August 28, 2020

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

Re: Second Quarter 2020 Environmental Monitoring Report, Hansville Landfill, Kitsap County, Washington
Project No. 160423-004-05.1

Dear Alexis:

This quarterly report summarizes the results of environmental monitoring conducted at the Hansville Landfill (Site) during the second quarter of 2020, 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 second quarter of 2020 were consistent with historical trends showing improvements in protection of human health and the environment. 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 – Second Quarter 2020

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 second quarter 2020 is provided below:

- On April 8, 2020, Aspect completed groundwater and surface water sampling in accordance with the Compliance Monitoring Plan (SCS, 2011). In addition, Aspect monitored landfill gas concentrations at the blower and inspected the blower system for proper operation.

- On May 21, 2020, Aspect monitored landfill gas concentrations at the blower and inspected the blower system for proper operation.

- On June 25, 2020, Aspect conducted landfill gas monitoring in accordance with the Compliance Monitoring Plan (SCS, 2011) and inspected the blower system for proper operation. Aspect monitored landfill gas concentrations at the blower, extraction wells, and at compliance monitoring probes. Extraction well flow rates were adjusted to ensure capture of landfill gasses, as necessary.

Deviations from the Compliance Monitoring Plan

There were no deviations from the Compliance Monitoring Plan (SCS, 2011) during the second quarter 2020 environmental 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

Aspect monitored landfill gas concentrations at the blower on April 8, 2020, and on May 21, 2020. Aspect monitored landfill gas concentrations at the blower, extraction wells, and compliance monitoring probes on June 25, 2020.

Landfill gas concentrations were measured with a calibrated 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 June 25, 2020, observed conditions remained within the normal range. Methane and carbon dioxide concentrations at the blower inlet were approximately 2.3 percent by volume and 9.5 percent by volume, respectively. The oxygen concentration was approximately 10.3 percent by volume. Flow rates were approximately 66 standard cubic feet per minute (scfm) during the second quarter. Wellfield optimization will continue to focus on maximizing methane and carbon dioxide collection rates. During the second quarter of 2020, the condensate collection rate was approximately 2 gallons per day. The 2,000-gallon condensate storage tank contained approximately 925 gallons at the end of the second quarter of 2020.

Based on the consistent performance of the landfill gas collection system and in consultation with the County and WMW, landfill gas wellfield monitoring and tuning is conducted on a quarterly basis, during the third month of the quarter (March, June, September, December). Monthly site visits include monitoring the flare inlet and condensate management system and visual inspection of the wellfield. If flare inlet readings are outside the normal range, then troubleshooting measures may include wellfield monitoring and tuning. Any damaged wellheads or wellheads with sagging flexible hose will be repaired to maintain optimal landfill gas system performance.

Explosive Gas Control

Methane was not detected in any of the compliance gas probes during the compliance monitoring event on June 25, 2020. Locations of on-property compliance probes GP-1, GP-2S, GP-2M, GP-2D, GP-3, GP-4, GP-5, and GP-6 are shown on Figure A-1, and the location of off-property compliance probe GP-7 is shown on Figure B-1. Carbon dioxide concentrations ranged from 0.9 to 2.9 percent by volume, reflecting natural conditions.

Summary of Groundwater and Surface Water Conditions

This section addresses groundwater and surface water conditions based on the monitoring event on April 8, 2020. Samples were collected from six groundwater monitoring wells and from four surface water monitoring locations (see Figure B-1) for laboratory analysis.

Groundwater Flow

Groundwater flow conditions during the second quarter of 2020 were consistent with those observed during previous monitoring events. Groundwater surface elevations were calculated using water levels measured April 8, 2020 (see Table B-1). Groundwater elevations ranged from 238.3 feet North American Vertical Datum of 1988 (NAVD88) in MW-12I to 266.8 feet NAVD88 in the upgradient, background monitoring well MW-5. The direction of groundwater flow at the Site was to the southwest. Groundwater gradients ranged from 0.007 feet over feet (feet/feet) in the upgradient areas, to 0.014 feet/feet further downgradient, with the gradient steepening near the groundwater discharge area (Figure B-1).

Groundwater and Surface Water Quality

Groundwater quality results from the second quarter of 2020 are presented in Table B-2, including field parameters, conventional parameters, dissolved metals, and volatile organic compounds. During the reporting period, dissolved 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 (0.0143 mg/L) and was essentially equal to the Site-specific cleanup level at MW-13D (0.00501 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 (0.073 µg/L) and MW-12I (0.085 µg/L).

Surface water quality results from the second quarter 2020 are presented in Table B-3, including field parameters, conventional parameters, dissolved metals, and volatile organic compounds. During the reporting period, dissolved arsenic and dissolved manganese concentrations in surface water were below the Site-specific cleanup level of 0.005 mg/L and 2.24 mg/L, respectively. 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. Historically, dissolved arsenic concentrations at MW-13D were below the cleanup level and appear to have stabilized near the cleanup level. Dissolved arsenic concentrations at MW-14 have historically exceeded the Site-specific cleanup level and have been decreasing steadily 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. Vinyl chloride concentrations at MW-14 were below the Site-specific cleanup level during the second quarter of 2020.

Figure C-3 shows time-series plots of historical and 10-year projected groundwater concentrations for MW-6 (vinyl chloride), MW-12I (vinyl chloride), MW-14 (vinyl chloride and arsenic), and MW-13D (arsenic). The projected restoration time frames for vinyl chloride concentrations range from approximately 2 to 10 years. In the unlikely event that the slowly increasing trend for dissolved arsenic at MW-13D continues, concentrations may regularly exceed the cleanup level in a couple years, but will remain below the Puget Sound regional background of 8 µg/L (Ecology, 2016) for more than 10 years. The projected restoration time frame for arsenic in groundwater at MW-14 is more than 10 years. Maintaining landfill gas collection performance may achieve groundwater cleanup levels within a shorter time frame than shown on Figure C-3.

Statistical Evaluation of Groundwater Trends

Statistically significant decreasing trends in dissolved arsenic and/or vinyl chloride concentrations were identified at monitoring wells MW-6, MW-12I, and MW-14. We attribute the decreasing trends to the cleanup actions at the Site, and project concentrations will continue to decrease to Site-specific cleanup levels as described above and shown in Figure C-3.

A statistically significant increasing trend in dissolved arsenic concentrations was identified at monitoring well MW-13D. Dissolved arsenic concentrations recently exceeded the Site-specific cleanup levels and remain below the regional natural background value provided by Ecology (Ecology, 2016) as shown in Figure C-3. The statistical trend analysis for dissolved arsenic concentrations in MW-13D was first conducted as part of the 2019 Annual Environmental Monitoring Report (Aspect, 2020) which includes an evaluation of potential sources. Based on the data available, it is likely that arsenic concentrations since 2007 reflect natural variations or off-Site influences, as opposed to effects from the Hansville Landfill Site. Dissolved arsenic concentrations in MW-13D and other locations will continue to be closely monitored and evaluated.

Table C-1 provides results of statistical analysis for arsenic and vinyl chloride for monitoring wells MW-6, MW-12I, MW-13D, 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). A negative Sen's Slope indicates a decreasing trend in concentrations while a positive Sen's Slope indicates an increasing trend.[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

[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.

wells show lower dissolved oxygen concentrations than the upgradient well (MW-5), which is likely caused by landfill gas coming in contact with groundwater directly beneath the landfill. Increasing the rate of landfill gas collection may prevent geochemically-mediated effects on groundwater.

References

Aspect Consulting, LLC, 2020, 2019 Annual Environmental Monitoring Report, Hansville Landfill, Kitsap County, Washington, February 28, 2020.

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.

Washington State Department of Ecology (Ecology), 2016, Natural Background Groundwater Arsenic Concentrations in Washington State, Ecology Publication No. 14-09-044, March 2016.

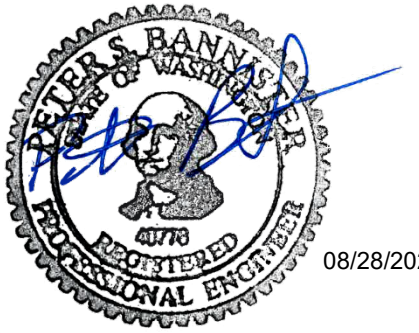
Limitations

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



08/28/2020

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Attachments:
A – Landfill Gas Data
B – Water Quality Results
C – Groundwater Statistics and Time-Series Plots
D – Field Forms and Laboratory Reports

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

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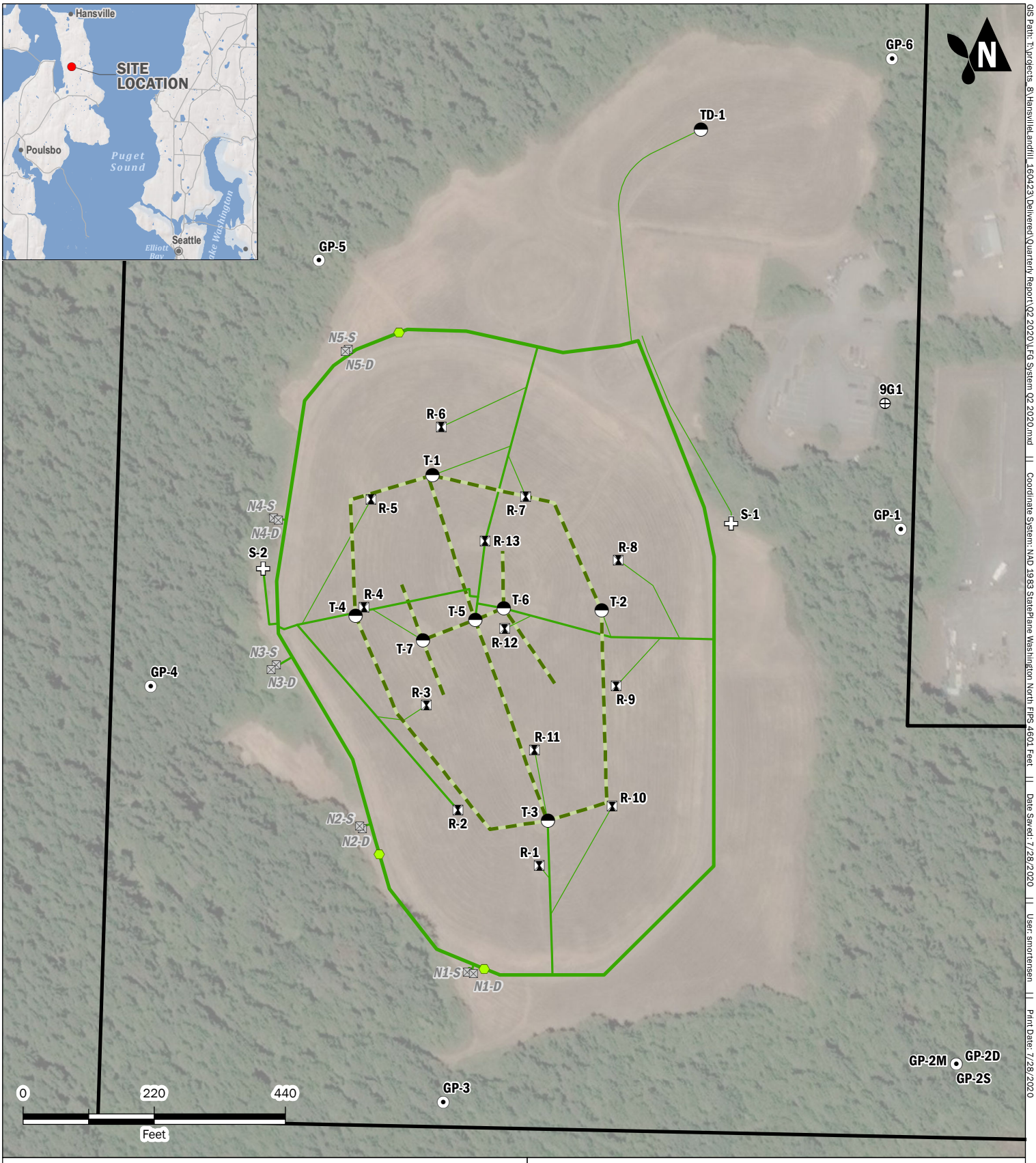
ATTACHMENT A

Landfill Gas Data



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Exploration

- Condensate Sump
- Gas Detection Probe
- Gas Extraction Well (Native Soil Completion) *Disconnected in October, 2019*
- 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

Second Quarter 2020 Environmental Monitoring Report
Hansville Landfill
Kitsap County, Washington

Aspect Consulting	JUL - 2020	BY: MLK / RAP	FIGURE NO. A-1
	PROJECT NO. 160423	REVISED BY: SBM	

Table A-1. Landfill Gas Data, Second Quarter, 2020

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	6/25/20 8:25	2.3	9.5	10.3	77.9	-3.94	-3.94	66.8	66.8	66.2	66.2
Blower Outlet	HANSBLOT	6/25/20 8:28	2.3	9.5	10.3	77.9	N/A	N/A	N/A	N/A	N/A	N/A
Extraction Well 001	HANSR001	6/25/20 9:49	8.3	14.5	0	77.2	-0.81	-0.81	74.5	74.6	0.8	0.3
Extraction Well 002	HANSR002	6/25/20 9:44	1.9	14.1	4.3	79.7	N/A	N/A	N/A	N/A	N/A	N/A
Extraction Well 003	HANSR003	6/25/20 9:39	9.1	13.6	0	77.3	-1.01	-1.01	67.3	67.4	0.9	0.9
Extraction Well 004	HANSR004	6/25/20 9:26	3.9	17.6	0.1	78.4	-1.51	-1.51	72.8	72.8	1.4	1.7
Extraction Well 005	HANSR005	6/25/20 9:21	5	18.5	0.2	76.3	-1.14	-1.14	75	75	2.3	2
Extraction Well 006	HANSR006	6/25/20 9:09	3.4	17.1	2.7	76.8	-1.29	-1.29	85.3	85.4	2.6	2.8
Extraction Well 007	HANSR007	6/25/20 9:05	0.4	14	3.3	82.3	-0.85	-0.85	65.6	65.5	2.2	2.2
Extraction Well 008	HANSR008	6/25/20 10:15	6	17.6	0	76.4	-0.67	-0.67	67.1	67	0	0.9
Extraction Well 009	HANSR009	6/25/20 10:05	2.1	15.1	1.7	81.1	N/A	N/A	N/A	N/A	N/A	N/A
Extraction Well 010	HANSR010	6/25/20 10:01	6.5	10.9	3	79.6	-0.72	-0.72	67.7	67.7	0.6	0.3
Extraction Well 011	HANSR011	6/25/20 9:56	3.3	8.3	1.2	87.2	-0.86	-0.86	73.3	73.5	0.3	1.1
Extraction Well 012	HANSR012	6/25/20 8:52	7.8	4.1	2.5	85.6	-0.83	-0.83	69.6	69.6	0	0
Extraction Well 013	HANSR013	6/25/20 9:01	4.2	13.9	1.5	80.4	N/A	N/A	N/A	N/A	N/A	N/A
Trench Collector TD-1	HANSTD01	6/25/20 8:38	1.9	21.1	0.2	76.8	-0.11	-0.11	66.1	66.1	12.2	12
Trench Collector TR-1	HANSTR01	6/25/20 9:15	0.1	16.4	2.1	81.4	-0.98	-0.98	71.5	71.5	2.2	2.2
Trench Collector TR-2	HANSTR02	6/25/20 10:09	7.7	17.8	0.1	74.4	N/A	N/A	N/A	N/A	N/A	N/A
Trench Collector TR-3	HANSTR03	6/25/20 9:52	0	0.1	20.4	79.5	N/A	N/A	N/A	N/A	N/A	N/A
Trench Collector TR-4	HANSTR04	6/25/20 9:30	1.8	19	0	79.2	-0.79	-0.79	75	75.3	2.4	2.2
Trench Collector TR-5	HANSTR05	6/25/20 8:57	0	0.1	20.5	79.4	N/A	N/A	N/A	N/A	N/A	N/A
Trench Collector TR-6	HANSTR06	6/25/20 8:46	10	17.3	0.2	72.5	N/A	N/A	N/A	N/A	N/A	N/A
Trench Collector TR-7	HANSTR07	6/25/20 9:35	8.9	17.5	0.1	73.5	-0.84	-0.84	66.2	66.2	2.9	2.5
Gas Probe 1	HANSGP01	6/25/20 1:40	0.0	1.3	19.5	NA	0.02	NA	NA	N/A	N/A	N/A
Gas Probe 2 Shallow	HANSGP2S	6/25/20 12:47	0.0	0.9	20.0	NA	0.01	NA	NA	N/A	N/A	N/A
Gas Probe 2 Middle	HANSGP2M	6/25/20 12:52	0.0	1.1	19.1	NA	0.0	NA	NA	N/A	N/A	N/A
Gas Probe 2 Deep	HANSGP2D	6/25/20 12:58	0.0	1.2	18.0	NA	0.0	NA	NA	N/A	N/A	N/A
Gas Probe 3	HANSGP03	6/25/20 12:30	0.0	1.2	19.8	NA	0.08	NA	NA	N/A	N/A	N/A
Gas Probe 4	HANSGP04	6/25/20 1:15	0.0	1.7	19.1	NA	-0.45	NA	NA	N/A	N/A	N/A
Gas Probe 5	HANSGP05	6/25/20 1:30	0.0	1.2	19.6	NA	0.0	NA	NA	N/A	N/A	N/A
Gas Probe 6	HANSGP06	6/25/20 1:50	0.0	3.7	17.0	NA	-0.01	NA	NA	N/A	N/A	N/A
Gas Probe 7	HANSGP07	6/25/20 12:08	0.0	2.9	18.0	NA	0.07	NA	NA	N/A	N/A	N/A

Notes

Static pressures and flow rates were inadvertently not recorded on June 25, 2020. Values reported represent averages of other monitoring events.

Flow rates measured using orifice plates (where installed).

N/A = indicates parameter not measured.

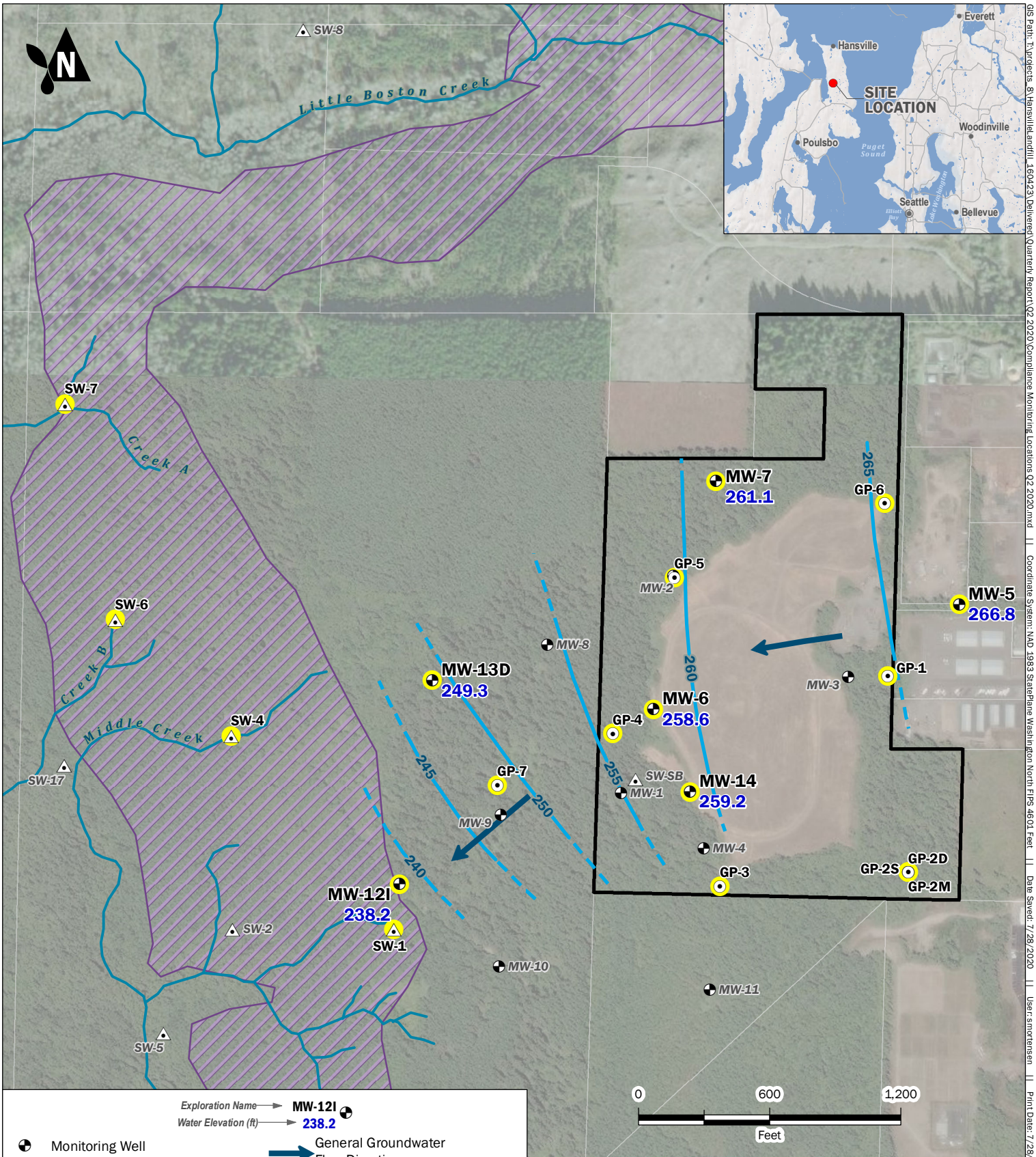
inches H2O = inches water column

degrees F = degrees Fahrenheit

(--) = indicates location was not monitored and has been decommissioned due to little to no landfill gas collection

ATTACHMENT B

Water Quality Results



Exploration Name → MW-12I
Water Elevation (ft) → 238.2

- Monitoring Well
- Gas Detection Probe
- Surface Water Station
- Compliance Monitoring Location
- Inferred Water Elevation Contour (ft, dashed where inferred) *Measured April 8rd, 2020*
- 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

Second Quarter 2020 Environmental Monitoring Report
Hansville Landfill
Kitsap County, Washington

Aspect Consulting	JUL-2020	BY: MLK / RAP	FIGURE NO. B-1
	PROJECT NO. 160423	REVISED BY: WEG / SBM	

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	100.14	266.8
MW-6	332.0	332.7	260	245	74.14	258.6
MW-7	344.3	346.0	259	244	84.95	261.1
MW-12I	245.6	248.1	217	207	9.93	238.2
MW-13D	258.1	260.4	205	195	11.12	249.3
MW-14	338.6	341.1	262	247	81.91	259.2

Notes

Depths to water collected April 8, 2020.

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

ft = feet

Table B-2. Groundwater Quality Results

Project No. 160423, Hansville Landfill, Hansville, Washington

		Location	MW-5	MW-6	MW-7	MW-12I	MW-13D	MW-14
		Date	04/08/2020	04/08/2020	04/08/2020	04/08/2020	04/08/2020	04/08/2020
Parameter	**Units**	**Site Cleanup Level**						
Field Parameters								
Dissolved Oxygen	mg/L		**7.68**	**0.39**	**0.68**	**1.4**	**1.81**	**0.63**
pH	pH units		**7.09**	**6.95**	**6.35**	**7.02**	**7.31**	**6.87**
Redox	mV		**80.1**	**82**	**87.9**	**61.9**	**82.4**	**89.8**
Specific Conductivity	uS/cm		**155.8**	**331.8**	**203**	**130**	**167.5**	**182**
Temperature	deg C		**10.1**	**12.5**	**9.3**	**10.1**	**10.5**	**11.1**
Turbidity	NTU		**0.65**	**0.3**	**0.33**	**0.18**	**0.61**	**0.34**
Conventionals								
Alkalinity	mg/L		**75**	**180**	**130**	**77**	**82**	**97**
Ammonia (as N)	mg/L		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bicarbonate	mg/L		**75**	**180**	**130**	**77**	**82**	**97**
Carbonate	mg/L		10 U	10 U	10 U	10 U	10 U	10 U
Chloride	mg/L		3 U	**3.6**	3 U	3 U	**4.8**	**5.3**
Nitrate (as N)	mg/L		**2.49**	**0.357**	**0.185**	0.100 U	0.100 U	0.100 U
Nitrite (as N)	mg/L		0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Orthophosphate (as P)	mg/L		0.10 U	0.10 R	0.10 U	0.10 U	0.10 R	0.10 R
Sulfate	mg/L		**7**	**23**	5 U	5 U	**15**	**8.8**
Total Organic Carbon	mg/L		1 U	**1.4**	**1.9**	**2.5**	1 U	**2.1**
Dissolved Metals								
Arsenic	mg/L	0.005	**0.00183**	**0.00170**	**0.00125**	**0.00238**	**0.00501**	**0.0143**
Manganese	mg/L	2.24	**0.0018**	**0.4**	0.001 U	**0.03**	**0.0075**	**1**
Volatile Organic Compounds								
Vinyl Chloride	ug/L	0.025	0.02 U	**0.073**	0.02 U	**0.085**	0.02 U	**0.023**

Notes

Samples were collected on April 8, 2020.

Bold = Detected

Shaded = Exceeded Site Cleanup Level

U = Not detected at or above reporting limit

R = Rejected. Orthophosphate results R flagged due to hold time exceedance.

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, Washington

			Location	SW-1	SW-4	SW-6	SW-7
			Date	04/08/2020	04/08/2020	04/08/2020	04/08/2020
Parameter	**Units**	**Site Cleanup Level**					
Field Parameters							
Dissolved Oxygen	mg/L			**10.58**	**10.41**	**9.15**	**11.39**
pH	pH units			**7.25**	**7.61**	**6.67**	**7.32**
Redox	mV			**82.3**	**95.7**	**90.2**	**82.2**
Specific Conductivity	uS/cm			**157**	**314.7**	**111**	**125.9**
Temperature	deg C			**9**	**8.4**	**8.6**	**8.5**
Turbidity	NTU			**2.56**	**4.67**	**46.9**	**6.07**
Conventionals							
Alkalinity	mg/L			**76**	**150**	**58**	**60**
Ammonia (as N)	mg/L			0.03 U	0.03 U	**0.037**	**0.039**
Bicarbonate	mg/L			**76**	**150**	**58**	**60**
Carbonate	mg/L			10 U	10 U	10 U	10 U
Chloride	mg/L			**3.9**	**12**	**3.3**	**3.2**
Nitrate (as N)	mg/L			**1.81**	**1.19**	0.100 U	**1.16**
Nitrite (as N)	mg/L			0.100 U	0.100 U	0.100 U	0.100 U
Orthophosphate (as P)	mg/L			0.10 U	0.10 U	0.10 R	0.10 R
Sulfate	mg/L			**8.3**	**17**	5 U	**6.8**
Total Organic Carbon	mg/L			**1.7**	**7.6**	**19**	**8.9**
Dissolved Metals							
Arsenic	mg/L	0.005		**0.00161**	**0.00186**	**0.00297**	**0.00122**
Manganese	mg/L	2.24		0.001 U	**0.035**	**0.045**	**0.0019**
Volatile Organic Compounds							
Vinyl Chloride	ug/L	0.025		0.02 U	0.02 U	0.02 U	0.02 U

Notes

Samples were collected on April 8, 2020.

Bold = Detected

Shaded = Exceeded Site Cleanup Level

U = Not detected at or above reporting limit

R = Rejected. Orthophosphate results R flagged due to hold time exceedance.

mV = millivolts

µS/cm = microSiemens per centimeter

deg C = degrees Celcius

ATTACHMENT C

Groundwater Statistics and Time-Series Plots

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	Increasing	6.7	1.960	53	Yes	4.6E-07	0.00017
MW-14	Decreasing	-7.3	-1.96	53	Yes	-3.3E-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	-6.8	-1.96	54	Yes	-6.8E-05	-0.025
MW-7	--	--	--	--	--		--
MW-12I	Decreasing	-7.0	-1.96	54	Yes	-9.5E-05	-0.035
MW-13D	--	--	--	--	--		--
MW-14	Decreasing	-8.7	-1.96	54	Yes	-1.0E-04	-0.038

Notes

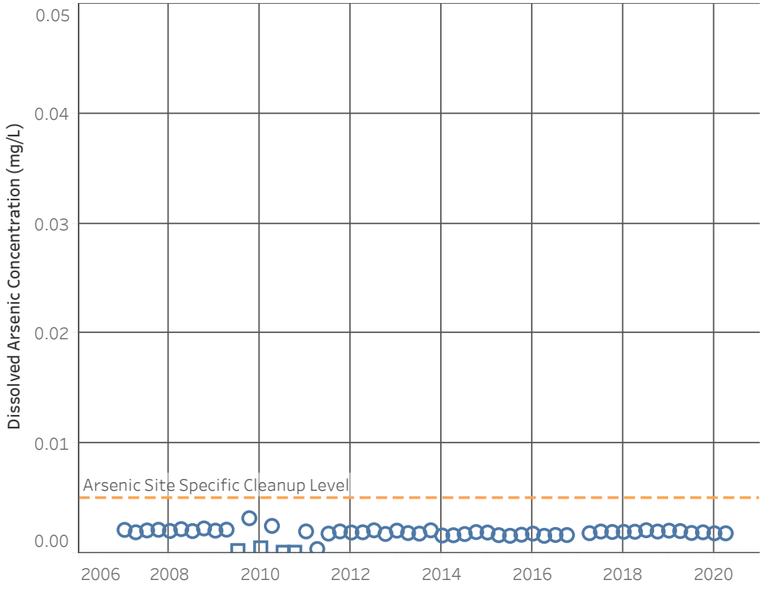
1 - The Statistical Trend indicates:
"Non-significant" if the magnitude of the Test Value is less than the Critical Value,
"Increasing" if the magnitude of the Test Value is greater than the Critical Value and the Sen's Slope is positive, or
"Decreasing" if the magnitude of the Test Value is greater 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.

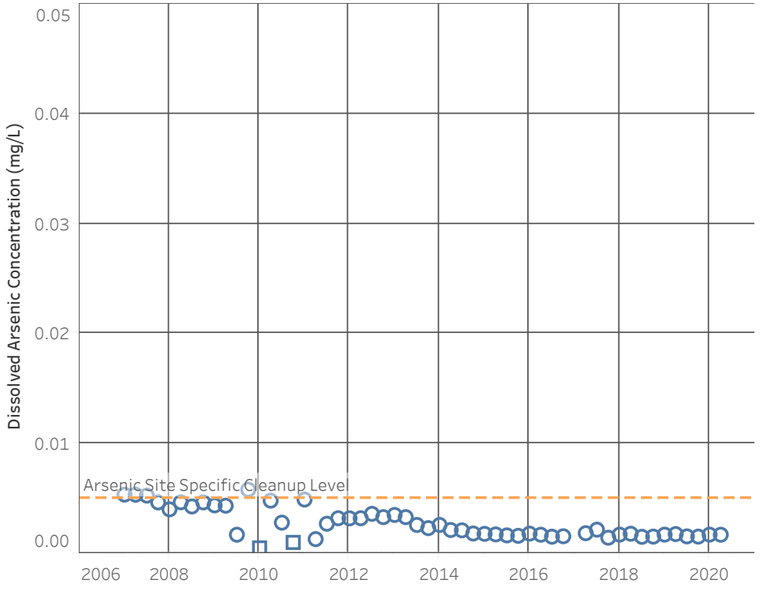
3 - "--" Indicates statistical analysis not conducted.

ug/L - micrograms per liter

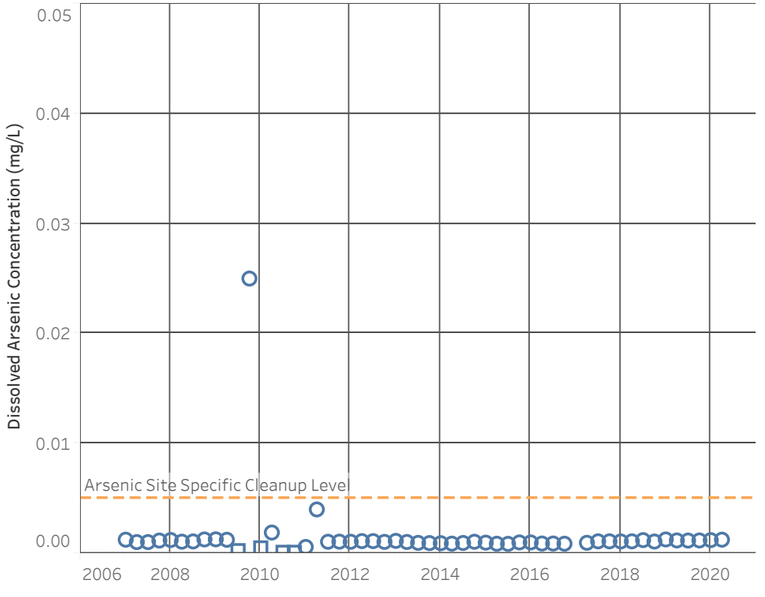
MW-5 (Background Well)



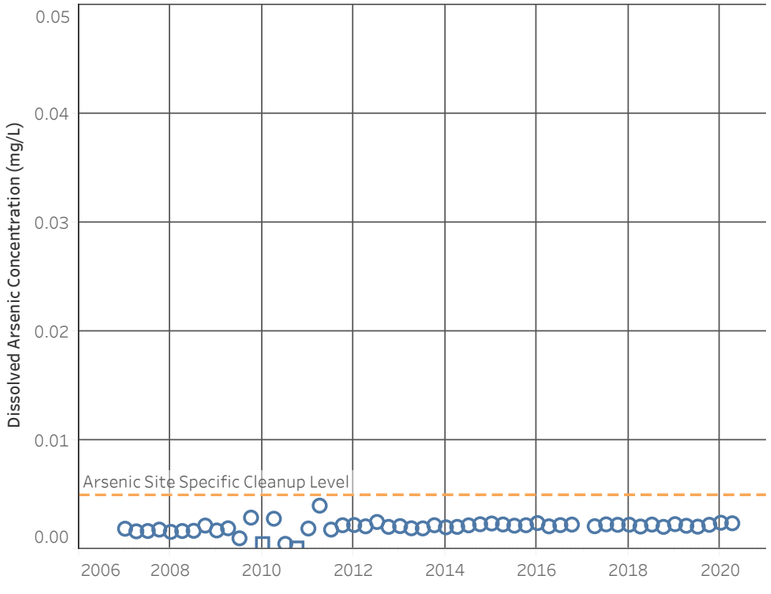
MW-6



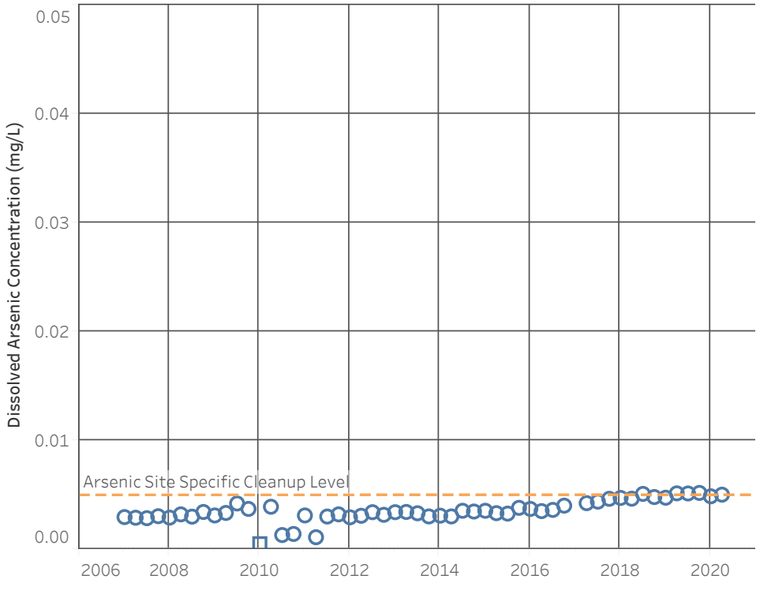
MW-7



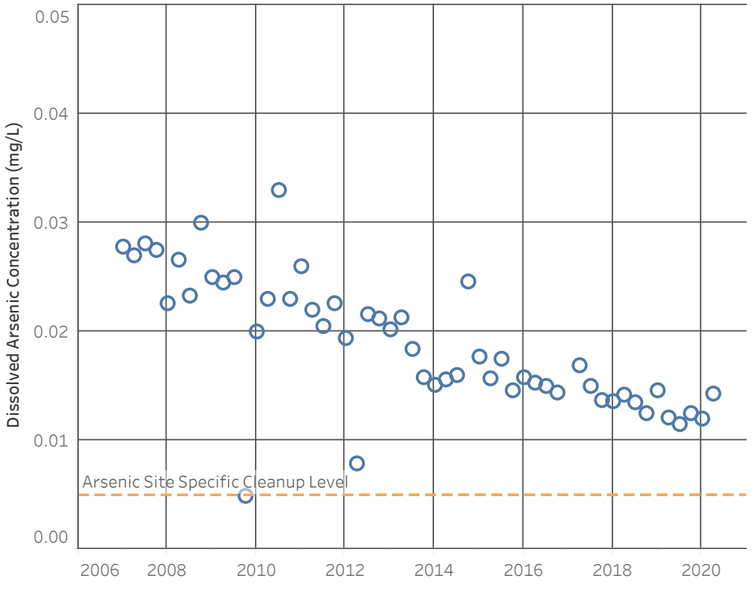
MW-12I



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

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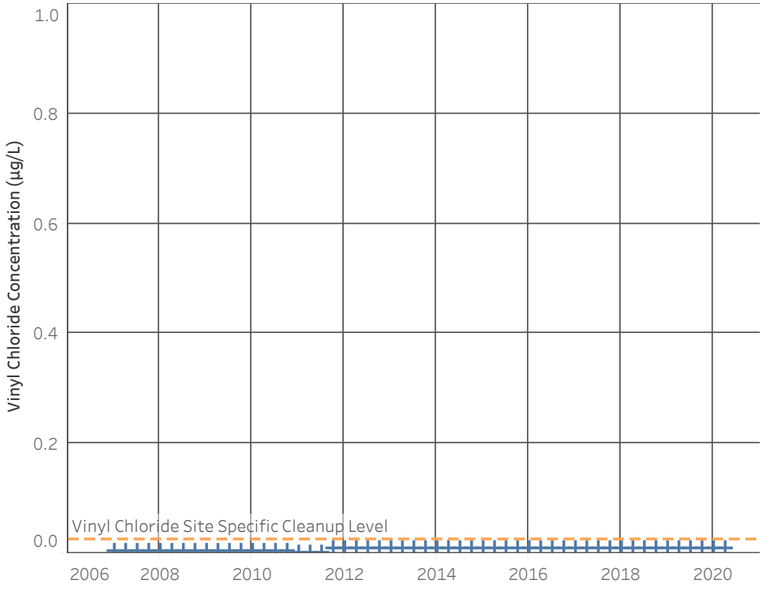
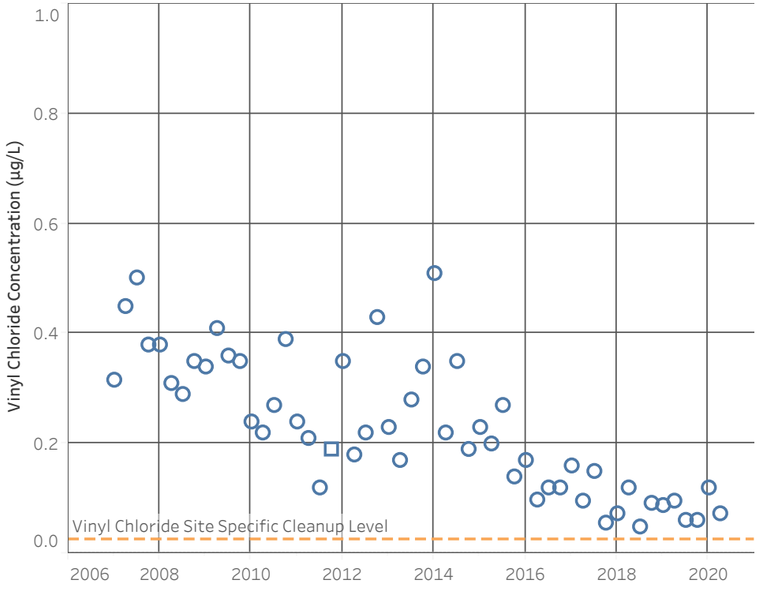
8/28/2020
Trend Plots (As)

Figure C-1 - Dissolved Arsenic Sampling Results
2020 Second Quarter Monitoring Report
Hansville Landfill
Kitsap County, WA

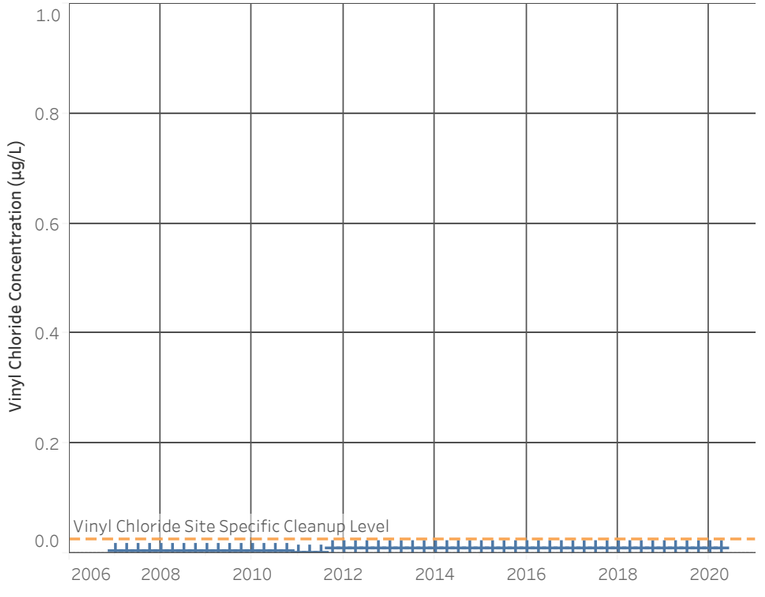
MW-5 (Background Well)



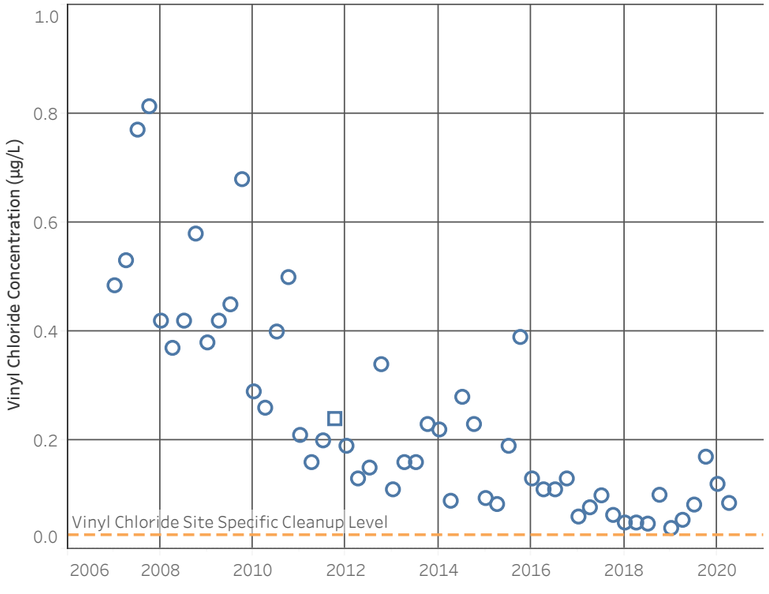
MW-6



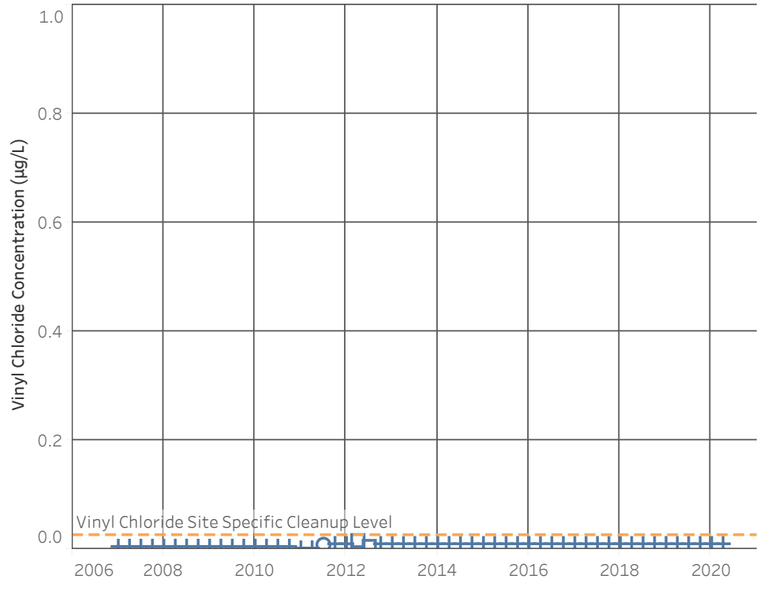
MW-7



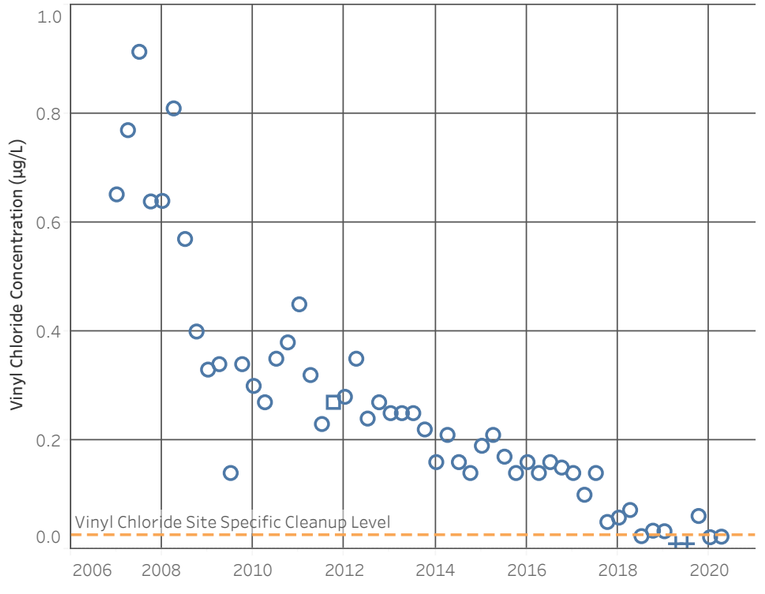
MW-12I



MW-13D



MW-14



Result Flags
Detected
J - Estimate
U - Non-Detect

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

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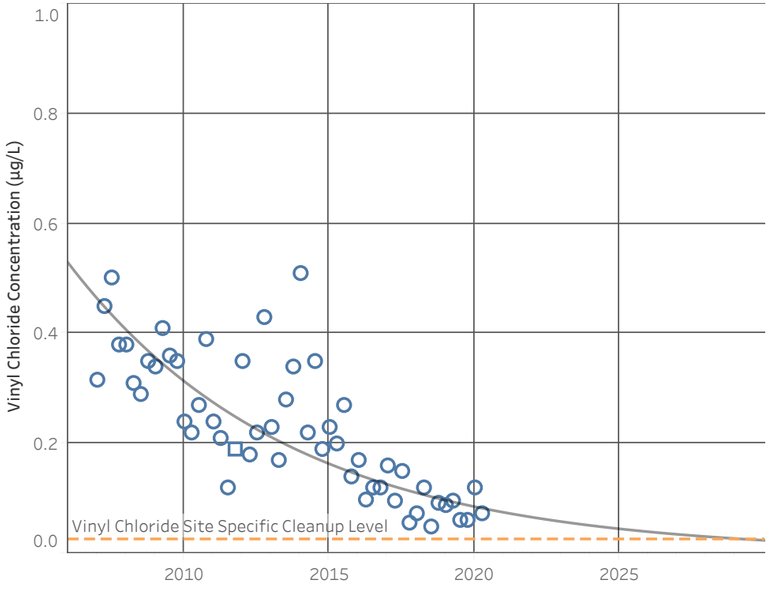
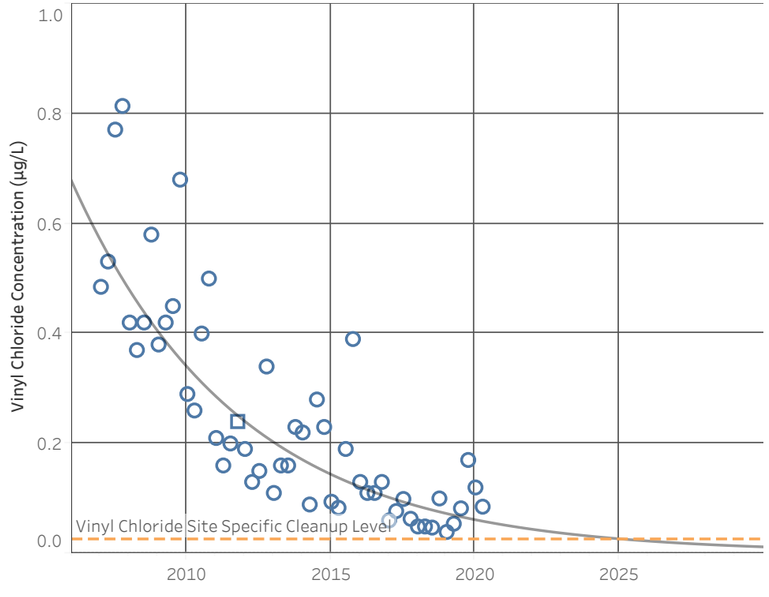
8/28/2020
Trend Plots (VC)

Figure C-2 - Vinyl Chloride Sampling Results
2020 Second Quarter Environmental Monitoring Report
Hansville Landfill
Kitsap County, WA

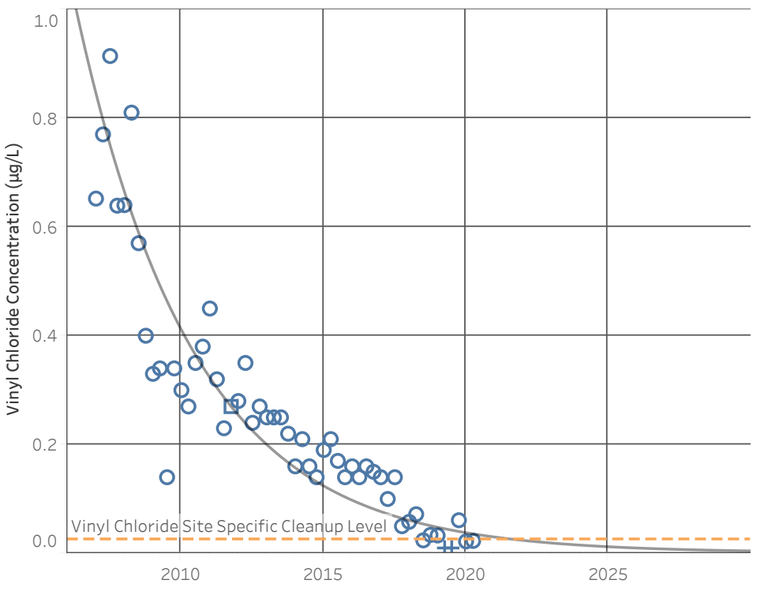
MW-6 Vinyl Chloride Trend



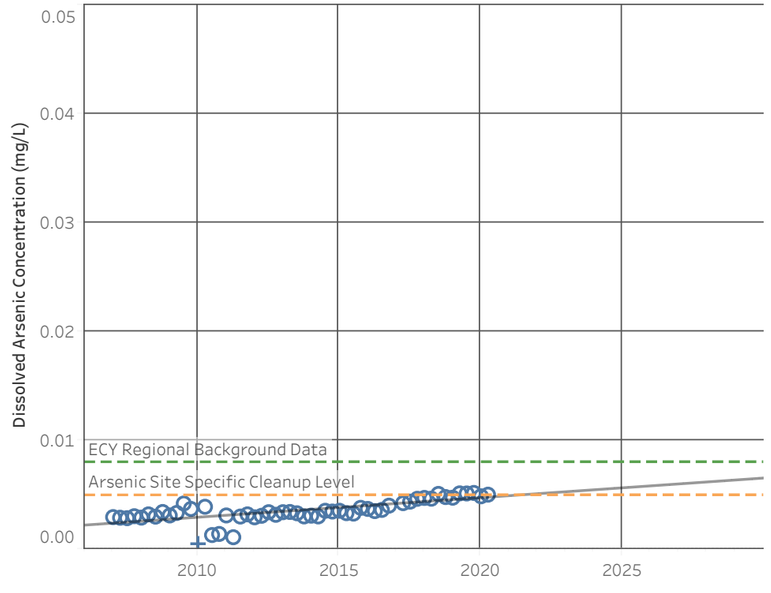
MW-12I Vinyl Chloride Trend



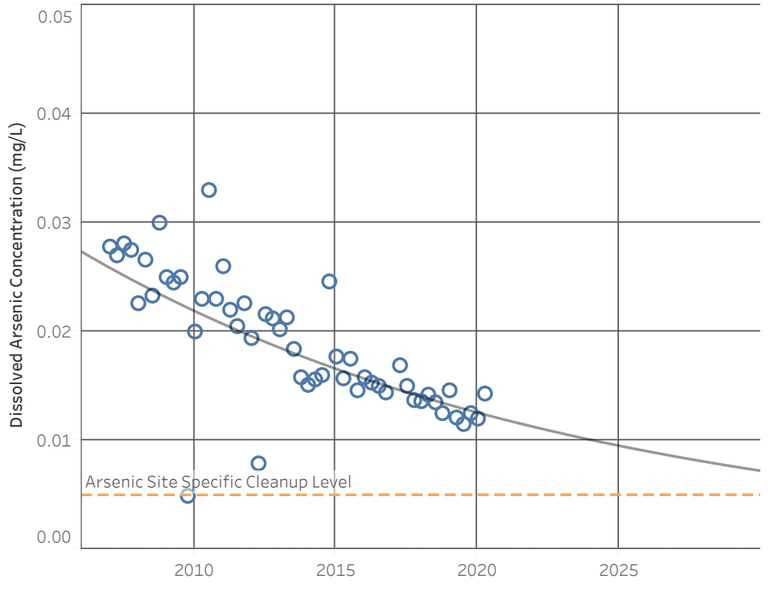
MW-14 Vinyl Chloride Trend



MW-13D Dissolved Arsenic 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

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8/28/2020
Trend Plots (VC)

Figure C-3 - 10 Year Attenuation Curves
2020 Second Quarter Environmental Monitoring Report
Hansville Landfill
Kitsap County, WA

ATTACHMENT D

Field Forms and Laboratory Reports

Aspect CONSULTING

Sample number MW-5-040820

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-5 Page: 1 of 1

Project Name: Hansville Landfill
Date: 4/8/2020
Sampled by: DWO
Measuring Point of Well: N TOC
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)

Project Number: 160423
Starting Water Level (ft TOC): 100.14
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): mid screen

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
0925	0	0.2	100.11							Start, Clear
0930			106.14	8.5	153.6	7.09	6.48	88.7	7.78	
0935			100.14	9.9	151.1	6.36	6.48	85.6	1.57	
0940			100.14	10.2	154.4	7.31	6.94	79.3	1.05	
0945			106.14	10.1	155.1	7.44	7.06	86.1	0.82	
0950			100.14	10.1	155.8	7.68	7.09	80.1	0.85	sample

Total Gallons Purged: 1.25
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
0955	40	VOA	3	N	HCl	clear	065	
↓	500	Amber	1	N	H2SO4	↓	↓	
	500	Poly	2	N	N			direct sub to ARI - x1
	500	Poly	2	Y	HNO3			direct sub to ARI - x1
↓	250	Poly	1	Y	N			direct sub to ARI

METHODS

Parameters measured with (instrument model & serial number) YSI: red Turbidimeter: white WLI: orblue/white
Purging Equipment: dedicated bladder pump OR peristaltic Decon Equipment: Alconox + water
Disposal of Discharged Water: on site
Observations/Comments:

Aspect CONSULTING

Sample number: MW-6-040820

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-6 **Page:** 1 of 1

Project Name: Hansville Landfill
Project Number: 160423
Date: 4/8/2020
Sampled by: DWO
Measuring Point of Well: N TOC
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)
Starting Water Level (ft TOC): 74.14
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): melsures

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
1432	0	0.2	74.14							Start, clear
1437			74.16	12.7	337.3	0.51	6.97	82.3	3.06	
1442			74.16	12.6	335.3	0.30	6.95	82.6	0.64	
1447			74.16	12.5	329.6	0.38	6.96	82.4	0.39	
1452			74.17	12.5	330.0	0.50	6.95	82.1	0.57	
1457			74.17	12.5	331.8	0.39	6.95	82.0	0.41	sample

Total Gallons Purged: 1.5
Total Casing Volumes Removed: /
Ending Water Level (ft TOC): 74.17
Ending Total Depth (ft TOC): /

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1500	40	VOA	3	N	HCl	clear	0.30	
↓	500	Amber	1	N	H2SO4	↓	↓	
↓	500	Poly	2	N	N	↓	↓	direct sub to ARI
↓	500	Poly	2	Y	HNO3	↓	↓	direct sub to ARI
↓	250	Poly	1	Y	N	↓	↓	direct sub to ARI

METHODS

Parameters measured with (instrument model & serial number) YSI: red Turbidimeter: white WLI: Blue/white
Purging Equipment: dedicated bladder pump OR peristaltic Decon Equipment: Alconox + water
Disposal of Discharged Water: on site
Observations/Comments:

Aspect CONSULTING

Sample number MW7-040820~~20~~

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-7 Page: 1 of 1

Project Name: Hansville Landfill
Project Number: 160423
Date: 4/8/2020
Sampled by: DCB
Measuring Point of Well: N TOC
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)

Starting Water Level (ft TOC): 84.95
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): mid-screen

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
0817	0	0.2	84.97							Start
0822			84.84	9.3	197.8	0.84	6.32	105.4	1.29	
0827			84.82	9.3	196.0	0.58	6.32	97.4	1.57	
0832			84.82	9.3	198.0	0.86	6.34	92.7	1.16	
0837			84.82	9.3	201.0	0.80	6.34	89.7	0.51	
0842			84.82	9.3	203.0	0.68	6.35	87.9	0.59	
0845										sample

Total Gallons Purged: 1.5 gal
Total Casing Volumes Removed: —
Ending Water Level (ft TOC): 84.98
Ending Total Depth (ft TOC): —

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
0845	40	VOA	3	N	HCl	clear	0.33	
↓	500	Amber	1	N	H2SO4	↓	↓	
↓	500	Poly	2	N	N	↓	↓	direct sub to ARI
↓	500	Poly	2	Y	HNO3	↓	↓	direct sub to ARI
↓	250	Poly	1	Y	N	↓	↓	direct sub to ARI

METHODS

Parameters measured with (instrument model & serial number) YSI: red Turbidimeter: orange WLI: orange/white
Purging Equipment: dedicated bladder pump OR peristaltic Decon Equipment: Alconox + water
Disposal of Discharged Water: on site

Observations/Comments:

Aspect CONSULTING

Sample number MW-12I-040820

GROUNDWATER SAMPLING RECORD

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

Project Name: Hansville Landfill
Date: 4/8/2020
Sampled by: DCB
Measuring Point of Well: N TOC
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)

Project Number: 160423
Starting Water Level (ft TOC): 9.93
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): mid-screen

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
~~1045~~	~~0~~	~~2.0~~	~~9.93~~							Start
~~1050~~										
1055	0	2.0	9.93							start
1100			9.99	9.6	127.5	2.31	6.91	72.8	0.36	
1105			9.94	9.8	131.1	1.57	6.94	68.7	0.19	
1110			9.97	10.1	131.7	1.56	7.01	62.8	0.18	
1115			9.95	10.1	130.3	1.41	7.02	62.3	0.19	
1120		↓	9.95	10.1	130.0	1.30	7.02	61.9	0.19	
1125										sample

Total Gallons Purged: 1.75
Total Casing Volumes Removed: _____
Ending Water Level (ft TOC): 9.95
Ending Total Depth (ft TOC): _____

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1125	40	VOA	3	N	HCl	clear	0.18	
↓	500	Amber	1	N	H2SO4	↓	↓	
	500	Poly	2	N	N			direct sub to ARI
	500	Poly	2	Y	HNO3			direct sub to ARI
	250	Poly	1	Y	N			direct sub to ARI
↓								

METHODS

Parameters measured with (instrument model & serial number) YSI: blue Turbidimeter: orange WLI: orange/white
Purging Equipment: dedicated bladder pump OR peristaltic Decon Equipment: Alconox + water
Disposal of Discharged Water: on site
Observations/Comments: _____

Aspect CONSULTING

Sample number MW-13D-040820

GROUNDWATER SAMPLING RECORD

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

Project Name: Hansville Landfill
Project Number: 160423
Date: 4/8/2020
Starting Water Level (ft TOC): 11.12
Sampled by: DCB
Casing Stickup (ft): —
Measuring Point of Well: N 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): mid-screen

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
1210	0	0.2	11.12							Start
1215			11.20	10.3	167.1	2.75	7.24	89.7	0.75	
1220			11.24	10.5	167.2	2.18	7.26	88.9	0.62	
1225			11.24	10.6	167.3	1.92	7.31	84.7	0.62	
1230			11.24	10.5	167.4	1.83	7.31	82.7	0.70	
1235			11.24	10.5	167.5	1.81	7.31	82.4	0.65	
1240										sample

Total Gallons Purged: 1.25
Total Casing Volumes Removed: —

Ending Water Level (ft TOC): 11.25
Ending Total Depth (ft TOC): —

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
						Color	Turbidity & Sediment	
1240	40	VOA	3	N	HCl	clear	0.61	
↓	500	Amber	1	N	H2SO4	↓	↓	
	500	Poly	2	N	N			direct sub to ARI
	500	Poly	2	Y	HNO3			direct sub to ARI
↓	250	Poly	1	Y	N	↓	↓	direct sub to ARI

METHODS

Parameters measured with (instrument model & serial number) YSI: blue Turbidimeter: orange WLI: orange/white

Purging Equipment: dedicated bladder pump OR peristaltic Decon Equipment: Alconox + water

Disposal of Discharged Water: on site

Observations/Comments:

Aspect CONSULTING

Sample number MW-14-040820

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-14 Page: 1 of 1

Project Name: Hansville Landfill
Date: 4/8/2020
Sampled by: DCB
Measuring Point of Well: N TOC
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)

Project Number: 160423
Starting Water Level (ft TOC): 81.91
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): mid-screen

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
1433	0	0.2	81.91							Start
1438			81.95	11.3	166.9	4.17	6.83	93.8	1.09	
1443			81.96	11.2	178.4	1.22	6.76	98.7	0.86	
1448			81.96	11.2	185.3	0.89	6.79	96.3	0.46	
1453			81.96	11.2	185.4	0.75	6.85	92.4	0.30	
1458			81.96	11.1	182.8	0.62	6.86	90.5	0.34	
1503			81.96	11.1	182.3	0.62	6.87	90.1	0.32	
1508			81.96	11.1	182.0	0.63	6.87	89.8	0.35	
1513										sample

Total Gallons Purged: 2 Total Casing Volumes Removed: –

Ending Water Level (ft TOC): 81.95 Ending Total Depth (ft TOC): –

SAMPLE INVENTORY

Time	Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
1513	mL					Color	Turbidity & Sediment	
	40	VOA	3	N	HCl	clear	.034	
	500	Amber	1	N	H2SO4			
	500	Poly	2	N	N			direct sub to ARI
	500	Poly	2	Y	HNO3			direct sub to ARI
	250	Poly	1	Y	N			direct sub to ARI

METHODS

Parameters measured with (instrument model & serial number) YSI: blue Turbidimeter: orange WLI: orange/white

Purging Equipment: dedicated bladder pump OR peristaltic Decon Equipment: Alconox + water

Disposal of Discharged Water: on site

Observations/Comments:

Aspect CONSULTING

Sample number SW-1-040820

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-1 Page: 1 of 1

Project Name: Hansville Landfill
Date: 4/8/2020
Sampled by: JWD
Measuring Point of Well: N TOC
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
				9.0	1570	10.58	7.25	82.3	256	Start

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: Color	Appearance: Turbidity & Sediment	Remarks
1050	40	VOA	3	N	HCl	Clear	256	
↓	500	Amber	1	N	H2SO4	↓	↓	
↓	500	Poly	2	N	N	↓	↓	direct sub to ARI
↓	500	Poly	2	Y	HNO3	↓	↓	direct sub to ARI
↓	250	Poly	1	Y	N	↓	↓	direct sub to ARI

METHODS

Parameters measured with (instrument model & serial number) YSI: red Turbidimeter: White WLI: /

Purging Equipment: dedicated bladder pump OR (peristaltic) Decon Equipment: Alconox + water

Disposal of Discharged Water: on site

Observations/Comments: _____

Aspect CONSULTING

Sample number SGW-4-040820

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SGW-4

Page: 1 of 1

Project Name: Hansville Landfill

Date: 4/8/2020

Sampled by: DWD

Measuring Point of Well: N TOC

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
				8.4	314.7	10.41	7.61	45.7	4.67	Start

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: Color	Appearance: Turbidity & Sediment	Remarks
1130	40	VOA	3	N	HCl	Clear	4.67	
↓	500	Amber	1	N	H2SO4	↓	↓	
	500	Poly	2	N	N			direct sub to ARI -X1
	500	Poly	2	Y	HNO3			direct sub to ARI -X1
	250	Poly	1	Y	N			direct sub to ARI

METHODS

Parameters measured with (instrument model & serial number) YSI: Red Turbidimeter: white WLI: —

Purging Equipment: dedicated bladder pump OR peristaltic (circled) Decon Equipment: Alconox + water

Disposal of Discharged Water: on site

Observations/Comments: ____________

Aspect CONSULTING

Sample number SW-6-040820

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-6 Page: 1 of 1

Project Name: Hansville Landfill
Date: 4/8/2020
Sampled by: DWO
Measuring Point of Well: N TOC
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
			/	8.6	111.0	9.15	6.67	90.2	46.9	Start

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	
1210	40	VOA	3	N	HCl	Lt. tan	46.9	
↓	500	Amber	1	N	H2SO4		↓	
	500	Poly	2	N	N			direct sub to ARI x1
	500	Poly	2	Y	HNO3			direct sub to ARI y1
	250	Poly	1	Y	N			direct sub to ARI

METHODS

Parameters measured with (instrument model & serial number) YSI: red Turbidimeter: white WLI: /

Purging Equipment: dedicated bladder pump OR (peristaltic) Decon Equipment: Alconox + water

Disposal of Discharged Water: on site

Observations/Comments: _____

Aspect CONSULTING

Sample number SW-7-040820

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-7 Page: 1 of 1

Project Name: Hansville Landfill
Project Number: 160423
Date: 4/8/2020
Sampled by: DW/DCB
Measuring Point of Well: N TOC
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
				8.5	125.4	11.39	7.32	82.2	6.07	Start

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: Color	Appearance: Turbidity & Sediment	Remarks
1340	40	VOA	3	N	HCl	Clear	6.07	
↓	500	Amber	1	N	H2SO4	↓	↓	
	500	Poly	2	N	N			direct sub to ARI
	500	Poly	2	Y	HNO3			direct sub to ARI
↓	250	Poly	1	Y	N			direct sub to ARI

METHODS

Parameters measured with (instrument model & serial number) YSI: red Turbidimeter: white WLI: _____
Purging Equipment: dedicated bladder pump OR peristaltic Decon Equipment: Alconox + water
Disposal of Discharged Water: on site
Observations/Comments: _____

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-135445-1
Client Project/Site: Hansville Landfill
Sampling Event: 2Q_3Q_4Q Sampling

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

Attn: Ms. Meilani Lanier-Kamaha'o

Betsy Sara

Authorized for release by:
4/22/2020 10:40:00 AM

Betsy Sara, Project Manager II
(303)736-0189
betsy.sara@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-135445-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
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.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.

Glossary

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

Job ID: 280-135445-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Aspect Consulting

Project: Hansville Landfill

Report Number: 280-135445-1

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.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

Sample Receiving

The samples were received on 04/10/2020; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 0.3º C and 0.7º C.

Holding Times

All holding times were within established control limits.

Method Blanks

All Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

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

Sample MW12I-040820 was selected to fulfill the laboratory batch quality control requirements for Method 350.1. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Ammonia above the upper control limit. 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.

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

General Comments

The analysis for 8260C SIM was 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

Job ID: 280-135445-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

address and phone number are:
Analytical Resources, Inc.
4611 S.134th Place
Tukwila, WA 98168-3240
206-695-6200

Detection Summary

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-135445-1

Client Sample ID: MW7-040820 — Lab Sample ID: 280-135445-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Alkalinity	130		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	130		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	1.9		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: MW5-040820 — Lab Sample ID: 280-135445-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	1.8		1.0		ug/L	1		6020	Dissolved
Sulfate	7.0		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	75		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	75		10		mg/L	1		SM 2320B	Total/NA

Client Sample ID: SW1-040820 — Lab Sample ID: 280-135445-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.9		3.0		mg/L	1		300.0	Total/NA
Sulfate	8.3		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	76		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	76		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	1.7		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: MW12I-040820 — Lab Sample ID: 280-135445-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.085		0.020		ug/L	1		8260C SIM	Total/NA
Manganese	30		1.0		ug/L	1		6020	Dissolved
Total Alkalinity	77		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	77		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	2.5		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: SW4-040820 — Lab Sample ID: 280-135445-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	35		1.0		ug/L	1		6020	Dissolved
Chloride	12		3.0		mg/L	1		300.0	Total/NA
Sulfate	17		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	150		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	150		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	7.6		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: SW6-040820 — Lab Sample ID: 280-135445-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	45		1.0		ug/L	1		6020	Dissolved
Chloride	3.3		3.0		mg/L	1		300.0	Total/NA
Ammonia as N	0.037		0.030		mg/L	1		350.1	Total/NA
Total Alkalinity	58		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	58		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	19		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: MW13D-040820 — Lab Sample ID: 280-135445-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	7.5		1.0		ug/L	1		6020	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver

Client Sample ID: MW13D-040820 (Continued) — Lab Sample ID: 280-135445-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.8		3.0		mg/L	1		300.0	Total/NA
Sulfate	15		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	82		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	82		10		mg/L	1		SM 2320B	Total/NA

Client Sample ID: SW7-040820 — Lab Sample ID: 280-135445-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	1.9		1.0		ug/L	1		6020	Dissolved
Chloride	3.2		3.0		mg/L	1		300.0	Total/NA
Sulfate	6.8		5.0		mg/L	1		300.0	Total/NA
Ammonia as N	0.039		0.030		mg/L	1		350.1	Total/NA
Total Alkalinity	60		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	60		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	8.9		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: MW6-040820 — Lab Sample ID: 280-135445-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.073		0.020		ug/L	1		8260C SIM	Total/NA
Manganese	400		1.0		ug/L	1		6020	Dissolved
Chloride	3.6		3.0		mg/L	1		300.0	Total/NA
Sulfate	23		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	180		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	180		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	1.4		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: MW14-040820 — Lab Sample ID: 280-135445-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.023		0.020		ug/L	1		8260C SIM	Total/NA
Manganese	1000		1.0		ug/L	1		6020	Dissolved
Chloride	5.3		3.0		mg/L	1		300.0	Total/NA
Sulfate	8.8		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	97		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	97		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	2.1		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: MW20DD-040820 — Lab Sample ID: 280-135445-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.023		0.020		ug/L	1		8260C SIM	Total/NA
Manganese	1000		1.0		ug/L	1		6020	Dissolved
Chloride	4.1		3.0		mg/L	1		300.0	Total/NA
Sulfate	8.5		5.0		mg/L	1		300.0	Total/NA
Ammonia as N	0.032		0.030		mg/L	1		350.1	Total/NA
Total Alkalinity	96		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	96		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	2.3		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: TB1 — Lab Sample ID: 280-135445-12

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-135445-1

Method	Method Description	Protocol	Laboratory
8260C SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL BUF
6020	Metals (ICP/MS)	SW846	TAL DEN
300.0	Anions, Ion Chromatography	MCAWW	TAL DEN
350.1	Nitrogen, Ammonia	MCAWW	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 5310B	Organic Carbon, Total (TOC)	SM	TAL DEN
Subcontract	Dissolved As (ARI) - direct sub to ARI from field	None	SC0056
Subcontract	Nitrate/Nitrite/o-phos(field filtered) (ARI) - direct sub to ARI from field	None	SC0056
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL DEN
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
None = None
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.

Laboratory References:

SC0056 = Analytical Resources, Inc, 4611 South 134th Place, Suite 100, Tukwila, WA 98168, TEL (206)695-6200
TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-135445-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-135445-1	MW7-040820	Water	04/08/20 08:45	04/10/20 08:30	
280-135445-2	MW5-040820	Water	04/08/20 09:55	04/10/20 08:30	
280-135445-3	SW1-040820	Water	04/08/20 10:50	04/10/20 08:30	
280-135445-4	MW12I-040820	Water	04/08/20 11:25	04/10/20 08:30	
280-135445-5	SW4-040820	Water	04/08/20 11:30	04/10/20 08:30	
280-135445-6	SW6-040820	Water	04/08/20 12:10	04/10/20 08:30	
280-135445-7	MW13D-040820	Water	04/08/20 12:40	04/10/20 08:30	
280-135445-8	SW7-040820	Water	04/08/20 13:40	04/10/20 08:30	
280-135445-9	MW6-040820	Water	04/08/20 15:00	04/10/20 08:30	
280-135445-10	MW14-040820	Water	04/08/20 15:13	04/10/20 08:30	
280-135445-11	MW20DD-040820	Water	04/08/20 00:00	04/10/20 08:30	
280-135445-12	TB1	Water	04/08/20 00:00	04/10/20 08:30	

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

Client Sample ID: MW7-040820
Date Collected: 04/08/20 08:45
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			04/14/20 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*117*		*50 - 150*		*04/14/20 17:21*	*1*
TBA-d9 (Surr)	*96*		*50 - 150*		*04/14/20 17:21*	*1*

Client Sample ID: MW5-040820
Date Collected: 04/08/20 09:55
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			04/14/20 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*118*		*50 - 150*		*04/14/20 17:46*	*1*
TBA-d9 (Surr)	*109*		*50 - 150*		*04/14/20 17:46*	*1*

Client Sample ID: SW1-040820
Date Collected: 04/08/20 10:50
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			04/14/20 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*110*		*50 - 150*		*04/14/20 18:10*	*1*
TBA-d9 (Surr)	*77*		*50 - 150*		*04/14/20 18:10*	*1*

Client Sample ID: MW12I-040820
Date Collected: 04/08/20 11:25
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**0.085**		0.020		ug/L			04/14/20 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*120*		*50 - 150*		*04/14/20 18:34*	*1*
TBA-d9 (Surr)	*111*		*50 - 150*		*04/14/20 18:34*	*1*

Client Sample ID: SW4-040820
Date Collected: 04/08/20 11:30
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			04/14/20 18:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*107*		*50 - 150*		*04/14/20 18:59*	*1*
TBA-d9 (Surr)	*67*		*50 - 150*		*04/14/20 18:59*	*1*

Client Sample ID: SW6-040820
Date Collected: 04/08/20 12:10
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			04/14/20 19:23	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		50 - 150		04/14/20 19:23	1
TBA-d9 (Surr)	77		50 - 150		04/14/20 19:23	1

Client Sample ID: MW13D-040820 — **Lab Sample ID: 280-135445-7**
Date Collected: 04/08/20 12:40 — **Matrix: Water**
Date Received: 04/10/20 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			04/14/20 19:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	110		50 - 150		04/14/20 19:48	1
TBA-d9 (Surr)	79		50 - 150		04/14/20 19:48	1

Client Sample ID: SW7-040820 — **Lab Sample ID: 280-135445-8**
Date Collected: 04/08/20 13:40 — **Matrix: Water**
Date Received: 04/10/20 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			04/14/20 20:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	112		50 - 150		04/14/20 20:12	1
TBA-d9 (Surr)	87		50 - 150		04/14/20 20:12	1

Client Sample ID: MW6-040820 — **Lab Sample ID: 280-135445-9**
Date Collected: 04/08/20 15:00 — **Matrix: Water**
Date Received: 04/10/20 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**0.073**		0.020		ug/L			04/14/20 20:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	114		50 - 150		04/14/20 20:37	1
TBA-d9 (Surr)	82		50 - 150		04/14/20 20:37	1

Client Sample ID: MW14-040820 — **Lab Sample ID: 280-135445-10**
Date Collected: 04/08/20 15:13 — **Matrix: Water**
Date Received: 04/10/20 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**0.023**		0.020		ug/L			04/14/20 21:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		50 - 150		04/14/20 21:01	1
TBA-d9 (Surr)	81		50 - 150		04/14/20 21:01	1

Client Sample ID: MW20DD-040820 — **Lab Sample ID: 280-135445-11**
Date Collected: 04/08/20 00:00 — **Matrix: Water**
Date Received: 04/10/20 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**0.023**		0.020		ug/L			04/14/20 21:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		50 - 150		04/14/20 21:26	1
TBA-d9 (Surr)	82		50 - 150		04/14/20 21:26	1

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

Client Sample ID: TB1
Date Collected: 04/08/20 00:00
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			04/14/20 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*116*		*50 - 150*		*04/14/20 21:51*	*1*
TBA-d9 (Surr)	*80*		*50 - 150*		*04/14/20 21:51*	*1*

Method: 6020 - Metals (ICP/MS) - Dissolved

Client Sample ID: MW7-040820
Date Collected: 04/08/20 08:45
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		1.0		ug/L		04/15/20 14:55	04/16/20 12:09	1

Client Sample ID: MW5-040820
Date Collected: 04/08/20 09:55
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1.8**		1.0		ug/L		04/15/20 14:55	04/16/20 12:27	1

Client Sample ID: SW1-040820
Date Collected: 04/08/20 10:50
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		1.0		ug/L		04/15/20 14:55	04/16/20 12:30	1

Client Sample ID: MW12I-040820
Date Collected: 04/08/20 11:25
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**30**		1.0		ug/L		04/15/20 14:55	04/16/20 12:34	1

Client Sample ID: SW4-040820
Date Collected: 04/08/20 11:30
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**35**		1.0		ug/L		04/15/20 14:55	04/16/20 12:45	1

Client Sample ID: SW6-040820
Date Collected: 04/08/20 12:10
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**45**		1.0		ug/L		04/15/20 14:55	04/16/20 12:48	1

Client Sample ID: MW13D-040820
Date Collected: 04/08/20 12:40
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**7.5**		1.0		ug/L		04/15/20 14:55	04/16/20 12:52	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Client Sample ID: SW7-040820
Date Collected: 04/08/20 13:40
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1.9**		1.0		ug/L		04/15/20 14:55	04/16/20 12:55	1

Client Sample ID: MW6-040820
Date Collected: 04/08/20 15:00
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**400**		1.0		ug/L		04/15/20 14:55	04/16/20 12:59	1

Client Sample ID: MW14-040820
Date Collected: 04/08/20 15:13
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1000**		1.0		ug/L		04/15/20 14:55	04/16/20 13:02	1

Client Sample ID: MW20DD-040820
Date Collected: 04/08/20 00:00
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1000**		1.0		ug/L		04/15/20 14:55	04/16/20 13:06	1

General Chemistry

Client Sample ID: MW7-040820
Date Collected: 04/08/20 08:45
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/L			04/21/20 02:46	1
Sulfate	ND		5.0		mg/L			04/21/20 02:46	1
Ammonia as N	ND		0.030		mg/L			04/16/20 13:46	1
Total Alkalinity	**130**		10		mg/L			04/15/20 14:45	1
Bicarbonate Alkalinity	**130**		10		mg/L			04/15/20 14:45	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 14:45	1
Total Organic Carbon - Average	**1.9**		1.0		mg/L			04/16/20 05:03	1

Client Sample ID: MW5-040820
Date Collected: 04/08/20 09:55
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/L			04/21/20 03:03	1
Sulfate	**7.0**		5.0		mg/L			04/21/20 03:03	1
Ammonia as N	ND		0.030		mg/L			04/16/20 13:48	1
Total Alkalinity	**75**		10		mg/L			04/15/20 14:49	1
Bicarbonate Alkalinity	**75**		10		mg/L			04/15/20 14:49	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 14:49	1
Total Organic Carbon - Average	ND		1.0		mg/L			04/16/20 05:49	1

Client Sample ID: SW1-040820
Date Collected: 04/08/20 10:50
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3.9**		3.0		mg/L			04/21/20 03:21	1

General Chemistry (Continued)

Client Sample ID: SW1-040820
Date Collected: 04/08/20 10:50
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**8.3**		5.0		mg/L			04/21/20 03:21	1
Ammonia as N	ND		0.030		mg/L			04/16/20 13:50	1
Total Alkalinity	**76**		10		mg/L			04/15/20 14:54	1
Bicarbonate Alkalinity	**76**		10		mg/L			04/15/20 14:54	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 14:54	1
Total Organic Carbon - Average	**1.7**		1.0		mg/L			04/16/20 06:05	1

Client Sample ID: MW12I-040820
Date Collected: 04/08/20 11:25
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/L			04/21/20 03:38	1
Sulfate	ND		5.0		mg/L			04/21/20 03:38	1
Ammonia as N	ND	F1	0.030		mg/L			04/16/20 13:52	1
Total Alkalinity	**77**		10		mg/L			04/15/20 14:59	1
Bicarbonate Alkalinity	**77**		10		mg/L			04/15/20 14:59	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 14:59	1
Total Organic Carbon - Average	**2.5**		1.0		mg/L			04/16/20 06:28	1

Client Sample ID: SW4-040820
Date Collected: 04/08/20 11:30
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12**		3.0		mg/L			04/21/20 05:06	1
Sulfate	**17**		5.0		mg/L			04/21/20 05:06	1
Ammonia as N	ND		0.030		mg/L			04/16/20 14:10	1
Total Alkalinity	**150**		10		mg/L			04/15/20 15:04	1
Bicarbonate Alkalinity	**150**		10		mg/L			04/15/20 15:04	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 15:04	1
Total Organic Carbon - Average	**7.6**		1.0		mg/L			04/16/20 06:43	1

Client Sample ID: SW6-040820
Date Collected: 04/08/20 12:10
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3.3**		3.0		mg/L			04/21/20 05:23	1
Sulfate	ND		5.0		mg/L			04/21/20 05:23	1
Ammonia as N	**0.037**		0.030		mg/L			04/16/20 14:12	1
Total Alkalinity	**58**		10		mg/L			04/15/20 15:08	1
Bicarbonate Alkalinity	**58**		10		mg/L			04/15/20 15:08	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 15:08	1
Total Organic Carbon - Average	**19**		1.0		mg/L			04/16/20 07:00	1

Client Sample ID: MW13D-040820
Date Collected: 04/08/20 12:40
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.8**		3.0		mg/L			04/21/20 05:41	1
Sulfate	**15**		5.0		mg/L			04/21/20 05:41	1
Ammonia as N	ND		0.030		mg/L			04/16/20 14:14	1

General Chemistry (Continued)

Client Sample ID: MW13D-040820
Date Collected: 04/08/20 12:40
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**82**		10		mg/L			04/15/20 15:13	1
Bicarbonate Alkalinity	**82**		10		mg/L			04/15/20 15:13	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 15:13	1
Total Organic Carbon - Average	ND		1.0		mg/L			04/16/20 07:15	1

Client Sample ID: SW7-040820
Date Collected: 04/08/20 13:40
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3.2**		3.0		mg/L			04/21/20 05:58	1
Sulfate	**6.8**		5.0		mg/L			04/21/20 05:58	1
Ammonia as N	**0.039**		0.030		mg/L			04/16/20 14:16	1
Total Alkalinity	**60**		10		mg/L			04/15/20 15:18	1
Bicarbonate Alkalinity	**60**		10		mg/L			04/15/20 15:18	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 15:18	1
Total Organic Carbon - Average	**8.9**		1.0		mg/L			04/16/20 07:29	1

Client Sample ID: MW6-040820
Date Collected: 04/08/20 15:00
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3.6**		3.0		mg/L			04/21/20 06:16	1
Sulfate	**23**		5.0		mg/L			04/21/20 06:16	1
Ammonia as N	ND		0.030		mg/L			04/16/20 14:18	1
Total Alkalinity	**180**		10		mg/L			04/15/20 15:23	1
Bicarbonate Alkalinity	**180**		10		mg/L			04/15/20 15:23	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 15:23	1
Total Organic Carbon - Average	**1.4**		1.0		mg/L			04/16/20 08:16	1

Client Sample ID: MW14-040820
Date Collected: 04/08/20 15:13
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**5.3**		3.0		mg/L			04/21/20 06:33	1
Sulfate	**8.8**		5.0		mg/L			04/21/20 06:33	1
Ammonia as N	ND		0.030		mg/L			04/16/20 14:20	1
Total Alkalinity	**97**		10		mg/L			04/15/20 15:28	1
Bicarbonate Alkalinity	**97**		10		mg/L			04/15/20 15:28	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 15:28	1
Total Organic Carbon - Average	**2.1**		1.0		mg/L			04/16/20 08:34	1

Client Sample ID: MW20DD-040820
Date Collected: 04/08/20 00:00
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.1**		3.0		mg/L			04/21/20 06:51	1
Sulfate	**8.5**		5.0		mg/L			04/21/20 06:51	1
Ammonia as N	**0.032**		0.030		mg/L			04/16/20 14:22	1
Total Alkalinity	**96**		10		mg/L			04/15/20 15:58	1
Bicarbonate Alkalinity	**96**		10		mg/L			04/15/20 15:58	1

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-135445-1

General Chemistry (Continued)

Client Sample ID: MW20DD-040820
Date Collected: 04/08/20 00:00
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonate Alkalinity	ND		10		mg/L			04/15/20 15:58	1
Total Organic Carbon - Average	**2.3**		1.0		mg/L			04/15/20 19:10	1

Surrogate Summary

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-135445-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DBFM (50-150)	TBA (50-150)
280-135445-1	MW7-040820	117	96
280-135445-2	MW5-040820	118	109
280-135445-3	SW1-040820	110	77
280-135445-4	MW12I-040820	120	111
280-135445-5	SW4-040820	107	67
280-135445-6	SW6-040820	111	77
280-135445-7	MW13D-040820	110	79
280-135445-8	SW7-040820	112	87
280-135445-9	MW6-040820	114	82
280-135445-10	MW14-040820	111	81
280-135445-11	MW20DD-040820	111	82
280-135445-12	TB1	116	80
LCS 480-525766/6	Lab Control Sample	104	101
LCSD 480-525766/7	Lab Control Sample Dup	102	93
MB 480-525766/9	Method Blank	117	86

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

TBA = TBA-d9 (Surr)

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

Lab Sample ID: MB 480-525766/9
Matrix: Water
Analysis Batch: 525766

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			04/14/20 12:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*117*		*50 - 150*		*04/14/20 12:36*	*1*
TBA-d9 (Surr)	*86*		*50 - 150*		*04/14/20 12:36*	*1*

Lab Sample ID: LCS 480-525766/6
Matrix: Water
Analysis Batch: 525766

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl chloride			0.200	0.210		ug/L		105	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*104*		*50 - 150*
TBA-d9 (Surr)	*101*		*50 - 150*

Lab Sample ID: LCSD 480-525766/7
Matrix: Water
Analysis Batch: 525766

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Vinyl chloride			0.200	0.197		ug/L		98	50 - 150	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*102*		*50 - 150*
TBA-d9 (Surr)	*93*		*50 - 150*

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 280-491630/1-A
Matrix: Water
Analysis Batch: 492165

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 491630

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		1.0		ug/L		04/15/20 14:55	04/16/20 12:02	1

Lab Sample ID: LCS 280-491630/2-A
Matrix: Water
Analysis Batch: 492165

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 491630

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Manganese			40.0	41.0		ug/L		103	85 - 117		

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-135445-1 MS
Matrix: Water
Analysis Batch: 492165

Client Sample ID: MW7-040820
Prep Type: Dissolved
Prep Batch: 491630

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	ND		40.0	41.0		ug/L		101	85 - 117

Lab Sample ID: 280-135445-1 MSD
Matrix: Water
Analysis Batch: 492165

Client Sample ID: MW7-040820
Prep Type: Dissolved
Prep Batch: 491630

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Manganese	ND		40.0	42.0		ug/L		104	85 - 117	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 280-492191/6
Matrix: Water
Analysis Batch: 492191

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/L			04/20/20 10:44	1
Sulfate	ND		5.0		mg/L			04/20/20 10:44	1

Lab Sample ID: MB 280-492191/68
Matrix: Water
Analysis Batch: 492191

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/L			04/21/20 04:48	1
Sulfate	ND		5.0		mg/L			04/21/20 04:48	1

Lab Sample ID: LCS 280-492191/4
Matrix: Water
Analysis Batch: 492191

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	94.6		mg/L		95	90 - 110
Sulfate	100	94.5		mg/L		94	90 - 110

Lab Sample ID: LCS 280-492191/67
Matrix: Water
Analysis Batch: 492191

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	98.2		mg/L		98	90 - 110
Sulfate	100	98.9		mg/L		99	90 - 110

Lab Sample ID: LCSD 280-492191/5
Matrix: Water
Analysis Batch: 492191

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	94.8		mg/L		95	90 - 110	0	10
Sulfate	100	94.4		mg/L		94	90 - 110	0	10

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-492191/3
Matrix: Water
Analysis Batch: 492191

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.51		mg/L		90	50 - 150		
Sulfate			5.00	ND		mg/L		83	50 - 150		

Lab Sample ID: 280-135400-B-1 MS
Matrix: Water
Analysis Batch: 492191

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	360	E	50.0	412	E 4	mg/L		100	80 - 120		
Sulfate	ND		50.0	50.2		mg/L		100	80 - 120		

Lab Sample ID: 280-135400-B-1 MSD
Matrix: Water
Analysis Batch: 492191

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	360	E	50.0	412	E 4	mg/L		101	80 - 120	0	20
Sulfate	ND		50.0	50.4		mg/L		101	80 - 120	0	20

Lab Sample ID: 280-135400-B-1 DU
Matrix: Water
Analysis Batch: 492191

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	360	E	361	E	mg/L		0.2	15
Sulfate	ND		ND		mg/L		NC	15

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 280-492029/57
Matrix: Water
Analysis Batch: 492029

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	ND		0.030		mg/L			04/16/20 13:03	1

Lab Sample ID: LCS 280-492029/56
Matrix: Water
Analysis Batch: 492029

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia as N			2.50	2.74		mg/L		110	90 - 110		

Lab Sample ID: 280-135445-4 MS
Matrix: Water
Analysis Batch: 492029

Client Sample ID: MW12I-040820
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia as N	ND	F1	1.00	1.13	F1	mg/L		113	90 - 110		

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 280-135445-4 MSD — **Client Sample ID: MW12I-040820**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 492029

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	ND	F1	1.00	1.09		mg/L		109	90 - 110	4	10

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-491911/31 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 491911

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		10		mg/L			04/15/20 13:33	1
Bicarbonate Alkalinity	ND		10		mg/L			04/15/20 13:33	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 13:33	1

Lab Sample ID: MB 280-491911/58 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 491911

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		10		mg/L			04/15/20 15:53	1
Bicarbonate Alkalinity	ND		10		mg/L			04/15/20 15:53	1
Carbonate Alkalinity	ND		10		mg/L			04/15/20 15:53	1

Lab Sample ID: LCS 280-491911/30 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 491911

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	200	207		mg/L		104	89 - 109

Lab Sample ID: LCS 280-491911/57 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 491911

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	200	210		mg/L		105	89 - 109

Lab Sample ID: 280-135445-11 DU — **Client Sample ID: MW20DD-040820**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 491911

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	96		98.8		mg/L		3	10

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-491944/35
Matrix: Water
Analysis Batch: 491944

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average	ND		1.0		mg/L			04/15/20 23:57	1

Lab Sample ID: MB 280-491944/4
Matrix: Water
Analysis Batch: 491944

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average	ND		1.0		mg/L			04/15/20 14:47	1

Lab Sample ID: LCS 280-491944/3
Matrix: Water
Analysis Batch: 491944

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Average			25.0	25.2		mg/L		101	88 - 112		

Lab Sample ID: LCS 280-491944/34
Matrix: Water
Analysis Batch: 491944

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Average			25.0	25.4		mg/L		102	88 - 112		

Lab Sample ID: 280-135445-1 MS
Matrix: Water
Analysis Batch: 491944

Client Sample ID: MW7-040820
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Average	1.9		25.0	27.5		mg/L		102	88 - 112		

Lab Sample ID: 280-135445-1 MSD
Matrix: Water
Analysis Batch: 491944

Client Sample ID: MW7-040820
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average	1.9		25.0	27.6		mg/L		103	88 - 112	0	15

GC/MS VOA

Analysis Batch: 525766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135445-1	MW7-040820	Total/NA	Water	8260C SIM	
280-135445-2	MW5-040820	Total/NA	Water	8260C SIM	
280-135445-3	SW1-040820	Total/NA	Water	8260C SIM	
280-135445-4	MW12I-040820	Total/NA	Water	8260C SIM	
280-135445-5	SW4-040820	Total/NA	Water	8260C SIM	
280-135445-6	SW6-040820	Total/NA	Water	8260C SIM	
280-135445-7	MW13D-040820	Total/NA	Water	8260C SIM	
280-135445-8	SW7-040820	Total/NA	Water	8260C SIM	
280-135445-9	MW6-040820	Total/NA	Water	8260C SIM	
280-135445-10	MW14-040820	Total/NA	Water	8260C SIM	
280-135445-11	MW20DD-040820	Total/NA	Water	8260C SIM	
280-135445-12	TB1	Total/NA	Water	8260C SIM	
MB 480-525766/9	Method Blank	Total/NA	Water	8260C SIM	
LCS 480-525766/6	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 480-525766/7	Lab Control Sample Dup	Total/NA	Water	8260C SIM	

Metals

Prep Batch: 491630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135445-1	MW7-040820	Dissolved	Water	3005A	
280-135445-2	MW5-040820	Dissolved	Water	3005A	
280-135445-3	SW1-040820	Dissolved	Water	3005A	
280-135445-4	MW12I-040820	Dissolved	Water	3005A	
280-135445-5	SW4-040820	Dissolved	Water	3005A	
280-135445-6	SW6-040820	Dissolved	Water	3005A	
280-135445-7	MW13D-040820	Dissolved	Water	3005A	
280-135445-8	SW7-040820	Dissolved	Water	3005A	
280-135445-9	MW6-040820	Dissolved	Water	3005A	
280-135445-10	MW14-040820	Dissolved	Water	3005A	
280-135445-11	MW20DD-040820	Dissolved	Water	3005A	
MB 280-491630/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-491630/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-135445-1 MS	MW7-040820	Dissolved	Water	3005A	
280-135445-1 MSD	MW7-040820	Dissolved	Water	3005A	

Analysis Batch: 492165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135445-1	MW7-040820	Dissolved	Water	6020	491630
280-135445-2	MW5-040820	Dissolved	Water	6020	491630
280-135445-3	SW1-040820	Dissolved	Water	6020	491630
280-135445-4	MW12I-040820	Dissolved	Water	6020	491630
280-135445-5	SW4-040820	Dissolved	Water	6020	491630
280-135445-6	SW6-040820	Dissolved	Water	6020	491630
280-135445-7	MW13D-040820	Dissolved	Water	6020	491630
280-135445-8	SW7-040820	Dissolved	Water	6020	491630
280-135445-9	MW6-040820	Dissolved	Water	6020	491630
280-135445-10	MW14-040820	Dissolved	Water	6020	491630
280-135445-11	MW20DD-040820	Dissolved	Water	6020	491630
MB 280-491630/1-A	Method Blank	Total Recoverable	Water	6020	491630
LCS 280-491630/2-A	Lab Control Sample	Total Recoverable	Water	6020	491630

Metals (Continued)

Analysis Batch: 492165 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135445-1 MS	MW7-040820	Dissolved	Water	6020	491630
280-135445-1 MSD	MW7-040820	Dissolved	Water	6020	491630

General Chemistry

Analysis Batch: 491911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135445-1	MW7-040820	Total/NA	Water	SM 2320B	
280-135445-2	MW5-040820	Total/NA	Water	SM 2320B	
280-135445-3	SW1-040820	Total/NA	Water	SM 2320B	
280-135445-4	MW12I-040820	Total/NA	Water	SM 2320B	
280-135445-5	SW4-040820	Total/NA	Water	SM 2320B	
280-135445-6	SW6-040820	Total/NA	Water	SM 2320B	
280-135445-7	MW13D-040820	Total/NA	Water	SM 2320B	
280-135445-8	SW7-040820	Total/NA	Water	SM 2320B	
280-135445-9	MW6-040820	Total/NA	Water	SM 2320B	
280-135445-10	MW14-040820	Total/NA	Water	SM 2320B	
280-135445-11	MW20DD-040820	Total/NA	Water	SM 2320B	
MB 280-491911/31	Method Blank	Total/NA	Water	SM 2320B	
MB 280-491911/58	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-491911/30	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 280-491911/57	Lab Control Sample	Total/NA	Water	SM 2320B	
280-135445-11 DU	MW20DD-040820	Total/NA	Water	SM 2320B	

Analysis Batch: 491944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135445-1	MW7-040820	Total/NA	Water	SM 5310B	
280-135445-2	MW5-040820	Total/NA	Water	SM 5310B	
280-135445-3	SW1-040820	Total/NA	Water	SM 5310B	
280-135445-4	MW12I-040820	Total/NA	Water	SM 5310B	
280-135445-5	SW4-040820	Total/NA	Water	SM 5310B	
280-135445-6	SW6-040820	Total/NA	Water	SM 5310B	
280-135445-7	MW13D-040820	Total/NA	Water	SM 5310B	
280-135445-8	SW7-040820	Total/NA	Water	SM 5310B	
280-135445-9	MW6-040820	Total/NA	Water	SM 5310B	
280-135445-10	MW14-040820	Total/NA	Water	SM 5310B	
280-135445-11	MW20DD-040820	Total/NA	Water	SM 5310B	
MB 280-491944/35	Method Blank	Total/NA	Water	SM 5310B	
MB 280-491944/4	Method Blank	Total/NA	Water	SM 5310B	
LCS 280-491944/3	Lab Control Sample	Total/NA	Water	SM 5310B	
LCS 280-491944/34	Lab Control Sample	Total/NA	Water	SM 5310B	
280-135445-1 MS	MW7-040820	Total/NA	Water	SM 5310B	
280-135445-1 MSD	MW7-040820	Total/NA	Water	SM 5310B	

Analysis Batch: 492029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135445-1	MW7-040820	Total/NA	Water	350.1	
280-135445-2	MW5-040820	Total/NA	Water	350.1	
280-135445-3	SW1-040820	Total/NA	Water	350.1	
280-135445-4	MW12I-040820	Total/NA	Water	350.1	
280-135445-5	SW4-040820	Total/NA	Water	350.1	

General Chemistry (Continued)

Analysis Batch: 492029 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135445-6	SW6-040820	Total/NA	Water	350.1	
280-135445-7	MW13D-040820	Total/NA	Water	350.1	
280-135445-8	SW7-040820	Total/NA	Water	350.1	
280-135445-9	MW6-040820	Total/NA	Water	350.1	
280-135445-10	MW14-040820	Total/NA	Water	350.1	
280-135445-11	MW20DD-040820	Total/NA	Water	350.1	
MB 280-492029/57	Method Blank	Total/NA	Water	350.1	
LCS 280-492029/56	Lab Control Sample	Total/NA	Water	350.1	
280-135445-4 MS	MW12I-040820	Total/NA	Water	350.1	
280-135445-4 MSD	MW12I-040820	Total/NA	Water	350.1	

Analysis Batch: 492191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-135445-1	MW7-040820	Total/NA	Water	300.0	
280-135445-2	MW5-040820	Total/NA	Water	300.0	
280-135445-3	SW1-040820	Total/NA	Water	300.0	
280-135445-4	MW12I-040820	Total/NA	Water	300.0	
280-135445-5	SW4-040820	Total/NA	Water	300.0	
280-135445-6	SW6-040820	Total/NA	Water	300.0	
280-135445-7	MW13D-040820	Total/NA	Water	300.0	
280-135445-8	SW7-040820	Total/NA	Water	300.0	
280-135445-9	MW6-040820	Total/NA	Water	300.0	
280-135445-10	MW14-040820	Total/NA	Water	300.0	
280-135445-11	MW20DD-040820	Total/NA	Water	300.0	
MB 280-492191/6	Method Blank	Total/NA	Water	300.0	
MB 280-492191/68	Method Blank	Total/NA	Water	300.0	
LCS 280-492191/4	Lab Control Sample	Total/NA	Water	300.0	
LCS 280-492191/67	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-492191/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 280-492191/3	Lab Control Sample	Total/NA	Water	300.0	
280-135400-B-1 MS	Matrix Spike	Total/NA	Water	300.0	
280-135400-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
280-135400-B-1 DU	Duplicate	Total/NA	Water	300.0	

Client Sample ID: MW7-040820

Lab Sample ID: 280-135445-1

Date Collected: 04/08/20 08:45

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 17:21	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 12:09	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 02:46	JAP	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 13:46	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 14:45	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/16/20 05:03	JMB	TAL DEN

Client Sample ID: MW5-040820

Lab Sample ID: 280-135445-2

Date Collected: 04/08/20 09:55

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 17:46	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 12:27	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 03:03	JAP	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 13:48	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 14:49	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/16/20 05:49	JMB	TAL DEN

Client Sample ID: SW1-040820

Lab Sample ID: 280-135445-3

Date Collected: 04/08/20 10:50

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 18:10	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 12:30	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 03:21	JAP	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 13:50	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 14:54	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/16/20 06:05	JMB	TAL DEN

Client Sample ID: MW12I-040820

Lab Sample ID: 280-135445-4

Date Collected: 04/08/20 11:25

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 18:34	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 12:34	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 03:38	JAP	TAL DEN

Lab Chronicle

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-135445-1

Client Sample ID: MW12I-040820

Lab Sample ID: 280-135445-4

Date Collected: 04/08/20 11:25

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 13:52	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 14:59	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/16/20 06:28	JMB	TAL DEN

Client Sample ID: SW4-040820

Lab Sample ID: 280-135445-5

Date Collected: 04/08/20 11:30

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 18:59	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 12:45	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 05:06	JAP	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 14:10	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 15:04	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/16/20 06:43	JMB	TAL DEN

Client Sample ID: SW6-040820

Lab Sample ID: 280-135445-6

Date Collected: 04/08/20 12:10

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 19:23	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 12:48	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 05:23	JAP	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 14:12	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 15:08	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/16/20 07:00	JMB	TAL DEN

Client Sample ID: MW13D-040820

Lab Sample ID: 280-135445-7

Date Collected: 04/08/20 12:40

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 19:48	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 12:52	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 05:41	JAP	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 14:14	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 15:13	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/16/20 07:15	JMB	TAL DEN

Client Sample ID: SW7-040820

Lab Sample ID: 280-135445-8

Date Collected: 04/08/20 13:40

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 20:12	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 12:55	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 05:58	JAP	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 14:16	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 15:18	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/16/20 07:29	JMB	TAL DEN

Client Sample ID: MW6-040820

Lab Sample ID: 280-135445-9

Date Collected: 04/08/20 15:00

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 20:37	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 12:59	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 06:16	JAP	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 14:18	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 15:23	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/16/20 08:16	JMB	TAL DEN

Client Sample ID: MW14-040820

Lab Sample ID: 280-135445-10

Date Collected: 04/08/20 15:13

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 21:01	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 13:02	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 06:33	JAP	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 14:20	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 15:28	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/16/20 08:34	JMB	TAL DEN

Client Sample ID: MW20DD-040820

Lab Sample ID: 280-135445-11

Date Collected: 04/08/20 00:00

Matrix: Water

Date Received: 04/10/20 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 21:26	CDC	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	491630	04/15/20 14:55	EC	TAL DEN
Dissolved	Analysis	6020		1			492165	04/16/20 13:06	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	492191	04/21/20 06:51	JAP	TAL DEN

Lab Chronicle

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-135445-1

Client Sample ID: MW20DD-040820

Date Collected: 04/08/20 00:00
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	10 mL	10 mL	492029	04/16/20 14:22	BWH	TAL DEN
Total/NA	Analysis	SM 2320B		1			491911	04/15/20 15:58	SPG	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	491944	04/15/20 19:10	JMB	TAL DEN

Client Sample ID: TB1

Date Collected: 04/08/20 00:00
Date Received: 04/10/20 08:30

Lab Sample ID: 280-135445-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	25 mL	25 mL	525766	04/14/20 21:51	CDC	TAL BUF

Laboratory References:

SC0056 = Analytical Resources, Inc, 4611 South 134th Place, Suite 100, Tukwila, WA 98168, TEL (206)695-6200
TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Analytical Resources, Incorporated
Analytical Chemists and Consultants

20 April 2020

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)
20D0076	N/A

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

2000076

Chain of Custody Record

Denver #280

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: David Urish/Dylon Bronson	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-23414-6845.1
Client Contact: Meilani Lopez-Kamahaʻo	Phone: (206)413-5408	E-Mail: betsy.sara@testamericainc.com		Page: 1/1
Company: Aspect Consulting, LLC				Job #:
Address: 350 Madison Ave N	Due Date Requested:	Analysis Requested		
City: Bainbridge Island	TAT Requested (days):			
State, Zip: WA, 98110				
Phone:	PO #: Purchase Order not required			
Email: mkamahao@aspectconsulting.com	WO #:			
Project Name: Hansville Landfill	Project #:skip sites/events 28006013 - 2Q/3Q/4Q Sampling			
Site: Washington	SSOW#:			

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	Nitrate/Nitrite (IC) - direct sub to ARI	Total Number of containers	Special Instructions/Note:
				Preservation Code:	X	X	A	D	S	N	N	D	N	X	
MW-7-040820	4/8/20	0845		W							X	X	X		
MW-5-040820		0955													
SW-1-040820		1050													
MW-12I-040820		1125													Diss As,NO3,NO2,o-phos subbed direct to ARI
SW-4-040820		1130													
SW-6-040820		1210													
MW-13D-040820		1240													
SW-7-040820		1340													
MW-6-040820		1500													
MW-14-040820		1513													
MW-20DD-040820		—													

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:	Date/Time:	Company	Received by:	Date/Time:	Company
David Urish	4/9/20 0800	Aspect	Daniel B.[illegible]	4/9/20 0800	Aspect
[illegible signature]	4/9/20 0845	Aspect	Kenny Dang	4/9/2020 0845	ARI

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Page 2 of 39 20D0076 ARISample FINAL 20 Apr 2020 1503

Analytical Report

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-7-040820	20D0076-01	Water	08-Apr-2020 08:45	09-Apr-2020 08:45
MW-5-040820	20D0076-02	Water	08-Apr-2020 09:55	09-Apr-2020 08:45
SW-1-040820	20D0076-03	Water	08-Apr-2020 10:50	09-Apr-2020 08:45
MW-12I-040820	20D0076-04	Water	08-Apr-2020 11:25	09-Apr-2020 08:45
SW-4-040820	20D0076-05	Water	08-Apr-2020 11:30	09-Apr-2020 08:45
SW-6-040820	20D0076-06	Water	08-Apr-2020 12:10	09-Apr-2020 08:45
MW-13D-040820	20D0076-07	Water	08-Apr-2020 12:40	09-Apr-2020 08:45
SW-7-040820	20D0076-08	Water	08-Apr-2020 13:40	09-Apr-2020 08:45
MW-6-040820	20D0076-09	Water	08-Apr-2020 15:00	09-Apr-2020 08:45
MW-14-040820	20D0076-10	Water	08-Apr-2020 15:13	09-Apr-2020 08:45
MW-20DD-040820	20D0076-11	Water	08-Apr-2020 00:00	09-Apr-2020 08:45

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: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

Work Order Case Narrative

Sample receipt

Samples as listed on the preceding page were received April 9, 2020 under ARI work order 20D0076. 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-7-040820. The matrix spike percent recovery and duplicate RPD were within QC limits.

Anions - EPA Method 300.0

Several samples were re-analyzed at dilutions outside of the 48 hour recommended holding times and have been flagged with "H" qualifiers.

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-7-040820. The matrix spike percent recoveries and duplicate RPD were within QC limits.

WORK ORDER

20D0076

Client: Test America - Denver | **Project Manager:** Amanda Volgardsen

Project: Hansville | **Project Number:** [none]

Preservation Confirmation

Container ID	Container Type	pH	
20D0076-01 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-01 B	Miscellaneous Container		
20D0076-01 C	Miscellaneous Container		
20D0076-02 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-02 B	Miscellaneous Container		
20D0076-02 C	Miscellaneous Container		
20D0076-03 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-03 B	Miscellaneous Container		
20D0076-03 C	Miscellaneous Container		
20D0076-04 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-04 B	Miscellaneous Container		
20D0076-04 C	Miscellaneous Container		
20D0076-05 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-05 B	Miscellaneous Container		
20D0076-05 C	Miscellaneous Container		
20D0076-06 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-06 B	Miscellaneous Container		
20D0076-06 C	Miscellaneous Container		
20D0076-07 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-07 B	Miscellaneous Container		
20D0076-07 C	Miscellaneous Container		
20D0076-08 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-08 B	Miscellaneous Container		
20D0076-08 C	Miscellaneous Container		
20D0076-09 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-09 B	Miscellaneous Container		
20D0076-09 C	Miscellaneous Container		
20D0076-10 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-10 B	Miscellaneous Container		
20D0076-10 C	Miscellaneous Container		
20D0076-11 A	Miscellaneous container, 1:1 HN03	<2	Pass
20D0076-11 B	Miscellaneous Container		
20D0076-11 C	Miscellaneous Container		

Reviewed By _____ Date _____

WORK ORDER

20D0076

Client: Test America - Denver	**Project Manager: Amanda Volgardsen**
Project: Hansville	**Project Number: [none]**

KD
Preservation Confirmed By

KD
~~20D0076~~ 4/9/2020
Date

Reviewed By

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Test America Denver Project Name: Hansville Landfill

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 20D0076 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler? YES (NO)

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)

Time 0845 0.1 ____ ____ ____ ____ ____ ____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: DOO 5206

Cooler Accepted by: KD Date: 4/9/2020 Time: 0845

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

How were bottles sealed in plastic bags? ..... Individually Grouped (Not)

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) _____

Were the sample(s) split by ARI? (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: KD Date: 4/9/2020 Time: 0925 Labels checked by: KD

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-7-040820

20D0076-01 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 08:45

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 15:31

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-01 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	0.00125	mg/L	

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-7-040820

20D0076-01 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 08:45

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 14:11

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-01 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	0.185	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: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-5-040820

20D0076-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 09:55

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 16:14

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-02 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	0.00183	mg/L	

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-5-040820

20D0076-02 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 09:55

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 15:12

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-02 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	2.49	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

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

SW-1-040820

20D0076-03 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 10:50

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 16:19

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-03 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	0.00161	mg/L	

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

SW-1-040820

20D0076-03 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 10:50

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 15:32

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-03 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	1.81	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: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-12I-040820

20D0076-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 11:25

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 16:24

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-04 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	0.00238	mg/L	

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-12I-040820

20D0076-04 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 11:25

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 15:52

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-04 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

SW-4-040820

20D0076-05 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 11:30

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 16:29

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-05 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	0.00186	mg/L	

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Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

SW-4-040820

20D0076-05 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 11:30

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 16:12

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-05 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	1.19	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

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

SW-6-040820

20D0076-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 12:10

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 16:33

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-06 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	0.00297	mg/L	

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

SW-6-040820

20D0076-06 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 12:10

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 17:12

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-06 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

SW-6-040820

20D0076-06RE2 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 12:10

Instrument: IC930 Analyst: CDE — Analyzed: 04/13/2020 15:21

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-06RE2 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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, H
Nitrate-N	14797-55-8	1	0.100	0.100	ND	mg/L	U, H

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-13D-040820

20D0076-07 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 12:40

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 16:38

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-07 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	0.00501	mg/L	

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-13D-040820

20D0076-07 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 12:40

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 17:32

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-07 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-13D-040820

20D0076-07RE3 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 12:40

Instrument: IC930 Analyst: CDE — Analyzed: 04/13/2020 15:41

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-07RE3 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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, H
Nitrate-N	14797-55-8	1	0.100	0.100	ND	mg/L	U, H

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

SW-7-040820

20D0076-08 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 13:40

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 16:43

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-08 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	0.00122	mg/L	

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

SW-7-040820

20D0076-08 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 13:40

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 17:52

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-08 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

SW-7-040820

20D0076-08RE2 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 13:40

Instrument: IC930 Analyst: CDE — Analyzed: 04/13/2020 16:41

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-08RE2 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	1.16	mg/L	H

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-6-040820

20D0076-09 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 15:00

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 16:47

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-09 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	0.00170	mg/L	

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-6-040820

20D0076-09 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 15:00

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 18:12

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-09 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-6-040820

20D0076-09RE3 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 15:00

Instrument: IC930 Analyst: CDE — Analyzed: 04/13/2020 17:01

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-09RE3 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrate-N	14797-55-8	1	0.100	0.100	0.357	mg/L	H

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-14-040820

20D0076-10 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 15:13

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 16:53

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-10 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.000200	0.0143	mg/L	

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-14-040820

20D0076-10 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 15:13

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 18:32

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-10 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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

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: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-14-040820

20D0076-10RE2 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 15:13

Instrument: IC930 Analyst: CDE — Analyzed: 04/13/2020 17:21

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-10RE2 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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, H
Nitrate-N	14797-55-8	1	0.100	0.100	ND	mg/L	U, H

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-20DD-040820

20D0076-11 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 04/08/2020 00:00

Instrument: ICPMS2 Analyst: MCB — Analyzed: 04/17/2020 17:01

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 20D0076-11 A 01

Preparation Batch: BID0219 — Sample Size: 25 mL

Prepared: 04/16/2020 — 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	

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-20DD-040820

20D0076-11 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 00:00

Instrument: IC930 Analyst: CDE — Analyzed: 04/09/2020 18:52

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-11 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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

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Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

MW-20DD-040820

20D0076-11RE2 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 04/08/2020 00:00

Instrument: IC930 Analyst: CDE — Analyzed: 04/13/2020 17:41

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 20D0076-11RE2 C

Preparation Batch: BID0120 — Sample Size: 10 mL

Prepared: 04/09/2020 — Final Volume: 10 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, H
Nitrate-N	14797-55-8	1	0.100	0.100	ND	mg/L	U, H

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U
Orthophosphorus	1426-54-42	1	0.10	0.10	ND	mg/L	H, U

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BID0219 - 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 (BID0219-BLK1)					Prepared: 16-Apr-2020 Analyzed: 17-Apr-2020 13:26						
Arsenic, Dissolved	75a	ND	0.000200	mg/L							U
LCS (BID0219-BS1)					Prepared: 16-Apr-2020 Analyzed: 17-Apr-2020 13:31						
Arsenic, Dissolved	75a	0.0236	0.000200	mg/L	0.0250		94.4	80-120			
Duplicate (BID0219-DUP1)		**Source: 20D0076-01**			Prepared: 16-Apr-2020 Analyzed: 17-Apr-2020 15:39						
Arsenic, Dissolved	75a	0.00121	0.000200	mg/L		0.00125			3.99	20	
Matrix Spike (BID0219-MS1)		**Source: 20D0076-01**			Prepared: 16-Apr-2020 Analyzed: 17-Apr-2020 15:47						
Arsenic, Dissolved	75a	0.0260	0.000200	mg/L	0.0250	0.00125	99.0	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: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

Wet Chemistry - Quality Control

Batch BID0120 - No Prep Wet Chem

Instrument: IC930 Analyst: CDE

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BID0120-BLK1)				Prepared: 09-Apr-2020 Analyzed: 09-Apr-2020 13:31							
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 (BID0120-BS1)				Prepared: 09-Apr-2020 Analyzed: 09-Apr-2020 13:51							
Nitrate-N	4.97	0.100	0.100	mg/L	5.00		99.4	90-110			
Nitrite-N	5.45	0.100	0.100	mg/L	5.00		109	90-110			
LCS (BID0120-BS2)				Prepared: 09-Apr-2020 Analyzed: 13-Apr-2020 12:40							
Orthophosphorus	4.65	0.10	0.10	mg/L	5.00		93.0	90-110			
Duplicate (BID0120-DUP1)		**Source: 20D0076-01**		Prepared: 09-Apr-2020 Analyzed: 09-Apr-2020 14:32							
Nitrate-N	0.190	0.100	0.100	mg/L		0.185			2.67	20	
Nitrite-N	ND	0.100	0.100	mg/L		ND					U
Orthophosphorus	ND	0.10	0.10	mg/L		ND					U
Matrix Spike (BID0120-MS1)		**Source: 20D0076-01**		Prepared: 09-Apr-2020 Analyzed: 09-Apr-2020 14:52							
Nitrate-N	2.18	0.100	0.100	mg/L	2.00	0.185	99.7	75-125			
Nitrite-N	2.23	0.100	0.100	mg/L	2.00	ND	112	75-125			
Orthophosphorus	1.53	0.10	0.10	mg/L	2.00	ND	76.5	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: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

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	01/31/2021
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	WA100006-012	05/12/2020
WADOE	WA Dept of Ecology	C558	06/30/2020
WA-DW	Ecology - Drinking Water	C558	06/30/2020

Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: 208006013-2Q/3Q/4Q	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	20-Apr-2020 15:03

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
H	Hold time violation - Hold time was exceeded.
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.

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280 TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: David Unruh / Dylan Br.	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-23414-6845.1
Client Contact: Meilani Lanier-Kamaha'o	Phone: (206) 413-5408	E-Mail: betsy.sara@testamericainc.com		Page: 1/2
Company: Aspect Consulting, LLC				Job #:
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: mlkamaha'o@aspectconsulting.com	WO #:			
Project Name: Hansville Landfill	Project #:skip sites/events 28006013 - 2Q/3Q/4Q 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	Nitrate/Nitrite (IC) - direct sub to ARI	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	D	S	N	N	D	N		
MW-7-040820	4/8/20	0845		W			X	X	X	X					
MW-5-040820		0955													
SW-1-040820		1050													Diss As,NO3,NO2,o-phos subbed direct to ARI
MW-12I-040820		1125													
SW-4-040820		1130													
SW-6-040820		1210													
MW-13D-040820		1240													
~~MW~~ SW-7-040820		1340													
MW-~~6~~ 6-040820		1500													
MW-14-040820		1513													
MW-20DD-040820		—		~~PAQ~~ W											

280-135445 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:	Date/Time:	Company	Received by:	Date/Time:	Company
1	David Unruh	4/9/20 0800	Aspect	Daniel Babcock	4/9/20 0800	Aspect
2				Jillian Fink	4-10-20 0830	TA Buffalo
3						

Custody Seals Intact: △ Yes △ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 0.4, 0.0 °C IR9 +0.3 JL 4-10-20

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

Denver #280 TestAmerica — THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: David Unruh / Dylon Braun	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-23414-6845.1
Client Contact: Melissa Lonzar-Hamacher	Phone: (206) 413-5408	E-Mail: betsy.sara@testamericainc.com		Page: 2/2
Company: Aspect Consulting, LLC				Job #:
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: mlhamacher@aspectconsulting.com	WO #:			
Project Name: Hansville Landfill	Project #:skip sites/events 28006013 - 2Q/3Q/4Q Sampling			
Site: Washington	SSOW#:			

Analysis Requested

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	Nitrate/Nitrite (IC) - direct sub to ARI	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	D	S	N	N	D	N		
Trip Blank	—	—		AQ			X								
															Diss As,NO3,NO2,o-phos subbed direct to ARI

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:

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:

	Date/Time	Company		Date/Time	Company
Relinquished by: David Unruh	4/9/20 0800	Aspect	Received by: Digital Bhak	4/9/20 0800	Aspect
Relinquished by:	Date/Time:	Company	Received by: Julia Fuhr	4-10-20 0830	TA Den
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:

Shipments tendered on Friday are delivered on Saturday to most locations.

8156 5923 5702

Release Signature
For nonresidential deliveries.

For FedEx Use Only
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Base Charges
Other
Total Charges

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

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4955 YARROW ST
ARVADA, CO 80002
(303) 736-0100

SATURDAY DELIVERY

Shipments tendered on Friday are delivered on Saturday to most locations.

8156 5923 5713

Release Signature
For nonresidential deliveries.

For FedEx Use Only
Employee Number
Base Charges
Other
Total Charges

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

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M-10091 Rev. 12/17

Form ID 0667

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280-135445 Waybill

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-520673.1
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 #: 280-135445-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 4/22/2020			
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	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW7-040820 (280-135445-1)	4/8/20	08:45 Pacific		Water			X	3	
MW5-040820 (280-135445-2)	4/8/20	09:55 Pacific		Water			X	3	
SW1-040820 (280-135445-3)	4/8/20	10:50 Pacific		Water			X	3	
MW12I-040820 (280-135445-4)	4/8/20	11:25 Pacific		Water			X	3	
SW4-040820 (280-135445-5)	4/8/20	11:30 Pacific		Water			X	3	
SW6-040820 (280-135445-6)	4/8/20	12:10 Pacific		Water			X	3	
MW13D-040820 (280-135445-7)	4/8/20	12:40 Pacific		Water			X	3	
SW7-040820 (280-135445-8)	4/8/20	13:40 Pacific		Water			X	3	
MW6-040820 (280-135445-9)	4/8/20	15:00 Pacific		Water			X	3	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica 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 Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

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
[signature]	4/13/2020 1410		[signature]	04/14/20 1040	TA
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: 3.3 #1 ICE

Ver: 01/16/2019

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-520673.2
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 #: 280-135445-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 4/22/2020			
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	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW14-040820 (280-135445-10)	4/8/20	15:13 Pacific		Water			X	3	
MW20DD-040820 (280-135445-11)	4/8/20	Pacific		Water			X	3	
TB1 (280-135445-12)	4/8/20	Pacific		Water			X	6	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the labo

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
1	[signature]	4/13/2020 1410		[signature]	4/14/20 1000	TA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	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: 3.3 #1 ICE

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Aspect Consulting

Job Number: 280-135445-1

Login Number: 135445
List Number: 1
Creator: Sara, Betsy A

List Source: Eurofins TestAmerica, Denver

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	
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	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: 280-135445-1

Login Number: 135445
List Number: 2
Creator: Yeager, Brian A

List Source: Eurofins TestAmerica, Buffalo
List Creation: 04/14/20 03:51 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	3.3 ice ir gun #1
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.	True	
Chlorine Residual checked.	True	