691-2600(Tel) 716-691-7991(Fax)	PO #:			
Email:	WO #:			
Project Name: Hansville Landfill	Project #: 28006013			
Site: Hansville	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C_SIM/5030C (MOD) Local Method	8260C/5030C (MOD) Appendix II Volatiles	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-7-011619 (280-119289-1)	1/16/19	12:30 Pacific		Water			X	X	6	
MW-5-011619 (280-119289-2)	1/16/19	14:25 Pacific		Water			X	X	6	
SW-1-011619 (280-119289-3)	1/16/19	09:15 Pacific		Water			X	X	6	
MW-12I-011619 (280-119289-4)	1/16/19	14:25 Pacific		Water			X	X	6	
SW-4-011619 (280-119289-5)	1/16/19	10:30 Pacific		Water			X	X	6	
MW-13D-011619 (280-119289-6)	1/16/19	15:40 Pacific		Water			X	X	6	
SW-6-011619 (280-119289-7)	1/16/19	11:30 Pacific		Water			X	X	6	
SW-7-011619 (280-119289-8)	1/16/19	12:20 Pacific		Water			X	X	6	
MW-14-011619 (280-119289-9)	1/16/19	16:05 Pacific		Water			X	X	6	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Laura Castro	1-21-19 1217	TAL Den	Annikow Cikolb	01/22/19 0945	T/T
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.0 #1 ICE

Ver: 09/20/2016

01/31/2019

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-469586.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: betsy.sara@testamericainc.com	State of Origin: Washington	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 280-119289-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 1/25/2019			
City: Amherst	TAT Requested (days):			
State, Zip: NY, 14228-2298				
Phone: 716-691-2600(Tel) 716-691-7991(Fax)	PO #:			
Email:	WO #:			
Project Name: Hansville Landfill	Project #: 28006013			
Site: Hansville	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C_SIM/5030C (MOD) Local Method	8260C/5030C (MOD) Appendix II Volatiles	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-6-011619 (280-119289-10)	1/16/19	12:00 Pacific		Water			X	X	6	
MW-20DD-011619 (280-119289-11)	1/16/19	Pacific		Water			X	X	6	
TRIP BLANK (280-119289-12)	1/16/19	Pacific		Water			X	X	9	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Laura Castro	1-21-19 1217	TAL Den	Chinkow Cikolb	01/22/19 0945	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.0/#1 ICE

Ver: 09/20/2016

01/31/2019

Login Sample Receipt Checklist

Client: Aspect Consulting

Job Number: 280-119289-1

Login Number: 119289
List Number: 1
Creator: Quint, Jessica A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	Refer to job narrative for details
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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Aspect Consulting

Job Number: 280-119289-1

Login Number: 119289
List Number: 2
Creator: Kinecki, Kenneth P

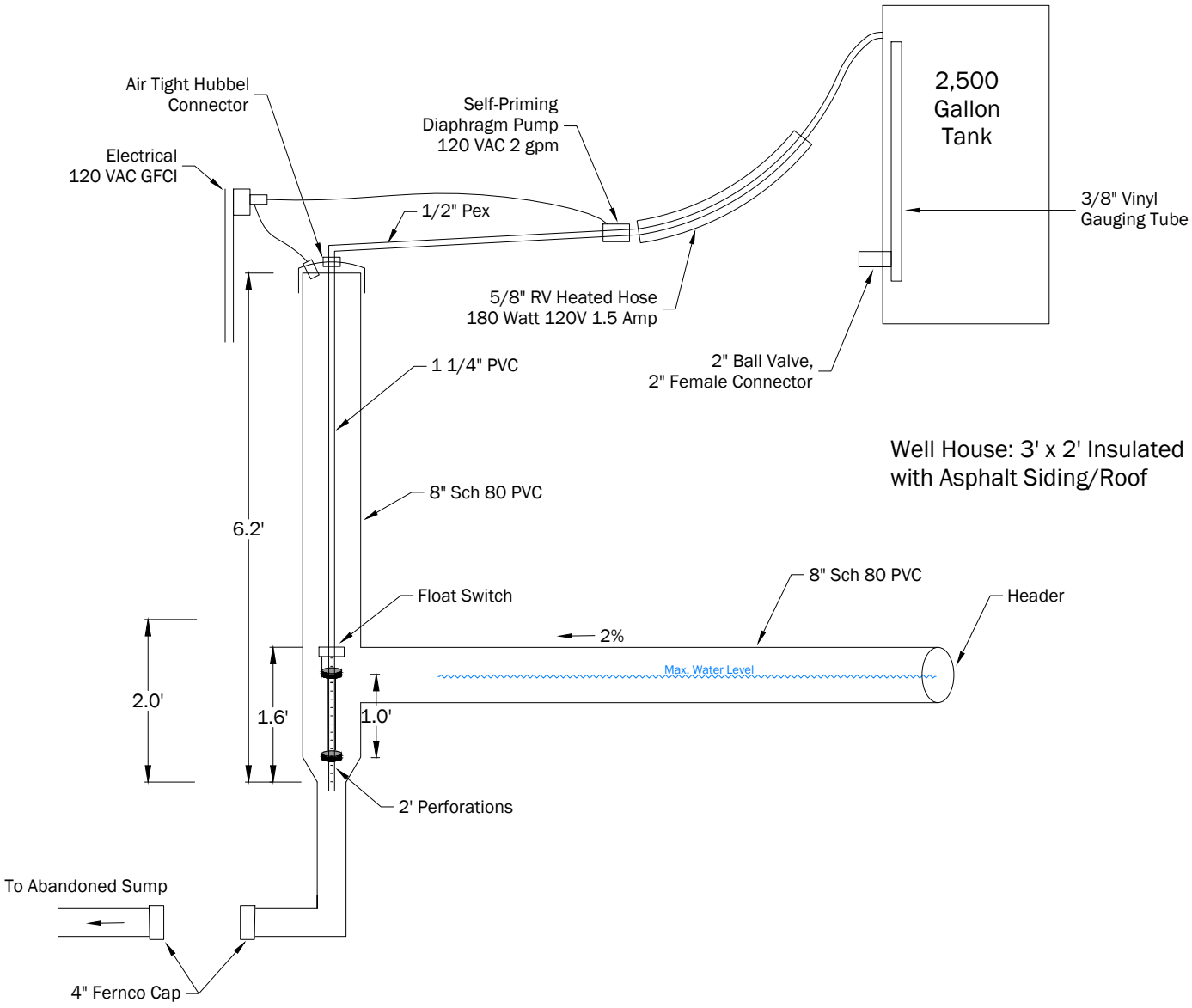
List Source: TestAmerica Buffalo
List Creation: 01/22/19 05:34 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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	1.8 C
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?	True	
There are no discrepancies between the sample IDs on the containers 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	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

ATTACHMENT E

Condensate System Improvements
As-Built and Photographs

FIGURE



Not to Scale

Process Design for Alternative Condensate Management System

Hansville Landfill, Kitsap County
Hansville, Washington

Aspect CONSULTING	Mar-2019	BY: RRH/SCC	FIGURE NO. 1
	PROJECT NO. 160423	REVISED BY: -	

Photograph 1. Electrical connection at existing flare control panel

Photograph 2. Condensate system layout within flare compound

Photograph 3. Condensate sump wellhead detail