November 24, 2021

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

Re: Third Quarter 2021 Environmental Monitoring Report
Hansville Landfill, Kitsap County, Washington
Project No. 160423-A-05-05.1

Dear Alexis:

This quarterly report summarizes the results of environmental monitoring conducted at the Hansville Landfill (Site) during the third quarter of 2021, and was prepared by Aspect Consulting, LLC (Aspect) on behalf of Kitsap County Public Works Solid Waste Division (County) 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 third quarter of 2021 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 – Third Quarter 2021

Site activities during the reporting period included environmental monitoring of landfill gas, groundwater, and surface water. Documentation of the quarterly activities is presented in the following attachments:

- Attachment A presents landfill gas monitoring data.
- Attachment B presents groundwater elevations, a groundwater contour map, and groundwater and surface water quality analytical results.
- Attachment C presents summary statistics, time-series graphs, and graphs of projected groundwater concentrations for arsenic and vinyl chloride at selected monitoring wells.
- Attachment D presents supporting field records, laboratory data reports, and chain-of-custody documentation.

A chronology of on-Site monitoring activities performed during the third quarter 2021 is provided below:

- On July 21, Aspect completed groundwater and surface water sampling in accordance with the Compliance Monitoring Plan (SCS, 2011).
- On August 2, Aspect implemented extraction wellhead improvements to reduce leakage and improve vacuum and landfill gas collection.
- On August 10, Kitsap County crews pumped out the condensate tank and western sump; Aspect was on the Site to observe the work.
- On August 19, Aspect conducted monthly performance monitoring of the blower system and condensate management system. Maintenance activities included replacement of the condensate pump.
- On September 16, 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 optimize landfill gas collection. Maintenance activities included final modifications of the landfill gas wellheads to improve vacuum distribution across the wellfield.

Collection of landfill gas samples is ongoing, and results of the air quality analysis will be presented in a separate document at the completion of the work, anticipated for later this year.

Deviations from the Compliance Monitoring Plan

There were no deviations from the Compliance Monitoring Plan (SCS, 2011) during the third quarter 2021 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 and system vacuum at the blower on July 21, August 19, and September 16, 2021. Aspect monitored landfill gas concentrations, vacuum, and flow at the extraction wells and compliance monitoring probes on September 16, 2021.

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 September 16, 2021, observed conditions remained within the normal range. At the blower inlet, methane and carbon dioxide concentrations were approximately 5.9 percent by volume and 15.3 percent by volume, respectively. The oxygen concentration was approximately 2.9 percent by volume. The flow rate was approximately 75 standard cubic feet per minute (scfm) with a system vacuum of 6.5 inches water column.

On August 10, 2021, an Aspect representative observed a crew from Kitsap County Public Works remove condensate from the 2,000-gallon condensate storage tank inside the flare compound and the western sump. Approximately 1,200 gallons were removed from the condensate storage tank and 1,350 gallons were removed from the western condensate sump.

Reduced vacuum was observed in the south and east portion of the wellfield. Measurements taken in the second quarter 2021 revealed about a 3.5-inch differential in vacuum across the well field, with the likely cause identified as blockages in the perimeter header. This condition was also observed during the third quarter 2021 before and after the western condensate sump was emptied. Based on observed conditions, alternative methods to address vacuum loss across the wellfield include:

- Inspect the perimeter header for blockages and remove blockages or replace blocked portions of the perimeter header.

- At the center of the wellfield, connect the north and/or west lateral to the south and east lateral to convey vacuum and landfill gas. Condensate would continue to drain to the perimeter header.

Landfill gas wellfield monitoring and tuning is conducted on a quarterly basis, during the third month of the quarter (March, June, September, December). Wellfield optimization will continue to focus on maximizing methane and carbon dioxide collection rates. 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.

The condensate collection rates have ranged between 0 and 100 gallons per month, since installation in December 2018. The condensate storage tank was emptied (approximately 1,200 gallons) for the first time in August 2021. The volume of condensate in the tank at the end of the third quarter was less than 200 gallons.

Explosive Gas Control

Methane was not detected in any of the compliance gas probes during the compliance monitoring event on September 16, 2021. 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 0.5 to 2.4 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 July 21, 2021. 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 third quarter of 2021 were consistent with those observed during previous monitoring events. Groundwater surface elevations were calculated using water levels measured July 21, 2021 (see Table B-1). Groundwater elevations ranged from 237.7 feet North American Vertical Datum of 1988 (NAVD88) in MW-12I to 266.0 feet NAVD88 in the upgradient, background monitoring well MW-5. The direction of groundwater flow at the Site was generally west across the landfill then shifts southwest, consistent with historical observations. 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 third quarter of 2021 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

(0.014 mg/L) and MW-13D (0.00562 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 (ug/L) at all monitoring wells, except MW-6 (0.056 ug/L), MW-12I (0.11 ug/L), and MW-14 (0.052 ug/L), consistent with historical results.

Surface water quality results from the third quarter 2021 are presented in Table B-3, including field parameters, conventional parameters, dissolved metals, and volatile organic compounds. During the reporting period, dissolved arsenic concentrations in surface water were below the Site-specific cleanup level of 0.005 mg/L at all monitoring locations. Dissolved manganese concentrations in surface water were below the Site-specific cleanup level of 2.24 mg/L. Vinyl chloride concentrations in surface water were not detected at a reporting limit below the Site-specific cleanup level of 0.025 ug/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 have gradually increased to exceed the cleanup level, doing so for the first time in the second quarter 2020. This increasing trend is evaluated and discussed in the following section. 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 ug/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 steadily decreasing over time. Variability in rates of decreasing concentrations is attributed to inconsistent landfill gas collection system performance, which is actively monitored and being corrected through wellhead maintenance.

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 1.5 to 8 years. If the slowly increasing trend for dissolved arsenic at MW-13D continues, concentrations may regularly exceed the cleanup level, but will remain below the Puget Sound regional background of 8 ug/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 on Figure C-3.

A statistically significant increasing trend in dissolved arsenic concentrations was identified at monitoring well MW-13D. Dissolved arsenic concentrations exceeded the Site-specific cleanup levels during this monitoring period but remain below the regional natural background value provided by Ecology (Ecology, 2016; Ecology, 2021), as shown on 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) and included 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 due to the timing and nature of concentration changes. 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 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 minimize geochemically mediated effects on groundwater.

[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 are provided in units of µg/L per year, to support interpretation. For comparison, Table C-1 provides Sen's slope values for both units.

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.

Washington State Department of Ecology (Ecology), 2021, Natural Background Groundwater Arsenic Concentrations in Washington State, Ecology Publication No. 14-09-044, Draft for Public Comment, July 2021.

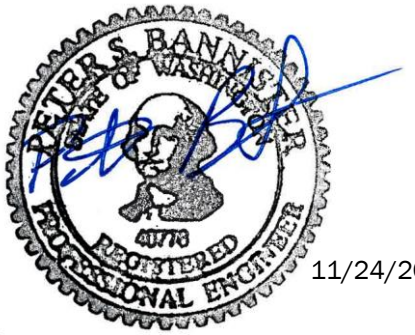
Limitations

Work for this project was performed for 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



11/24/2021

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

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

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

cc: Phil Perley, Waste Management of Washington
Steve Brown, Kitsap Public Health District
Cris Matthews, Washington State Department of Ecology
Joshua Carter, Roma Call, and Paul McCollum, Port Gamble S'Klallam Tribe

V:\160423 Kitsap County Hansville Landfill\Deliverables\2021 Reports\2021Q3\Q3 2021 Hansville Monitoring Report_Final_2021.11.24.docx

ATTACHMENT A

Landfill Gas Data

Table A-1. Landfill Gas Data, Third Quarter, 2021

Project No. 160423, Hansville Landfill, Hansville, WA

Location	Device ID	Date/Time	Methane CH_4 (% by vol)	Carbon Dioxide CO_2 (% by vol)	Oxygen O_2 (% by vol)	Hydrogen Sulfide H_2S (% by vol)	Balance Bal (% by vol)	Static Pressure (inches H_2O)		Gas Temperature (degrees F)		Flow Rate (SCFM)	
								Initial	Adjusted	Initial	Adjusted	Initial	Adjusted
Blower Inlet	HANSBLIN	9/16/21 9:38	5.9	15.3	2.9	10	75.9	-6.4	-6.4	64.5	64.6	75.1	74.9
Blower Outlet	HANSBLOT	9/16/21 9:41	5.9	15.3	2.9	21	75.9	N/A	N/A	N/A	N/A	N/A	N/A
Extraction Well 001	HANSR001	9/16/21 11:16	0	0.1	20.9	7	79	-0.37	-0.37	71.8	71.8	1.2	1.2
Extraction Well 002	HANSR002	9/16/21 11:07	2.1	10.7	8.4	8	78.8	N/A	N/A	N/A	N/A	N/A	N/A
Extraction Well 003	HANSR003	9/16/21 10:57	11.3	14.3	0	55	74.4	-1.37	-1.37	71.9	72.1	3.9	3.9
Extraction Well 004	HANSR004	9/16/21 10:27	4.9	17.7	0.5	12	76.9	-1.89	-1.89	73.7	73.8	3.1	3
Extraction Well 005	HANSR005	9/16/21 10:22	3.7	8.5	11.8	34	76	-1.15	-1.15	63.2	63.5	3.5	3.5
Extraction Well 006	HANSR006	9/16/21 10:17	3.1	16.6	3.4	5	76.9	-1.85	-1.85	78.8	78.9	3.8	3.6
Extraction Well 007	HANSR007	9/16/21 10:08	1.5	12.8	5.7	4	80	-1.19	-1.19	67.2	67.2	3.1	3.1
Extraction Well 008	HANSR008	9/16/21 12:07	8.1	18.1	0.1	0	73.7	-0.15	-0.15	66.6	66.7	1	1.1
Extraction Well 009	HANSR009	9/16/21 11:59	2.9	15.3	1.8	0	80	N/A	N/A	N/A	N/A	N/A	N/A
Extraction Well 010	HANSR010	9/16/21 11:34	9.6	10.7	3.1	5	76.6	-0.23	-0.23	66	67.5	0.5	0.5
Extraction Well 011	HANSR011	9/16/21 11:40	4.6	9.5	0	5	85.9	-0.09	-0.09	74.2	74.6	0	0
Extraction Well 012	HANSR012	9/16/21 9:51	23.7	6.4	0	29	69.9	-1.01	-1.01	69.2	69.3	1.6	1.7
Extraction Well 013	HANSR013	9/16/21 10:04	6.2	14.6	1.3	8	77.9	N/A	N/A	N/A	N/A	N/A	N/A
Trench Collector TD-1	HANSTD01	9/16/21 12:25	2.1	20.7	0.3	27	76.9	0.08	0.08	68.2	67.6	14.6	14.5
Trench Collector TR-1	HANSTR01	9/16/21 10:13	4.9	13.7	5.6	15	75.8	-0.66	-0.66	71.7	71.9	3.3	3.3
Trench Collector TR-2	HANSTR02	9/16/21 12:03	17.1	18.6	2.1	0	62.2	N/A	N/A	N/A	N/A	N/A	N/A
Trench Collector TR-3	HANSTR03	9/16/21 11:26	33.4	18.1	0	8	48.5	N/A	N/A	N/A	N/A	N/A	N/A
Trench Collector TR-4	HANSTR04	9/16/21 10:31	7.1	19.2	0	49	73.7	-0.63	-0.63	69.7	69.8	3.6	3.5
Trench Collector TR-5	HANSTR05	9/16/21 10:00	11.5	7.2	12.6	6	68.7	N/A	N/A	N/A	N/A	N/A	N/A
Trench Collector TR-6	HANSTR06	9/16/21 12:11	24.7	16.5	1.7	0	57.1	N/A	N/A	N/A	N/A	N/A	N/A
Trench Collector TR-7	HANSTR07	9/16/21 10:52	5.7	11.5	4.4	4	78.4	-0.5	-0.5	63.6	63.6	3.5	3.5
Gas Probe 1	HANSGP01	9/16/21 14:40	0.0	1.1	18.9	0.0	80.0	0.01	NA	NA	NA	NA	NA
Gas Probe 2 Shallow	HANSGP2S	9/16/21 14:20	0.0	0.5	19.6	0.0	79.9	0.01	NA	NA	NA	NA	NA
Gas Probe 2 Middle	HANSGP2M	9/16/21 14:25	0.0	1.0	19.5	0.0	79.5	0.0	NA	NA	NA	NA	NA
Gas Probe 2 Deep	HANSGP2D	9/16/21 14:30	0.0	1.2	18.0	0.0	80.8	0.02	NA	NA	NA	NA	NA
Gas Probe 3	HANSGP03	9/16/21 13:15	0.0	1.0	19.1	0.0	79.9	0.01	NA	NA	NA	NA	NA
Gas Probe 4	HANSGP04	9/16/21 13:40	0.0	1.2	19.6	0.0	79.2	0	NA	NA	NA	NA	NA
Gas Probe 5	HANSGP05	9/16/21 12:45	0.0	0.9	19.9	0.0	79.2	0.01	NA	NA	NA	NA	NA
Gas Probe 6	HANSGP06	9/16/21 0:30	0.0	2.4	18.2	0.0	79.4	0.02	NA	NA	NA	NA	NA
Gas Probe 7	HANSGP07	9/16/21 14:00	0.0	1.2	18.5	0.0	80.3	0.02	NA	NA	NA	NA	NA

Notes

Flow rates measured using orifice plates

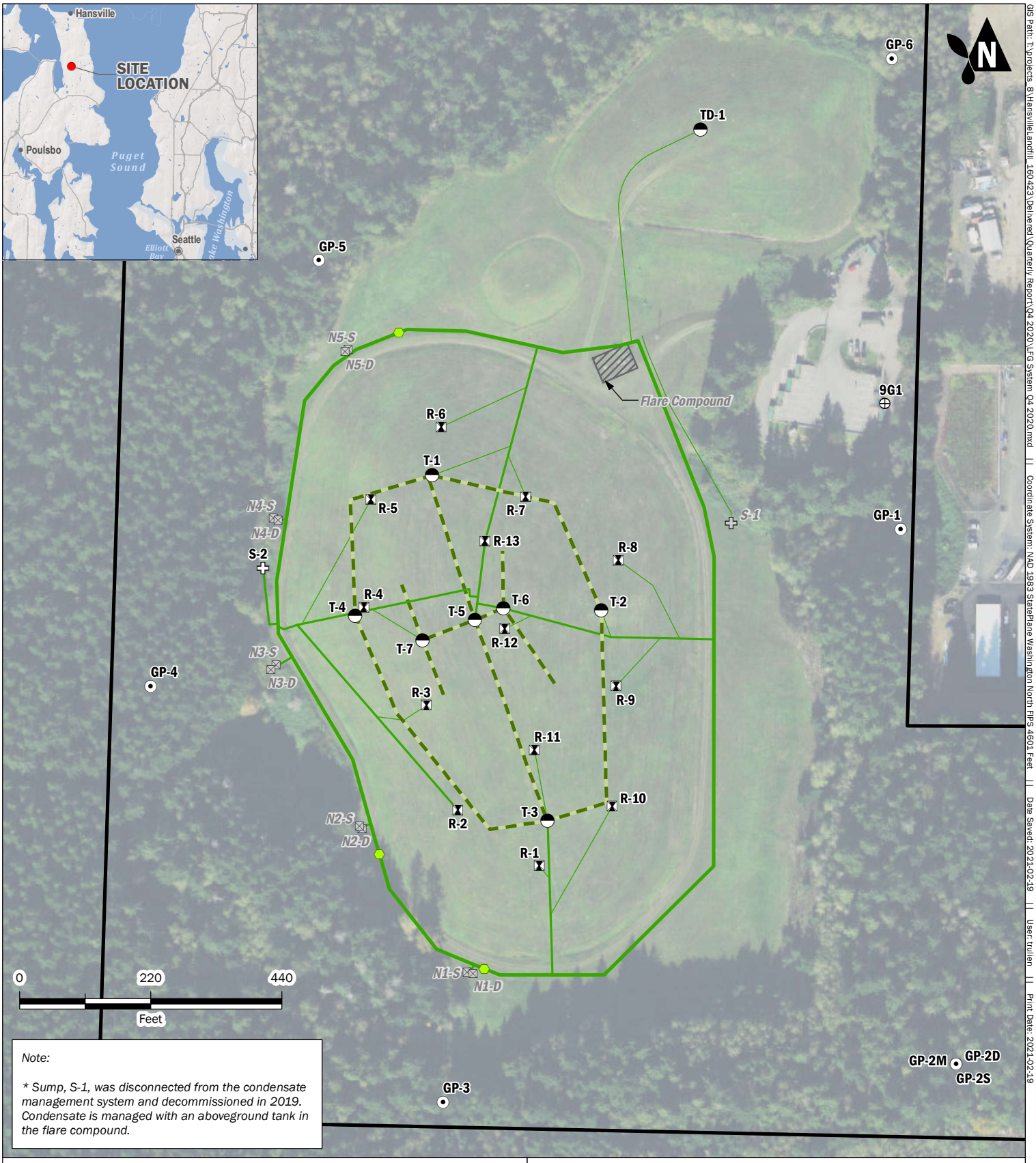
N/A = indicates parameter not measured

inches H_2O = inches water column

degrees F = degrees Fahrenheit

SCFM = standard cubic feet per minute

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



Note:

** Sump, S-1, was disconnected from the condensate management system and decommissioned in 2019. Condensate is managed with an aboveground tank in the flare compound.*

Exploration

- Gas Detection Probe
- Gas Extraction Well (in Refuse Completion)
- Gas Extraction Well (Native Soil Completion) *Disconnected in October, 2019*
- Trench Completion
- Well Geologic Control
- Condensate Sump
- Condensate Sump* *Decomissioned in 2019*

Landfill Gas System

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

Landfill Gas System

2021 Third Quarter Environmental Monitoring
Report Hansville Landfill
Kitsap County, Washington

Aspect Consulting	JUL-2021	BY: MLK / RAP	FIGURE NO. A-1
	PROJECT NO. 160423	REVISED BY: MLK	

GIS Path: T:\projects_8\HansvilleLandfill_160423\Delivered\Quarterly Report\Q4 2020\LFG System Q4 2020.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2021-02-19 || User: trullen || Print Date: 2021-02-19

ATTACHMENT B

Water Quality Results

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	100.95	266.0
MW-6	332.0	332.7	260	245	74.84	257.9
MW-7	344.3	346.0	259	244	85.21	260.8
MW-12I	245.6	248.1	217	207	10.41	237.7
MW-13D	258.1	260.4	205	195	11.98	248.4
MW-14	338.6	341.1	262	247	82.92	258.2

Notes

Depths to water collected July 21, 2021.

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	07/21/2021	07/21/2021	07/21/2021	07/21/2021	07/21/2021	07/21/2021
Parameter	**Units**	**Site Cleanup Level**						
Field Parameters								
Dissolved Oxygen	mg/L		**7.57**	**0.36**	**0.48**	**0.40**	**1.48**	**0.35**
pH	pH units		**6.73**	**7.09**	**6.21**	**7.19**	**7.57**	**7.21**
Redox	mV		**49.7**	**27.7**	**-58.6**	**28.0**	**28.1**	**9.7**
Specific Conductivity	uS/cm		**115.0**	**205.3**	**226.5**	**96.7**	**121**	**129.9**
Temperature	deg C		**11.9**	**12.9**	**10.5**	**11.3**	**11.7**	**12.6**
Turbidity	NTU		**2.72**	**1.88**	**2.21**	**2.03**	**1.92**	**2.16**
Conventionals								
Alkalinity	mg/L		**77**	**150**	**140**	**74**	**79**	**91**
Ammonia (as N)	mg/L		0.03 U	0.03 U	0.03 U	0.03 U	**0.039**	0.03 U
Bicarbonate	mg/L		**77**	**150**	**140**	**74**	**79**	**91**
Carbonate	mg/L		10 U	10 U	10 U	10 U	10 U	10 U
Chloride	mg/L		3.0 U	**3.6**	3.0 U	3.0 U	**4.7**	**4.9**
Nitrate (as N)	mg/L		**2.11**	**0.928**	**0.194**	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		**0.13**	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Sulfate	mg/L		**7.1**	**17**	5.0 U	**5.7**	**15**	**8.2**
Total Organic Carbon	mg/L		**1.1**	**2.0**	**2.5**	**3.0**	**1.2**	**3.1**
Dissolved Metals								
Arsenic	mg/L	0.005	**0.00177**	**0.00159**	**0.00110**	**0.00244**	**0.00562**	**0.014**
Manganese	mg/L	2.24	0.001 U	**0.32**	**0.0012**	**0.027**	**0.0058**	**0.87**
Volatile Organic Compounds (VOCs)								
Vinyl Chloride	ug/L	0.025	0.02 U	**0.056**	0.02 U	**0.11**	0.02 U	**0.052**

Notes

Bold text = Analyte was detected

Shaded Cell = Result exceeded Site Cleanup level

U = Not detected at or above the Reporting Limit shown

UJ = Analyte not detected and the Reporting Limit is an estimate

mg/L = milligram per liter

mV = millivolts

uS/cm = microSiemens per centimeter

deg C = degrees Celcius

NTU = Nephelometric Turbidity Units

ug/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	07/21/2021	07/21/2021	07/21/2021	07/21/2021
Parameter	**Units**	**Site Cleanup Level**				
Field Parameters						
Dissolved Oxygen	mg/L		**10.01**	**9.74**	**8.45**	**9.56**
pH	pH units		**7.02**	**7.76**	**7.3**	**7.53**
Redox	mV		**7.6**	**1.1**	**-2.5**	**9.2**
Specific Conductivity	uS/cm		**164.6**	**361.7**	**129.2**	**139.5**
Temperature	deg C		**11.3**	**12.1**	**14**	**12.6**
Turbidity	NTU		**4.37**	**20.2**	**41.3**	**14.8**
Conventionals						
Alkalinity	mg/L		**81**	**180**	**77**	**73**
Ammonia (as N)	mg/L		0.03 U	0.03 U	**0.067**	0.03 U
Bicarbonate	mg/L		**81**	**180**	**77**	**73**
Carbonate	mg/L		10 U	10 U	10 U	10 U
Chloride	mg/L		**4.1**	**14**	**3.4**	**3.2**
Nitrate (as N)	mg/L		**1.65**	**1.44**	0.100 U	0.100 U
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 U	0.10 U
Sulfate	mg/L		**8.4**	**23**	5.0 U	**5.9**
Total Organic Carbon	mg/L		**2.0**	**3.9**	**9.9**	**6.8**
Dissolved Metals						
Arsenic	mg/L	0.005	**0.00172**	**0.00182**	**0.00474**	**0.00176**
Manganese	mg/L	2.24	0.001 U	**0.031**	**0.089**	**0.0049**
Volatile Organic Compounds (VOCs)						
Vinyl Chloride	ug/L	0.025	0.02 U	0.02 U	0.02 U	0.02 U

Notes

Bold text = Analyte was detected

Shaded Cell = Result exceeded Site Cleanup level

U = Not detected at or above the Reporting Limit shown

mg/L = milligram per liter

mg/L = milligram per liter

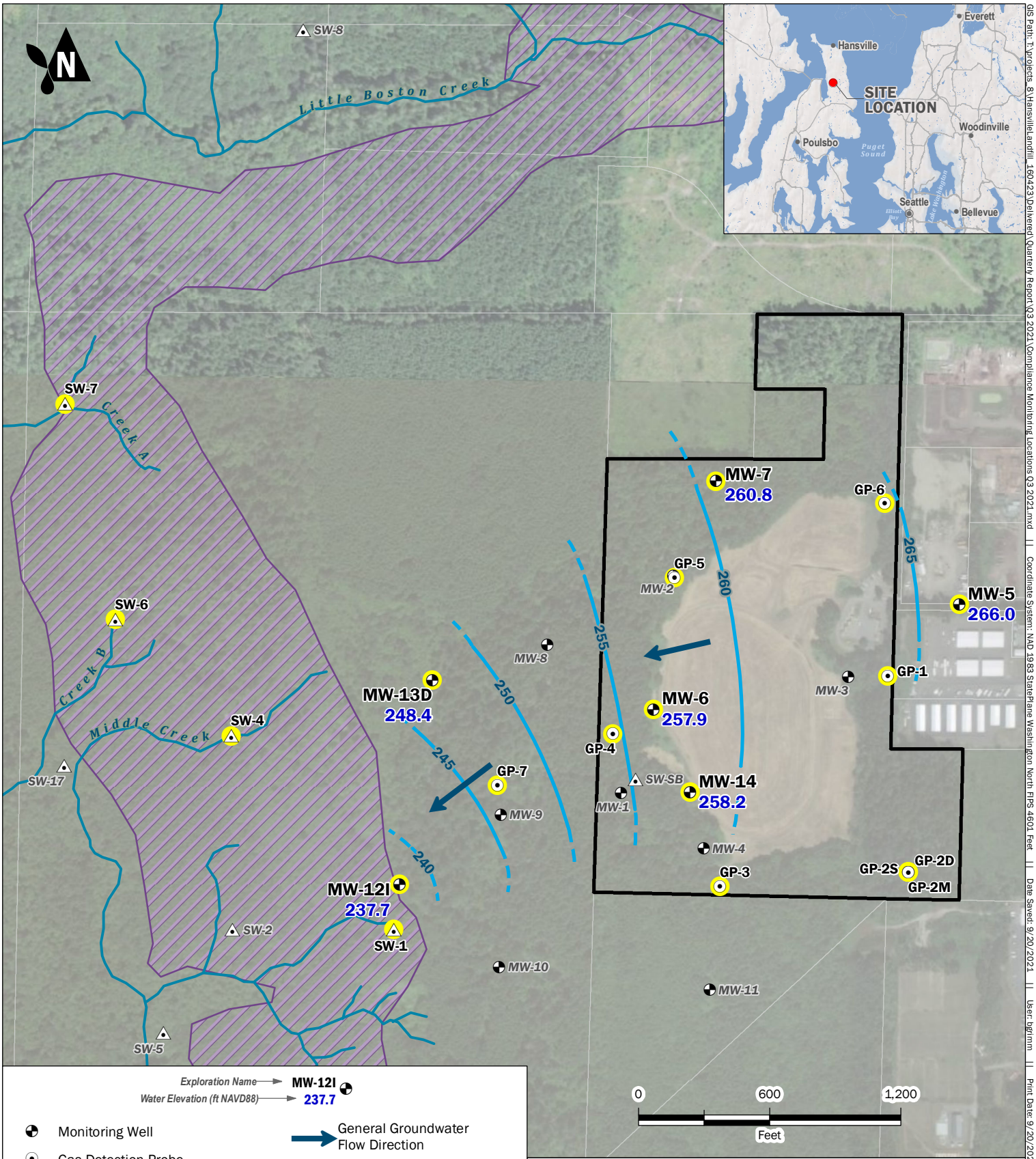
mV = millivolts

uS/cm = microSiemens per centimeter

deg C = degrees Celcius

NTU = Nephelometric Turbidity Units

ug/L = microgram per liter



Exploration Name → MW-12I
Water Elevation (ft NAVD88) → 237.7

- Monitoring Well
- Gas Detection Probe
- Surface Water Station
- Compliance Monitoring Location
- Water Elevation Contour (ft NAVD88, dashed where inferred) *Measured January 20th, 2021*
- 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

Third Quarter 2021 Environmental Monitoring Report
Hansville Landfill
Kitsap County, Washington

Aspect Consulting	SEP-2021	BY: MLK / RAP	FIGURE NO. B-1
	PROJECT NO. 160423	REVISED BY: WEG	

GIS Path: T:\projects_8\Hansville\Landfill_160423\Delivered\Quarterly Report\Q3 2021\Compliance Monitoring Locations Q3 2021.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 9/20/2021 || User: bgrimm || Print Date: 9/20/2021

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	7.7	1.96	58	Yes	5.3E-07	0.00019
MW-14	Decreasing	-7.7	-1.96	58	Yes	-3.1E-06	-0.0011

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	-7.6	-1.96	58	Yes	-6.5E-05	-0.024
MW-7	--	--	--	--	--		--
MW-12I	Decreasing	-7.2	-1.96	59	Yes	-7.9E-05	-0.029
MW-13D	--	--	--	--	--		--
MW-14	Decreasing	-8.9	-1.96	59	Yes	-9.3E-05	-0.034

Notes

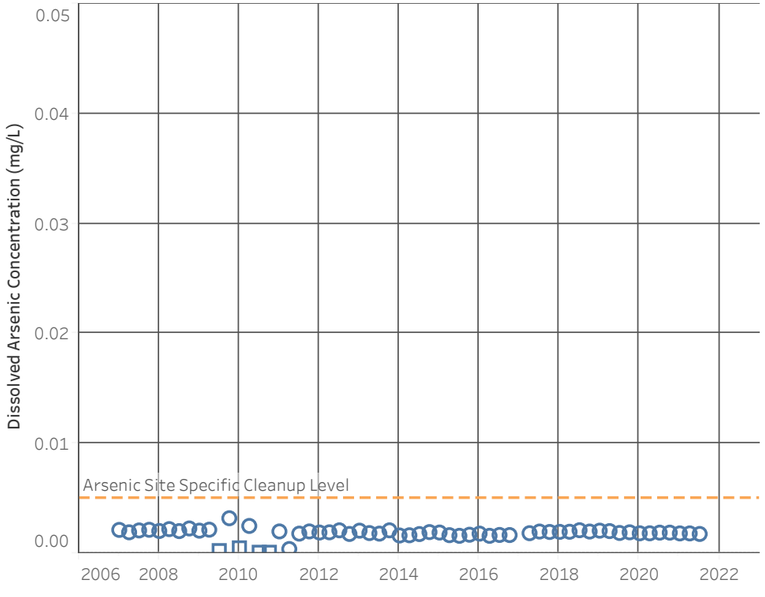
1 - The Statistical Trend indicates:
"Non-significant" if the magnitude of the Test Value is less than the Critical Value,
"Increasing" if the magnitude of the Test Value is greater than the Critical Value and the Sen's Slope is positive, or
"Decreasing" if the magnitude of the Test Value is greater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

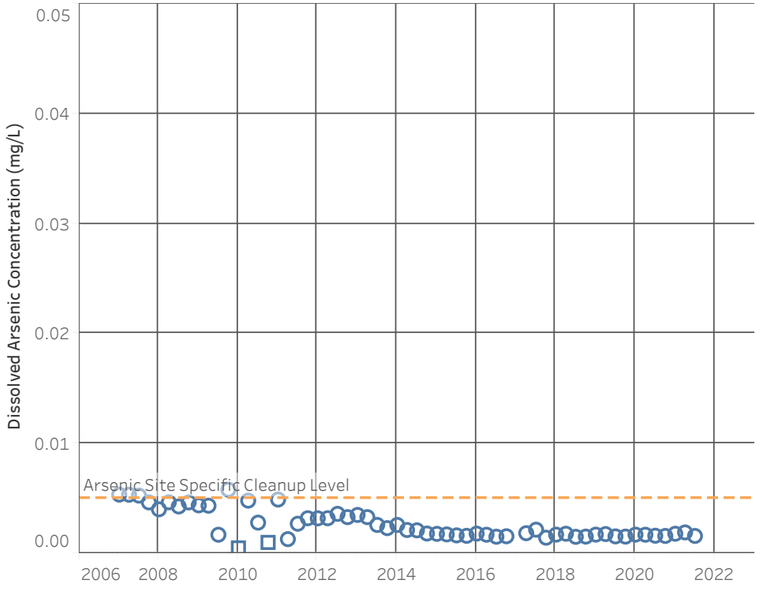
3 - "--" Indicates statistical analysis not conducted.
ug/L - micrograms per liter

4 - Data range is from 2nd quarter 2006 through 3nd quarter 2021

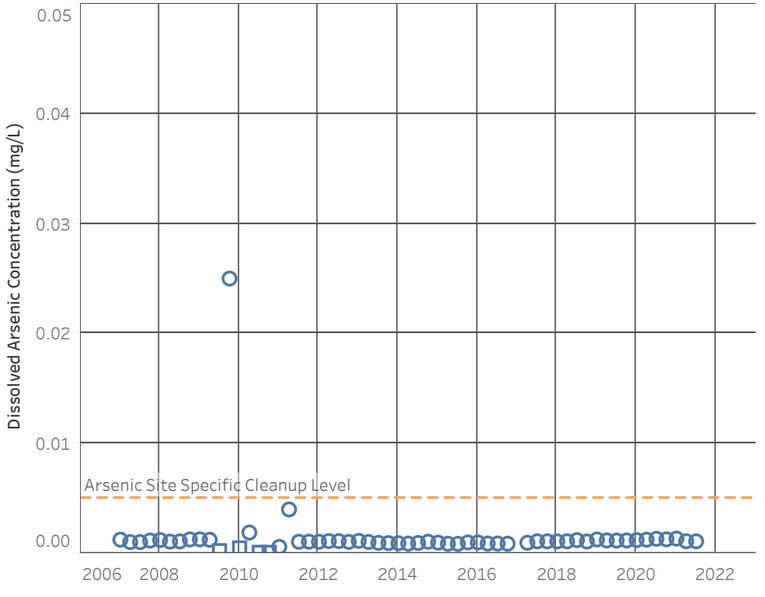
MW-5 (Background Well)



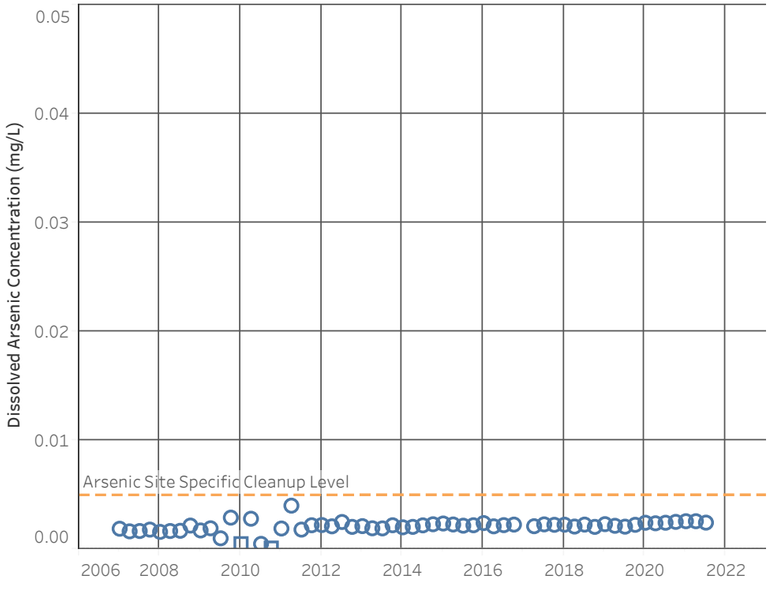
MW-6



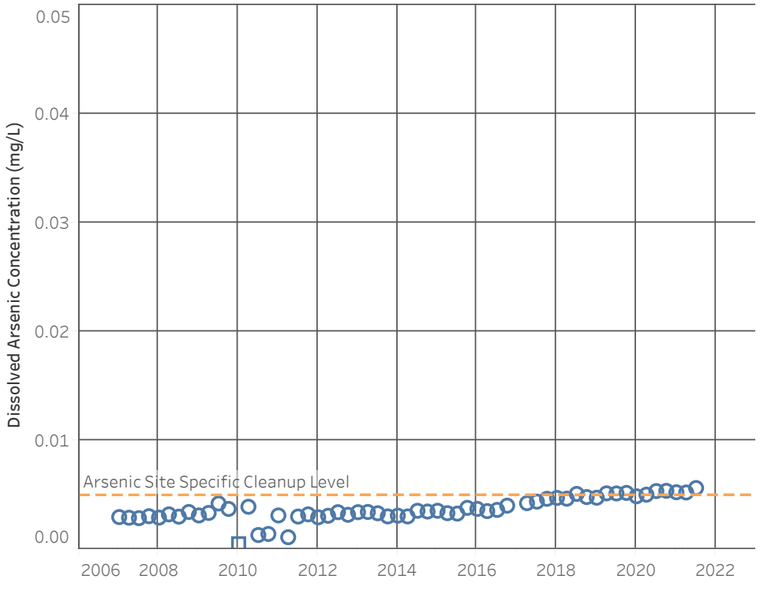
MW-7



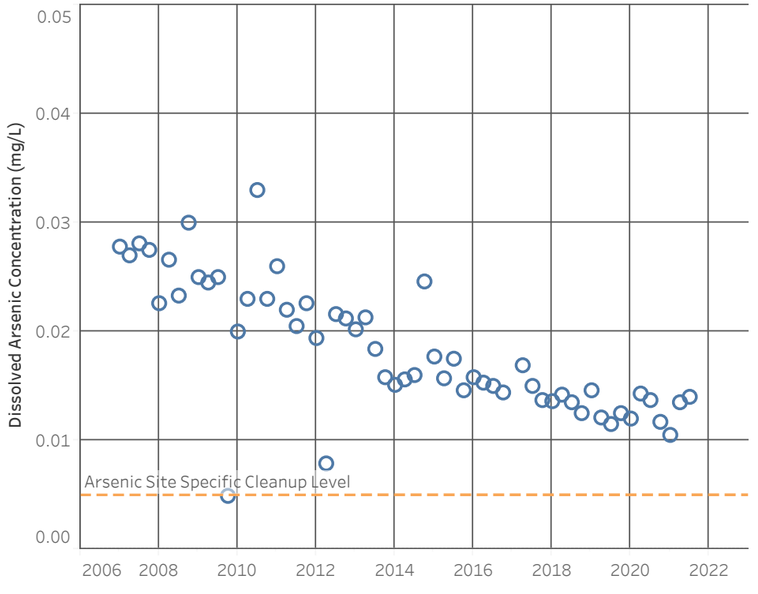
MW-12I



MW-13D



MW-14



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

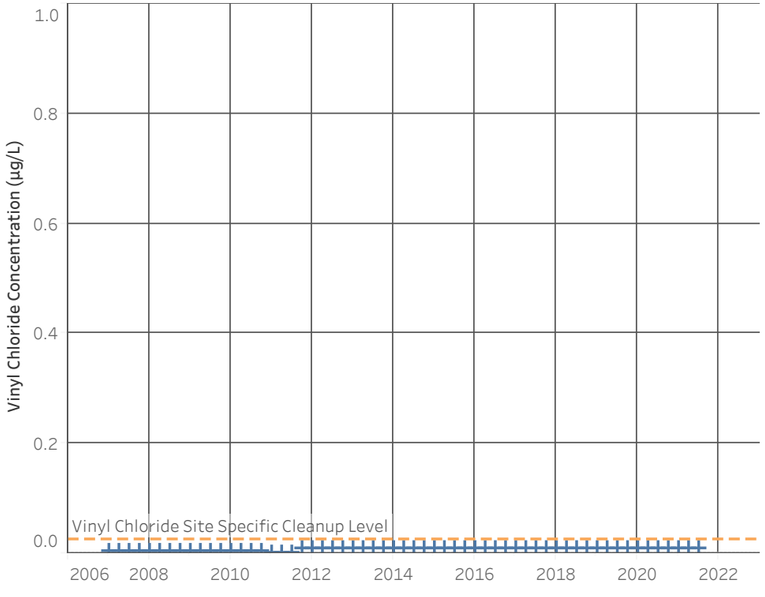
Result Flags
○ Detected □ U - Non-Detect

Aspect CONSULTING

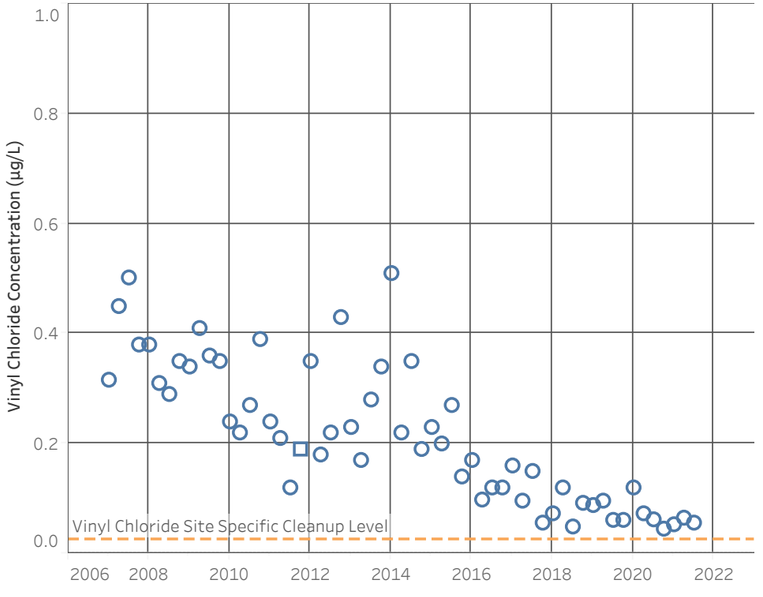
10/27/2021
Trend Plots (As)

Figure C-1 - 2021 Third Quarter Dissolved Arsenic Sampling Results
2021 Third Quarter Environmental Monitoring Report
Hansville Landfill
Kitsap County, WA

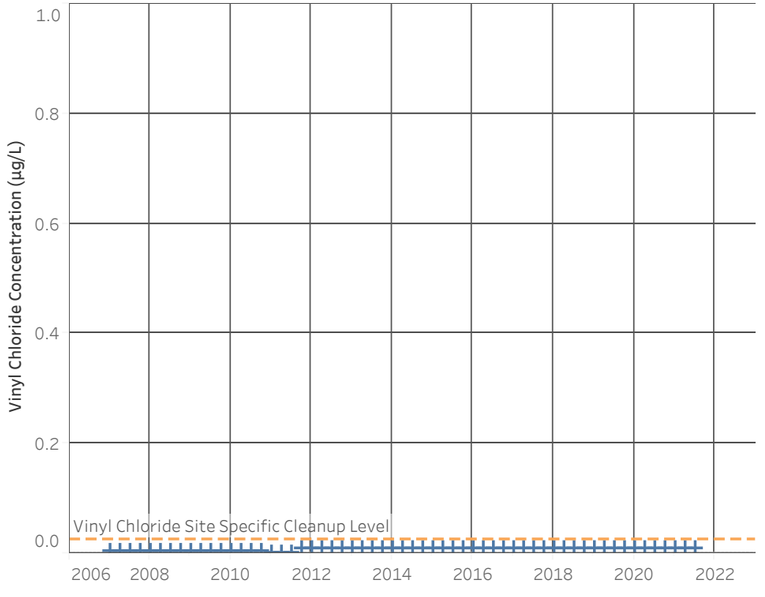
MW-5 (Background Well)



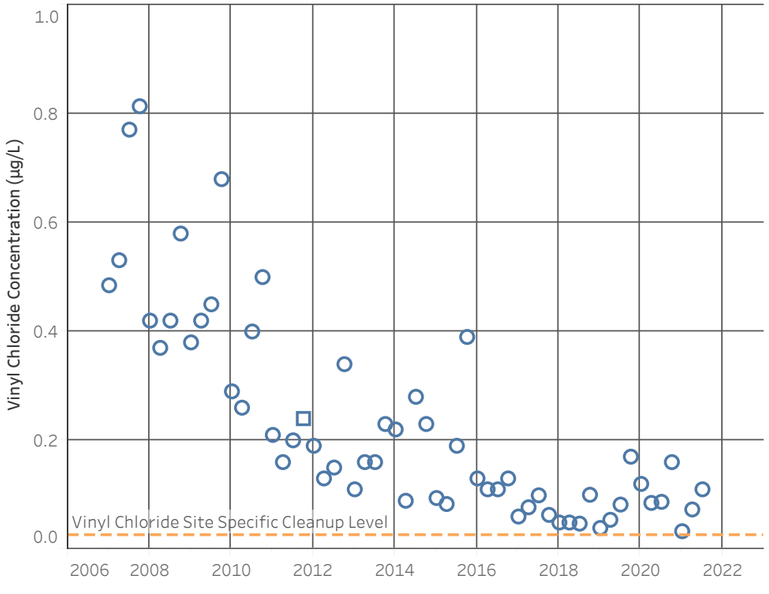
MW-6



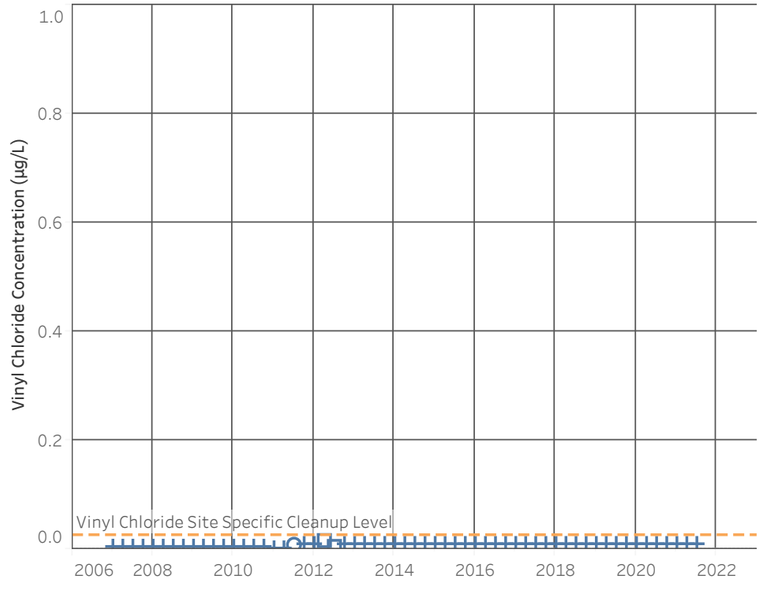
MW-7



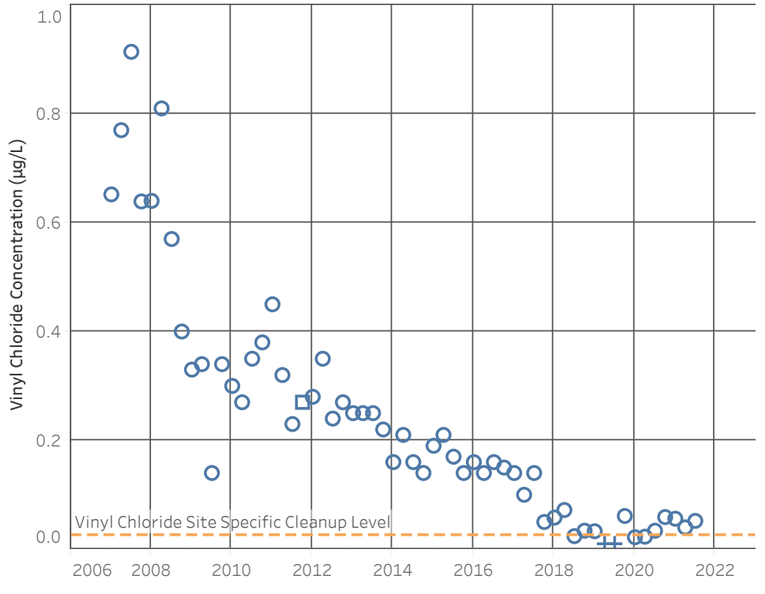
MW-12I



MW-13D



MW-14



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

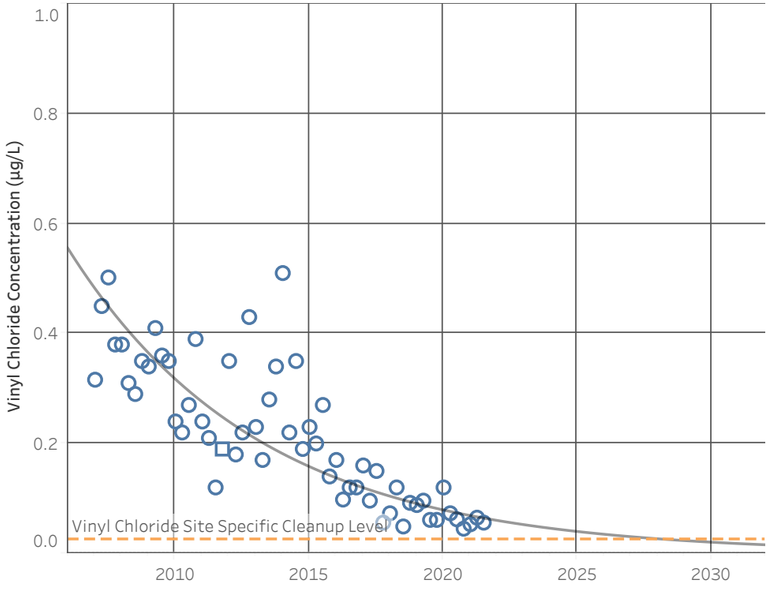
Note: Non-detected values are shown at 1/2 the reporting limit.

Aspect CONSULTING

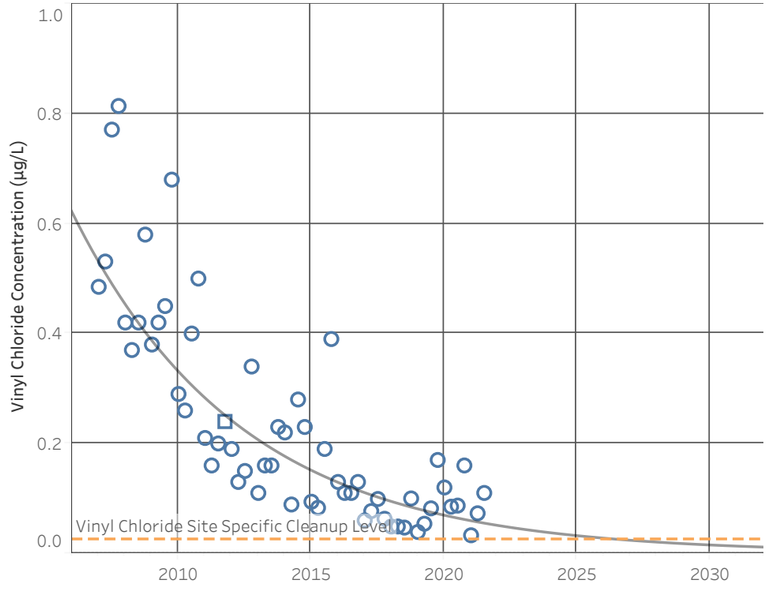
10/27/2021
Trend Plots (VC)

Figure C-2 - 2021 Third Quarter Vinyl Chloride Sampling Results
2021 Third Quarter Environmental Monitoring Report
Hansville Landfill
Kitsap County, WA

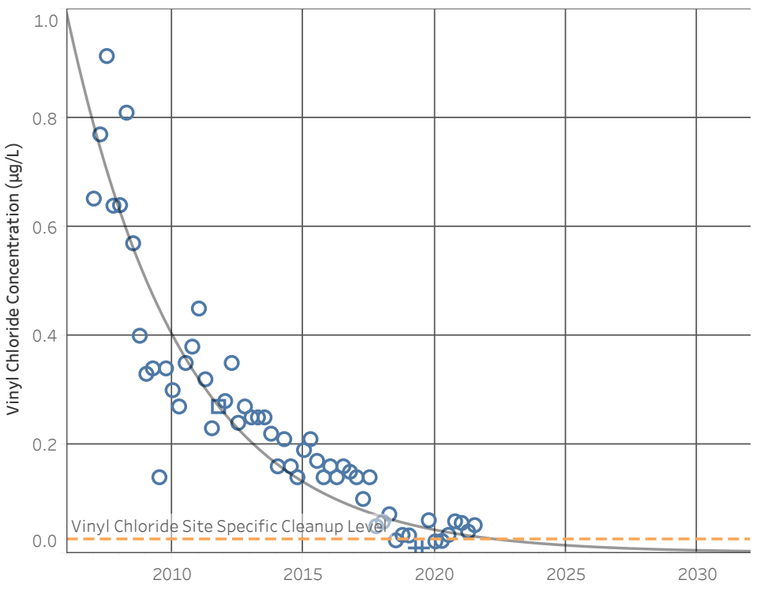
MW-6 Vinyl Chloride Trend



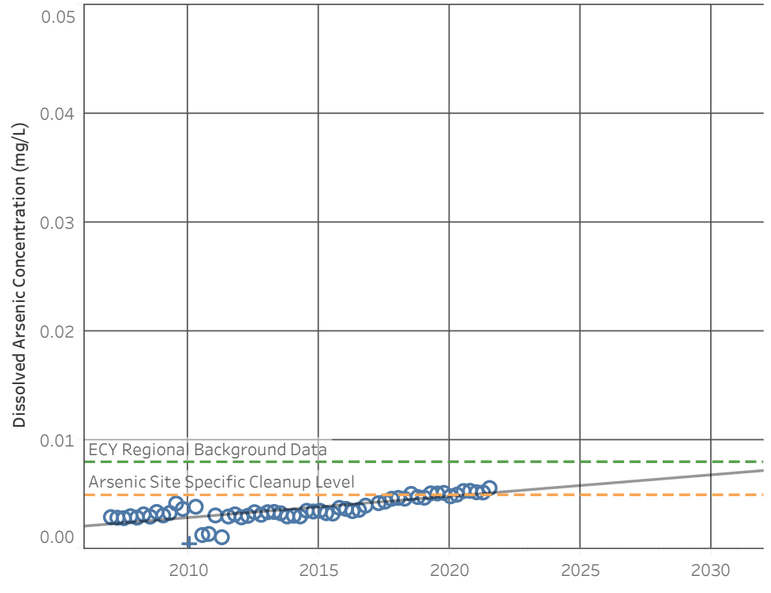
MW-12I Vinyl Chloride Trend



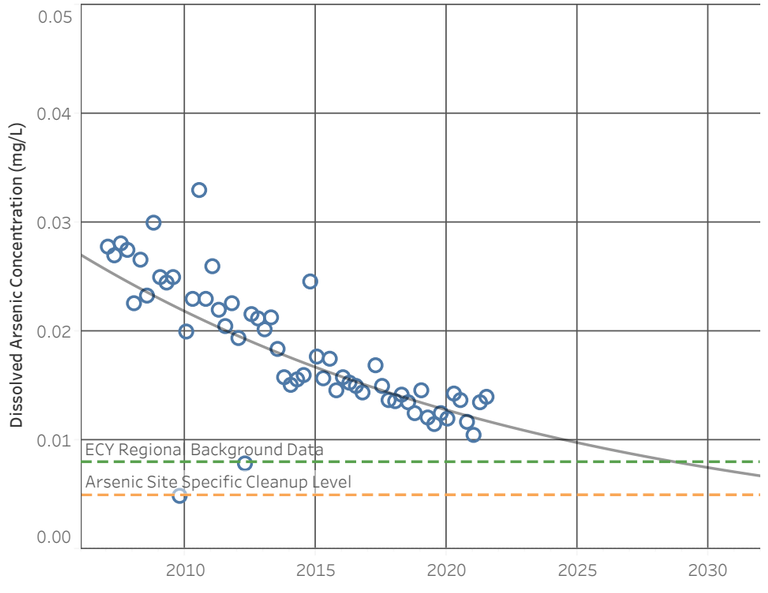
MW-14 Vinyl Chloride Trend



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

Aspect CONSULTING

10/27/2021
Trend Plots (VC)

Figure C-3 - 10 Year Attenuation Curves
2021 Third Quarter Environmental Monitoring Report
Hansville Landfill
Kitsap County, WA

ATTACHMENT D

Field Forms and Laboratory Reports

Aspect CONSULTING

Sample number MW-5-072121

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-5 Page: 1 of 1

Project Name: Hansville Landfill
Project Number: 160423
Date: 7/21/2021
Starting Water Level (ft TOC): 100.95
Sampled by: DCB or CB
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): midscreen

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
0915	0	0.2	100.95	—	—	—	—	—	—	Start
0920	1.0	↓	101.02	12.2	123.4	13.20	6.68	89.3	175	Clear, no odor, no sheen
0925	2.0		101.02	11.7	121.2	6.97	6.20	88.5	3.97	
0930	3.0		101.03	12.9	118.0	6.61	6.36	67.5	2.81	
0935	4.0		101.00	13.1	118.2	6.57	6.47	59.4	2.78	
0940	5.0		101.00	13.3	118.2	6.39	6.60	49.9	2.66	
0943	6.0		101.00	11.9	116.4	7.24	6.76	45.1	2.74	
0946	7.0		101.00	11.8	115.5	7.43	6.70	51.1	2.93	
0949	8.0		101.00	11.8	115.0	7.58	6.72	50.9	3.11	
0952	9.0		101.01	11.9	115.0	7.56	6.73	49.9	2.97	
0955	10.0		101.01	11.9	115.0	7.57	6.73	49.7	2.72	
1000	11.0	↓								

Total Gallons Purged: 11L = Total Casing Volumes Removed: ---

Ending Water Level (ft TOC): 101.04 Ending Total Depth (ft TOC): ---

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
						Color	Turbidity & Sediment	
1000	40	VOA	3	N	HCl	clear	2.72	
↓	250	Amber	2	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: green 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 MW-6-072121

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-6 Page: 1 of 1

Project Name: Hansville Landfill
Date: 7/21/2021
Sampled by: DCB or CB
Measuring Point of Well: N TOC
Screened Interval (ft. TOC) –
Filter Pack Interval (ft. TOC) –

Project Number: 160423
Starting Water Level (ft TOC): 74.84
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): midscreen

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
1522	0	0.2	74.84	–	–	–	–	–	–	Start
1527	1.0	↓	74.84	13.1	200.3	1.93	7.10	30.5	5.01	Clear, no odor, no sheen
1538	2.0		74.84	12.7	204.7	0.77	7.11	27.5	2.50	
1543	3.0		74.86	12.9	205.8	0.45	7.09	28.5	1.60	
1548	4.0		74.87	13.0	206.8	0.37	7.08	28.1	2.11	
1553	5.0		74.87	12.9	205.9	0.36	7.09	27.7	1.88	
1558	6.0	↓	74.87	12.9	205.3	0.36	7.09	27.7		

Total Gallons Purged: 6.0 L
Total Casing Volumes Removed: ---
Ending Water Level (ft TOC): 74.91
Ending Total Depth (ft TOC): ---

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1605	40	VOA	3	N	HCl			
↓	250	Amber	2	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: orange 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 MW-7-072121

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-7 Page: 1 of 1

Project Name: Hansville Landfill
Date: 7/21/2021
Sampled by: DCB or CB
Measuring Point of Well: N TOC
Screened Interval (ft. TOC) —
Filter Pack Interval (ft. TOC) —

Project Number: 160423
Starting Water Level (ft TOC): 85.21
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): midscreen

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
0730		0.2	85.21	—	—	—	—	—	—	Start
0735		↓	85.21	12.9	345.3	8.35	7.05	-13.9	2.12	clear, no odor
0740			85.21	12.8	322.3	9.13	6.96	-13.1	1.82	
0745			85.21	10.8	231.4	2.98	6.10	-20.8	3.42	
0750			85.21	10.6	227.3	0.95	6.07	-34.2	2.19	
0755			85.21	10.6	226.7	0.55	6.14	-46.4	2.03	
0758			85.21	10.5	225.4	0.53	6.17	-52.7	2.47	
0801			85.21	10.5	226.1	0.48	6.20	-57.1	2.33	
0804			85.21	10.5	226.6	0.48	6.21	-58.2	2.28	
0807			85.21	10.5	226.5	0.48	6.21	-58.6	2.21	
0810		↓								sample

Total Gallons Purged: ~1.25
Total Casing Volumes Removed: ---
Ending Water Level (ft TOC): 85.21
Ending Total Depth (ft TOC): ---

SAMPLE INVENTORY

	Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
X	0810	40	VOA	3	N	HCl	clear	2.21	
X	↓	250	Amber	2	N	H2SO4	↓	↓	
X		500	Poly	2	N	N			direct sub to ARI x1
X		500	Poly	2	Y	HNO3			direct sub to ARI x1
X	↓	250	Poly	1	Y	N	↓	↓	direct sub to ARI

METHODS

Parameters measured with (instrument model & serial number) YSI: orange Turbidimeter: orange WLI: purple/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-072121

GROUNDWATER SAMPLING RECORD

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

Project Name: Hansville Landfill
Project Number: 160423
Date: 7/21/2021
Starting Water Level (ft TOC): 10.41
Sampled by: DCB or CB
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): midscreen

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
1100	0	0.2	10.41	–	–	–	–	–	–	Start
1105	1.0	↓	10.41	10.1	96.8	1.71	6.93	56.3	10.04	Clear, no odor no sheen
1110	2.0		10.41	10.9	97.0	0.56	6.89	51.0	3.77	
1115	3.0		10.45	11.3	97.0	0.55	7.10	36.4	2.75	
1120	4.0		10.43	11.4	96.1	0.47	7.16	32.2	2.81	
1125	5.0		10.44	11.5	95.9	0.43	7.18	29.8	2.44	
1130	6.0		10.44	11.4	96.4	0.41	7.19	28.8	2.95	
1135	7.0	↓	10.44	11.3	96.7	0.40	7.19	28.0	2.03	↓
~~1140~~	~~8.0~~									

Total Gallons Purged: 7.0L
Total Casing Volumes Removed: ---
Ending Water Level (ft TOC): 10.46
Ending Total Depth (ft TOC): ---

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
						Color	Turbidity & Sediment	
1140	40	VOA	3	N	HCl	Clear	2.03	
↓	250	Amber	2	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: Orange 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 MW-13D-072121

GROUNDWATER SAMPLING RECORD

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

Project Name: Hansville Landfill
Date: 7/21/2021
Sampled by: DCB or CB
Measuring Point of Well: N TOC
Screened Interval (ft. TOC) –
Filter Pack Interval (ft. TOC) –

Project Number: 160423
Starting Water Level (ft TOC): 11.98
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): midscreen

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
1220	0	0.2	11.98	–	–	–	–	–	–	Start
1225	1.0		11.98	11.6	121.2	2.88	7.19	40.8	2.96	Clear, slight sulfur-like odor, freshen
1230	2.0		11.98	11.2	121.4	2.78	7.42	39.5	2.97	
1235	3.0		12.01	11.8	120.5	2.16	7.41	38.7	3.48	
1240	4.0		12.01	11.9	121.2	1.51	7.57	29.0	2.27	
1245	5.0		12.01	11.8	121.1	1.54	7.57	28.4	2.74	
1250	6.0		12.01	11.7	121.0	1.48	7.57	28.1	2.70	
~~1255~~										

Total Gallons Purged: 6.02 Total Casing Volumes Removed: ---

Ending Water Level (ft TOC): 12.04 Ending Total Depth (ft TOC): ---

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
						Color	Turbidity & Sediment	
1255	40	VOA	3	N	HCl	Clear	1.92	
↓	250	Amber	2	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: orange WLI: Blue/white

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

Disposal of Discharged Water: on site

Observations/Comments:

MW-20DD-072121

Aspect CONSULTING

Sample number MW-14-072121

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-14 Page: 1 of 1

Project Name: Hansville Landfill
Date: 7/21/2021
Sampled by: DCB or CB
Measuring Point of Well: N TOC
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)

Project Number: 160423
Starting Water Level (ft TOC): 82.92'
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): midscreen

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
1335	0	0.2	82.92	—	—	—	—	—	—	Start
1340	1.0		82.98	12.8	125.1	6.02	7.36	10.1	4.22	Clear, no odor, no sheen
1345	2.0		82.98	12.7	127.3	1.72	7.25	11.5	3.64	
1350	3.0		82.98	12.7	128.5	0.45	7.22	11.2	3.39	
1355	4.0		82.98	12.6	129.3	0.37	7.21	11.7	2.38	
1400	5.0		82.98	12.6	130.2	0.35	7.20	11.6	2.63	
1405	6.0		82.95	12.6	129.9	0.35	7.21	11.7	2.76	

Total Gallons Purged: 6.0 L
Total Casing Volumes Removed: ---
Ending Water Level (ft TOC): 83.21
Ending Total Depth (ft TOC): ---

SAMPLE INVENTORY

Time	Volume mL	Bottle Type	Quantity	Filtration	Preservation	Appearance: Color	Appearance: Turbidity & Sediment	Remarks
1410	40	VOA	3	N	HCl	Clear	2.16	
	250	Amber	2	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: Orange WLI: Blue/white
Purging Equipment: dedicated bladder pump OR peristaltic Decon Equipment: Alconox + water
Disposal of Discharged Water: on site
Observations/Comments: Collected Duplicate MW-20DD-072121

Aspect CONSULTING

Sample number SW-1-072121

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-1 Page: ___ of ___

Project Name: Hansville Landfill
Project Number: 160423
Date: 7/21/2021
Starting Water Level (ft TOC): ~
Sampled by: DCB or CB
Casing Stickup (ft): ---
Measuring Point of Well: N TOC
Total Depth (ft TOC): ---
Screened Interval (ft. TOC) ~
Casing Diameter (inches): ~
Filter Pack Interval (ft. TOC) ~

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

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
1120				11.3	164.6	10.01	7.02	7.6	4.37	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	
1120	40	VOA	3	N	HCl	clear	4.37	
↓	250	Amber	2	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: orange Turbidimeter: orange WLI: ~
Purging Equipment: dedicated bladder pump OR peristaltic Decon Equipment: Alconox + water
Disposal of Discharged Water: on site
Observations/Comments:

P:\Kitsap County Solid Waste\Hansville Landfill 2016\Project 160423\Data\Field Data\WQ Sampling\Groundwater Sampling Form_Hansville

Aspect CONSULTING

Sample number SW-4-072121

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-4 Page: 1 of 1

Project Name: Hansville Landfill
Date: 7/21/2021
Sampled by: DCB or CB
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): midscreen

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				12.1	361.7	9.74	7.76	1.1	20.2	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
1210	40	VOA	3	N	HCl	brown	20.2	
↓	250	Amber	2	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: orange Turbidimeter: orange 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-6-072121

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-6 Page: 1 of 1

Project Name: Hansville Landfill
Project Number: 160423
Date: 7/21/2021
Starting Water Level (ft TOC): —
Sampled by: DCB or CB
Casing Stickup (ft): ---
Measuring Point of Well: N TOC
Total Depth (ft TOC): ---
Screened Interval (ft. TOC) —
Casing Diameter (inches):
Filter Pack Interval (ft. TOC) —

Casing Volume — (ft Water) x — (Lpfv)(gpf) = — (L)(gal)

Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

Sample Intake Depth (ft TOC): midscreen

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
1300				14.0	129.2	8.45	7.30	-2.5	41.3	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
1300	40	VOA	3	N	HCl	brown	41.3	
↓	250	Amber	2	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: orange Turbidimeter: orange 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-7-072121

GROUNDWATER SAMPLING RECORD

WELL NUMBER: SW-7 Page: 1 of 1

Project Name: Hansville Landfill
Date: 7/21/2021
Sampled by: DCB or CB
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): midscreen

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
1400				12.6	139.5	9.56	7.53	9.2	14.8	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
1400	40	VOA	3	N	HCl	clear	14.8	
↓	250	Amber	2	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: orange Turbidimeter: orange WLI:
Purging Equipment: dedicated bladder pump OR peristaltic Decon Equipment: Alconox + water
Disposal of Discharged Water: on site
Observations/Comments:

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 280-151093-1
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:
8/9/2021 3:29:00 PM

Betsy Sara, Project Manager II
(303)736-0189
Betsy.Sara@Eurofinset.com

Table of Contents

Definitions/Glossary

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-151093-1

Qualifiers

Metals

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.

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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Job ID: 280-151093-1

Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Aspect Consulting

Project: Hansville Landfill

Report Number: 280-151093-1

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

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

Sample Receiving

The samples were received on 07/23/2021 and 07/26/2021. The temperatures of the coolers at receipt were 2.4 C, 2.5 C and 18.8 C.

Due to a delay in FedEx delivery, the sample MW6 was received at the laboratory outside the required temperature criteria of 6.0 C at a temperature of 18.8 C. The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

One of two 250 mL sulfuric acid preserved amber glass containers for the sample MW6 was received broken, however sufficient volume remained to proceed with the requested analyses. The client was notified.

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)

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

The percent recoveries and/or relative percent difference of the MS/MSD performed on sample MW6-072121 were outside control limits for Dissolved Manganese Method 6020 because the sample concentration was greater than four times the spike amount. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, no corrective action was taken.

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

Job ID: 280-151093-1 (Continued)

Laboratory: Eurofins TestAmerica, Denver (Continued)

General Comments

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

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

Detection Summary

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-151093-1

Client Sample ID: MW5-072121 — Lab Sample ID: 280-151093-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	7.1		5.0		mg/L	1		300.0	Total/NA
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	1.1		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: MW7-072121 — Lab Sample ID: 280-151093-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	1.2		1.0		ug/L	1		6020	Dissolved
Total Alkalinity	140		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	140		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: MW12I-072121 — Lab Sample ID: 280-151093-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.11		0.020		ug/L	1		8260C SIM	Total/NA
Manganese	27		1.0		ug/L	1		6020	Dissolved
Sulfate	5.7		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	74		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	74		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	3.0		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: MW13D-072121 — Lab Sample ID: 280-151093-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	5.8		1.0		ug/L	1		6020	Dissolved
Chloride	4.7		3.0		mg/L	1		300.0	Total/NA
Sulfate	15		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	79		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	79		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	1.2		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: MW14-072121 — Lab Sample ID: 280-151093-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.052		0.020		ug/L	1		8260C SIM	Total/NA
Manganese	870		1.0		ug/L	1		6020	Dissolved
Chloride	4.9		3.0		mg/L	1		300.0	Total/NA
Sulfate	8.2		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	91		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	91		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	3.1		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: SW1-072121 — Lab Sample ID: 280-151093-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.1		3.0		mg/L	1		300.0	Total/NA
Sulfate	8.4		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	81		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	81		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	2.0		1.0		mg/L	1		SM 5310B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-151093-1

Client Sample ID: SW4-072121 — Lab Sample ID: 280-151093-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	31		1.0		ug/L	1		6020	Dissolved
Chloride	14		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	3.9		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: SW7-072121 — Lab Sample ID: 280-151093-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	4.9		1.0		ug/L	1		6020	Dissolved
Chloride	3.2		3.0		mg/L	1		300.0	Total/NA
Sulfate	5.9		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	73		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	73		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	6.8		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: SW6-072121 — Lab Sample ID: 280-151093-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	89		1.0		ug/L	1		6020	Dissolved
Chloride	3.4		3.0		mg/L	1		300.0	Total/NA
Ammonia as N	0.067		0.030		mg/L	1		350.1	Total/NA
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	9.9		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: MW20DD-072121 — Lab Sample ID: 280-151093-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.053		0.020		ug/L	1		8260C SIM	Total/NA
Manganese	870		1.0		ug/L	1		6020	Dissolved
Chloride	4.7		3.0		mg/L	1		300.0	Total/NA
Sulfate	8.2		5.0		mg/L	1		300.0	Total/NA
Total Alkalinity	90		10		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity	90		10		mg/L	1		SM 2320B	Total/NA
Total Organic Carbon - Average	2.9		1.0		mg/L	1		SM 5310B	Total/NA

Client Sample ID: TB1 — Lab Sample ID: 280-151093-12

No Detections.

Client Sample ID: MW6-072121 — Lab Sample ID: 280-151166-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	0.056		0.020		ug/L	1		8260C SIM	Total/NA
Manganese	320		1.0		ug/L	1		6020	Dissolved
Chloride	3.6		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	2.0		1.0		mg/L	1		SM 5310B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-151093-1

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: 280-151093-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-151093-1	MW5-072121	Water	07/21/21 10:00	07/23/21 09:20
280-151093-2	MW7-072121	Water	07/21/21 08:10	07/23/21 09:20
280-151093-3	MW12I-072121	Water	07/21/21 11:40	07/23/21 09:20
280-151093-4	MW13D-072121	Water	07/21/21 12:55	07/23/21 09:20
280-151093-5	MW14-072121	Water	07/21/21 14:10	07/23/21 09:20
280-151093-6	SW1-072121	Water	07/21/21 11:20	07/23/21 09:20
280-151093-7	SW4-072121	Water	07/21/21 12:10	07/23/21 09:20
280-151093-8	SW7-072121	Water	07/21/21 14:00	07/23/21 09:20
280-151093-9	SW6-072121	Water	07/21/21 13:00	07/23/21 09:20
280-151093-11	MW20DD-072121	Water	07/21/21 00:00	07/23/21 09:20
280-151093-12	TB1	Water	07/21/21 08:10	07/23/21 09:20
280-151166-1	MW6-072121	Water	07/21/21 16:05	07/26/21 09:10

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

Client Sample ID: MW5-072121
Date Collected: 07/21/21 10:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			07/28/21 21:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*118*		*50 - 150*		*07/28/21 21:09*	*1*
TBA-d9 (Surr)	*106*		*50 - 150*		*07/28/21 21:09*	*1*

Client Sample ID: MW7-072121
Date Collected: 07/21/21 08:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			07/28/21 21:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*121*		*50 - 150*		*07/28/21 21:33*	*1*
TBA-d9 (Surr)	*105*		*50 - 150*		*07/28/21 21:33*	*1*

Client Sample ID: MW12I-072121
Date Collected: 07/21/21 11:40
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**0.11**		0.020		ug/L			07/28/21 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*119*		*50 - 150*		*07/28/21 21:57*	*1*
TBA-d9 (Surr)	*97*		*50 - 150*		*07/28/21 21:57*	*1*

Client Sample ID: MW13D-072121
Date Collected: 07/21/21 12:55
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			07/28/21 22:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*122*		*50 - 150*		*07/28/21 22:21*	*1*
TBA-d9 (Surr)	*113*		*50 - 150*		*07/28/21 22:21*	*1*

Client Sample ID: MW14-072121
Date Collected: 07/21/21 14:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**0.052**		0.020		ug/L			07/28/21 22:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*118*		*50 - 150*		*07/28/21 22:46*	*1*
TBA-d9 (Surr)	*94*		*50 - 150*		*07/28/21 22:46*	*1*

Client Sample ID: SW1-072121
Date Collected: 07/21/21 11:20
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			07/28/21 23:10	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*125*		*50 - 150*		*07/28/21 23:10*	*1*
TBA-d9 (Surr)	*106*		*50 - 150*		*07/28/21 23:10*	*1*

Client Sample ID: SW4-072121
Date Collected: 07/21/21 12:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			07/28/21 23:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*123*		*50 - 150*		*07/28/21 23:34*	*1*
TBA-d9 (Surr)	*100*		*50 - 150*		*07/28/21 23:34*	*1*

Client Sample ID: SW7-072121
Date Collected: 07/21/21 14:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			07/28/21 23:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*122*		*50 - 150*		*07/28/21 23:59*	*1*
TBA-d9 (Surr)	*101*		*50 - 150*		*07/28/21 23:59*	*1*

Client Sample ID: SW6-072121
Date Collected: 07/21/21 13:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			07/29/21 00:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*122*		*50 - 150*		*07/29/21 00:23*	*1*
TBA-d9 (Surr)	*101*		*50 - 150*		*07/29/21 00:23*	*1*

Client Sample ID: MW20DD-072121
Date Collected: 07/21/21 00:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	**0.053**		0.020		ug/L			07/29/21 00:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*122*		*50 - 150*		*07/29/21 00:47*	*1*
TBA-d9 (Surr)	*113*		*50 - 150*		*07/29/21 00:47*	*1*

Client Sample ID: TB1
Date Collected: 07/21/21 08:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.020		ug/L			07/29/21 01:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*125*		*50 - 150*		*07/29/21 01:11*	*1*
TBA-d9 (Surr)	*116*		*50 - 150*		*07/29/21 01:11*	*1*

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

Client Sample ID: MW6-072121
Date Collected: 07/21/21 16:05
Date Received: 07/26/21 09:10

Lab Sample ID: 280-151166-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.056		0.020		ug/L			07/29/21 21:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*121*		*50 - 150*		*07/29/21 21:17*	*1*
TBA-d9 (Surr)	*108*		*50 - 150*		*07/29/21 21:17*	*1*

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

Client Sample ID: MW5-072121
Date Collected: 07/21/21 10:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		1.0		ug/L		07/26/21 09:20	07/27/21 01:26	1

Client Sample ID: MW7-072121
Date Collected: 07/21/21 08:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	1.2		1.0		ug/L		07/26/21 09:20	07/27/21 11:06	1

Client Sample ID: MW12I-072121
Date Collected: 07/21/21 11:40
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	27		1.0		ug/L		07/26/21 09:20	07/27/21 01:33	1

Client Sample ID: MW13D-072121
Date Collected: 07/21/21 12:55
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	5.8		1.0		ug/L		07/26/21 09:20	07/27/21 10:51	1

Client Sample ID: MW14-072121
Date Collected: 07/21/21 14:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	870		1.0		ug/L		07/26/21 09:20	07/27/21 01:40	1

Client Sample ID: SW1-072121
Date Collected: 07/21/21 11:20
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		1.0		ug/L		07/26/21 09:20	07/27/21 01:44	1

Client Sample ID: SW4-072121
Date Collected: 07/21/21 12:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	31		1.0		ug/L		07/26/21 09:20	07/27/21 01:48	1

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

Client Sample ID: SW7-072121
Date Collected: 07/21/21 14:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**4.9**		1.0		ug/L		07/26/21 09:20	07/27/21 10:55	1

Client Sample ID: SW6-072121
Date Collected: 07/21/21 13:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**89**		1.0		ug/L		07/26/21 09:20	07/27/21 01:55	1

Client Sample ID: MW20DD-072121
Date Collected: 07/21/21 00:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**870**		1.0		ug/L		07/26/21 09:20	07/27/21 01:59	1

Client Sample ID: MW6-072121
Date Collected: 07/21/21 16:05
Date Received: 07/26/21 09:10

Lab Sample ID: 280-151166-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**320**		1.0		ug/L		07/29/21 16:30	07/30/21 18:33	1

General Chemistry

Client Sample ID: MW5-072121
Date Collected: 07/21/21 10:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/L			07/26/21 19:36	1
Sulfate	**7.1**		5.0		mg/L			07/26/21 19:36	1
Ammonia as N	ND		0.030		mg/L			07/24/21 12:09	1
Total Alkalinity	**77**		10		mg/L			07/27/21 20:46	1
Bicarbonate Alkalinity	**77**		10		mg/L			07/27/21 20:46	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 20:46	1
Total Organic Carbon - Average	**1.1**		1.0		mg/L			07/29/21 23:47	1

Client Sample ID: MW7-072121
Date Collected: 07/21/21 08:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/L			07/26/21 19:50	1
Sulfate	ND		5.0		mg/L			07/26/21 19:50	1
Ammonia as N	ND		0.030		mg/L			07/24/21 12:11	1
Total Alkalinity	**140**		10		mg/L			07/27/21 21:26	1
Bicarbonate Alkalinity	**140**		10		mg/L			07/27/21 21:26	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 21:26	1
Total Organic Carbon - Average	**2.5**		1.0		mg/L			07/28/21 01:29	1

Client Sample ID: MW12I-072121
Date Collected: 07/21/21 11:40
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0		mg/L			07/26/21 21:14	1

General Chemistry (Continued)

Client Sample ID: MW12I-072121
Date Collected: 07/21/21 11:40
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**5.7**		5.0		mg/L			07/26/21 21:14	1
Ammonia as N	ND		0.030		mg/L			07/24/21 12:13	1
Total Alkalinity	**74**		10		mg/L			07/27/21 21:55	1
Bicarbonate Alkalinity	**74**		10		mg/L			07/27/21 21:55	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 21:55	1
Total Organic Carbon - Average	**3.0**		1.0		mg/L			07/26/21 18:25	1

Client Sample ID: MW13D-072121
Date Collected: 07/21/21 12:55
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.7**		3.0		mg/L			07/26/21 21:28	1
Sulfate	**15**		5.0		mg/L			07/26/21 21:28	1
Ammonia as N	**0.039**		0.030		mg/L			07/25/21 15:20	1
Total Alkalinity	**79**		10		mg/L			07/27/21 21:50	1
Bicarbonate Alkalinity	**79**		10		mg/L			07/27/21 21:50	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 21:50	1
Total Organic Carbon - Average	**1.2**		1.0		mg/L			07/28/21 01:44	1

Client Sample ID: MW14-072121
Date Collected: 07/21/21 14:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.9**		3.0		mg/L			07/26/21 21:42	1
Sulfate	**8.2**		5.0		mg/L			07/26/21 21:42	1
Ammonia as N	ND		0.030		mg/L			07/24/21 12:17	1
Total Alkalinity	**91**		10		mg/L			07/27/21 20:34	1
Bicarbonate Alkalinity	**91**		10		mg/L			07/27/21 20:34	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 20:34	1
Total Organic Carbon - Average	**3.1**		1.0		mg/L			07/28/21 01:59	1

Client Sample ID: SW1-072121
Date Collected: 07/21/21 11:20
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.1**		3.0		mg/L			07/26/21 21:56	1
Sulfate	**8.4**		5.0		mg/L			07/26/21 21:56	1
Ammonia as N	ND		0.030		mg/L			07/24/21 12:25	1
Total Alkalinity	**81**		10		mg/L			07/27/21 20:40	1
Bicarbonate Alkalinity	**81**		10		mg/L			07/27/21 20:40	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 20:40	1
Total Organic Carbon - Average	**2.0**		1.0		mg/L			07/26/21 19:09	1

Client Sample ID: SW4-072121
Date Collected: 07/21/21 12:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14**		3.0		mg/L			07/26/21 22:10	1
Sulfate	**23**		5.0		mg/L			07/26/21 22:10	1
Ammonia as N	ND		0.030		mg/L			07/24/21 12:45	1

General Chemistry (Continued)

Client Sample ID: SW4-072121
Date Collected: 07/21/21 12:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	**180**		10		mg/L			07/27/21 21:44	1
Bicarbonate Alkalinity	**180**		10		mg/L			07/27/21 21:44	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 21:44	1
Total Organic Carbon - Average	**3.9**		1.0		mg/L			07/26/21 19:23	1

Client Sample ID: SW7-072121
Date Collected: 07/21/21 14:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3.2**		3.0		mg/L			07/26/21 22:24	1
Sulfate	**5.9**		5.0		mg/L			07/26/21 22:24	1
Ammonia as N	ND		0.030		mg/L			07/24/21 12:47	1
Total Alkalinity	**73**		10		mg/L			07/27/21 21:38	1
Bicarbonate Alkalinity	**73**		10		mg/L			07/27/21 21:38	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 21:38	1
Total Organic Carbon - Average	**6.8**		1.0		mg/L			07/26/21 19:38	1

Client Sample ID: SW6-072121
Date Collected: 07/21/21 13:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3.4**		3.0		mg/L			07/26/21 22:38	1
Sulfate	ND		5.0		mg/L			07/26/21 22:38	1
Ammonia as N	**0.067**		0.030		mg/L			07/25/21 14:34	1
Total Alkalinity	**77**		10		mg/L			07/27/21 20:23	1
Bicarbonate Alkalinity	**77**		10		mg/L			07/27/21 20:23	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 20:23	1
Total Organic Carbon - Average	**9.9**		1.0		mg/L			07/26/21 20:22	1

Client Sample ID: MW20DD-072121
Date Collected: 07/21/21 00:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4.7**		3.0		mg/L			07/26/21 22:52	1
Sulfate	**8.2**		5.0		mg/L			07/26/21 22:52	1
Ammonia as N	ND		0.030		mg/L			07/24/21 13:35	1
Total Alkalinity	**90**		10		mg/L			07/27/21 20:29	1
Bicarbonate Alkalinity	**90**		10		mg/L			07/27/21 20:29	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 20:29	1
Total Organic Carbon - Average	**2.9**		1.0		mg/L			07/28/21 02:13	1

Client Sample ID: MW6-072121
Date Collected: 07/21/21 16:05
Date Received: 07/26/21 09:10

Lab Sample ID: 280-151166-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3.6**		3.0		mg/L			07/28/21 20:00	1
Sulfate	**17**		5.0		mg/L			07/28/21 20:00	1
Ammonia as N	ND		0.030		mg/L			07/27/21 12:51	1
Total Alkalinity	**150**		10		mg/L			07/28/21 01:21	1
Bicarbonate Alkalinity	**150**		10		mg/L			07/28/21 01:21	1

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-151093-1

General Chemistry (Continued)

Client Sample ID: MW6-072121
Date Collected: 07/21/21 16:05
Date Received: 07/26/21 09:10

Lab Sample ID: 280-151166-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonate Alkalinity	ND		10		mg/L			07/28/21 01:21	1
Total Organic Carbon - Average	**2.0**		1.0		mg/L			07/28/21 00:45	1

Surrogate Summary

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-151093-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)											
		DBFM	TBA										
Lab Sample ID	Client Sample ID	(50-150)	(50-150)										
280-151093-1	MW5-072121	118	106										
280-151093-2	MW7-072121	121	105										
280-151093-3	MW12I-072121	119	97										
280-151093-4	MW13D-072121	122	113										
280-151093-5	MW14-072121	118	94										
280-151093-6	SW1-072121	125	106										
280-151093-7	SW4-072121	123	100										
280-151093-8	SW7-072121	122	101										
280-151093-9	SW6-072121	122	101										
280-151093-11	MW20DD-072121	122	113										
280-151093-12	TB1	125	116										
280-151166-1	MW6-072121	121	108										
480-187724-I-3 MS	Matrix Spike	105	72										
480-187724-I-3 MSD	Matrix Spike Duplicate	102	79										
LCS 480-590818/6	Lab Control Sample	101	80										
LCS 480-590980/6	Lab Control Sample	105	86										
LCSD 480-590818/7	Lab Control Sample Dup	102	83										
LCSD 480-590980/7	Lab Control Sample Dup	104	87										
MB 480-590818/9	Method Blank	115	95										
MB 480-590980/9	Method Blank	119	102										

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)
TBA = TBA-d9 (Surr)

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

Lab Sample ID: MB 480-590818/9
Matrix: Water
Analysis Batch: 590818

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			07/28/21 20:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*115*		*50 - 150*		*07/28/21 20:20*	*1*
TBA-d9 (Surr)	*95*		*50 - 150*		*07/28/21 20:20*	*1*

Lab Sample ID: LCS 480-590818/6
Matrix: Water
Analysis Batch: 590818

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	0.216		ug/L		108	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*101*		*50 - 150*
TBA-d9 (Surr)	*80*		*50 - 150*

Lab Sample ID: LCSD 480-590818/7
Matrix: Water
Analysis Batch: 590818

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	0.222		ug/L		111	50 - 150	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*102*		*50 - 150*
TBA-d9 (Surr)	*83*		*50 - 150*

Lab Sample ID: MB 480-590980/9
Matrix: Water
Analysis Batch: 590980

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			07/29/21 20:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*119*		*50 - 150*		*07/29/21 20:53*	*1*
TBA-d9 (Surr)	*102*		*50 - 150*		*07/29/21 20:53*	*1*

Lab Sample ID: LCS 480-590980/6
Matrix: Water
Analysis Batch: 590980

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	0.214		ug/L		107	50 - 150		

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

Lab Sample ID: LCS 480-590980/6
Matrix: Water
Analysis Batch: 590980

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	*105*		*50 - 150*
TBA-d9 (Surr)	*86*		*50 - 150*

Lab Sample ID: LCSD 480-590980/7
Matrix: Water
Analysis Batch: 590980

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	0.218		ug/L		109	50 - 150	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	*104*		*50 - 150*
TBA-d9 (Surr)	*87*		*50 - 150*

Lab Sample ID: 480-187724-I-3 MS
Matrix: Water
Analysis Batch: 590980

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

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	*105*		*50 - 150*
TBA-d9 (Surr)	*72*		*50 - 150*

Lab Sample ID: 480-187724-I-3 MSD
Matrix: Water
Analysis Batch: 590980

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

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dibromofluoromethane (Surr)	*102*		*50 - 150*
TBA-d9 (Surr)	*79*		*50 - 150*

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 280-544189/1-A
Matrix: Water
Analysis Batch: 544402

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544189

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		1.0		ug/L		07/26/21 09:20	07/27/21 00:48	1

Lab Sample ID: LCS 280-544189/2-A
Matrix: Water
Analysis Batch: 544402

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544189

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Manganese			40.0	37.6		ug/L		94	85 - 117		

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

Lab Sample ID: MB 280-544692/1-A
Matrix: Water
Analysis Batch: 544955

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 544692

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		1.0		ug/L		07/29/21 16:30	07/30/21 18:26	1

Lab Sample ID: LCS 280-544692/2-A
Matrix: Water
Analysis Batch: 544955

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 544692

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	40.0	40.3		ug/L		101	85 - 117

Lab Sample ID: 280-150781-B-6-B MS
Matrix: Water
Analysis Batch: 544402

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 544189

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	1500		40.0	1580	4	ug/L		162	85 - 117

Lab Sample ID: 280-150781-B-6-C MSD
Matrix: Water
Analysis Batch: 544402

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 544189

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Manganese	1500		40.0	1570	4	ug/L		135	85 - 117	1	20

Lab Sample ID: 280-151166-1 MS
Matrix: Water
Analysis Batch: 544955

Client Sample ID: MW6-072121
Prep Type: Dissolved
Prep Batch: 544692

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	320		40.0	349	4	ug/L		77	85 - 117

Lab Sample ID: 280-151166-1 MSD
Matrix: Water
Analysis Batch: 544955

Client Sample ID: MW6-072121
Prep Type: Dissolved
Prep Batch: 544692

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Manganese	320		40.0	350	4	ug/L		81	85 - 117	0	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 280-544320/6
Matrix: Water
Analysis Batch: 544320

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			07/26/21 14:59	1
Sulfate	ND		5.0		mg/L			07/26/21 14:59	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-544320/4
Matrix: Water
Analysis Batch: 544320

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	97.9		mg/L		98	90 - 110
Sulfate	100	99.8		mg/L		100	90 - 110

Lab Sample ID: LCSD 280-544320/5
Matrix: Water
Analysis Batch: 544320

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	97.8		mg/L		98	90 - 110	0	10
Sulfate	100	99.7		mg/L		100	90 - 110	0	10

Lab Sample ID: MRL 280-544320/3
Matrix: Water
Analysis Batch: 544320

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	4.62		mg/L		92	50 - 150
Sulfate	5.00	ND		mg/L		88	50 - 150

Lab Sample ID: 280-151093-2 MS
Matrix: Water
Analysis Batch: 544320

Client Sample ID: MW7-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	ND		50.0	49.4		mg/L		99	80 - 120
Sulfate	ND		50.0	49.5		mg/L		94	80 - 120

Lab Sample ID: 280-151093-2 MSD
Matrix: Water
Analysis Batch: 544320

Client Sample ID: MW7-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		50.0	48.8		mg/L		98	80 - 120	1	20
Sulfate	ND		50.0	49.4		mg/L		94	80 - 120	0	20

Lab Sample ID: 280-151093-2 DU
Matrix: Water
Analysis Batch: 544320

Client Sample ID: MW7-072121
Prep Type: Total/NA

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

Lab Sample ID: MB 280-544552/6
Matrix: Water
Analysis Batch: 544552

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			07/28/21 10:04	1
Sulfate	ND		5.0		mg/L			07/28/21 10:04	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 280-544552/4
Matrix: Water
Analysis Batch: 544552

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	101		mg/L		101	90 - 110
Sulfate	100	96.7		mg/L		97	90 - 110

Lab Sample ID: LCSD 280-544552/5
Matrix: Water
Analysis Batch: 544552

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	102		mg/L		102	90 - 110	0	10
Sulfate	100	97.0		mg/L		97	90 - 110	0	10

Lab Sample ID: MRL 280-544552/3
Matrix: Water
Analysis Batch: 544552

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	4.12		mg/L		82	50 - 150
Sulfate	5.00	ND		mg/L		85	50 - 150

Lab Sample ID: 280-150655-A-1 MS
Matrix: Water
Analysis Batch: 544552

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	ND		50.0	53.1		mg/L		103	80 - 120
Sulfate	8.7		50.0	60.6		mg/L		104	80 - 120

Lab Sample ID: 280-150655-A-1 MSD
Matrix: Water
Analysis Batch: 544552

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	ND		50.0	53.3		mg/L		104	80 - 120	0	20
Sulfate	8.7		50.0	61.1		mg/L		105	80 - 120	1	20

Lab Sample ID: 280-150655-A-1 DU
Matrix: Water
Analysis Batch: 544552

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	ND		ND		mg/L		NC	15
Sulfate	8.7		8.73		mg/L		0.2	15

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 280-544216/55
Matrix: Water
Analysis Batch: 544216

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			07/24/21 11:33	1

Lab Sample ID: MB 280-544216/90
Matrix: Water
Analysis Batch: 544216

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			07/24/21 12:43	1

Lab Sample ID: LCS 280-544216/53
Matrix: Water
Analysis Batch: 544216

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	2.34		mg/L		94	90 - 110

Lab Sample ID: LCS 280-544216/88
Matrix: Water
Analysis Batch: 544216

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	2.58		mg/L		103	90 - 110

Lab Sample ID: LCSD 280-544216/54
Matrix: Water
Analysis Batch: 544216

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
Ammonia as N	2.50	2.42		mg/L		97	90 - 110	4	10

Lab Sample ID: LCSD 280-544216/89
Matrix: Water
Analysis Batch: 544216

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
Ammonia as N	2.50	2.62		mg/L		105	90 - 110	2	10

Lab Sample ID: 280-151093-11 MS
Matrix: Water
Analysis Batch: 544216

Client Sample ID: MW20DD-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	ND		1.00	1.03		mg/L		101	90 - 110

Lab Sample ID: 280-151093-11 MSD
Matrix: Water
Analysis Batch: 544216

Client Sample ID: MW20DD-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	ND		1.00	1.02		mg/L		100	90 - 110	1	10

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 280-544234/20
Matrix: Water
Analysis Batch: 544234

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			07/25/21 13:56	1

Lab Sample ID: LCS 280-544234/18
Matrix: Water
Analysis Batch: 544234

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	2.44		mg/L		98	90 - 110		

Lab Sample ID: LCSD 280-544234/19
Matrix: Water
Analysis Batch: 544234

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
Ammonia as N			2.50	2.46		mg/L		98	90 - 110	1	10

Lab Sample ID: 280-151093-4 MS
Matrix: Water
Analysis Batch: 544234

Client Sample ID: MW13D-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia as N	0.039		1.00	0.939		mg/L		90	90 - 110		

Lab Sample ID: 280-151093-4 MSD
Matrix: Water
Analysis Batch: 544234

Client Sample ID: MW13D-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	0.039		1.00	0.939		mg/L		90	90 - 110	0	10

Lab Sample ID: 280-151093-9 MS
Matrix: Water
Analysis Batch: 544234

Client Sample ID: SW6-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia as N	0.067		1.00	1.04		mg/L		97	90 - 110		

Lab Sample ID: 280-151093-9 MSD
Matrix: Water
Analysis Batch: 544234

Client Sample ID: SW6-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	0.067		1.00	1.04		mg/L		97	90 - 110	1	10

Lab Sample ID: MB 280-544490/20
Matrix: Water
Analysis Batch: 544490

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			07/27/21 12:17	1

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: LCS 280-544490/18
Matrix: Water
Analysis Batch: 544490

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	2.55		mg/L		102	90 - 110		

Lab Sample ID: LCSD 280-544490/19
Matrix: Water
Analysis Batch: 544490

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
Ammonia as N			2.50	2.51		mg/L		100	90 - 110	2	10

Lab Sample ID: 280-150881-A-10 MS
Matrix: Water
Analysis Batch: 544490

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		
Ammonia as N	1.1		1.00	2.07		mg/L		99	90 - 110		

Lab Sample ID: 280-150881-A-10 MSD
Matrix: Water
Analysis Batch: 544490

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
Ammonia as N	1.1		1.00	2.00		mg/L		93	90 - 110	3	10

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-544563/33
Matrix: Water
Analysis Batch: 544563

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		10		mg/L			07/27/21 21:20	1
Bicarbonate Alkalinity	ND		10		mg/L			07/27/21 21:20	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 21:20	1

Lab Sample ID: MB 280-544563/6
Matrix: Water
Analysis Batch: 544563

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		10		mg/L			07/27/21 17:51	1
Bicarbonate Alkalinity	ND		10		mg/L			07/27/21 17:51	1
Carbonate Alkalinity	ND		10		mg/L			07/27/21 17:51	1

Lab Sample ID: MB 280-544563/60
Matrix: Water
Analysis Batch: 544563

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	ND		10		mg/L			07/28/21 00:29	1
Bicarbonate Alkalinity	ND		10		mg/L			07/28/21 00:29	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 280-544563/60
Matrix: Water
Analysis Batch: 544563

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonate Alkalinity	ND		10		mg/L			07/28/21 00:29	1

Lab Sample ID: LCS 280-544563/31
Matrix: Water
Analysis Batch: 544563

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

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 280-544563/4
Matrix: Water
Analysis Batch: 544563

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Alkalinity			200	206		mg/L		103	89 - 109		

Lab Sample ID: LCS 280-544563/58
Matrix: Water
Analysis Batch: 544563

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Alkalinity			200	208		mg/L		104	89 - 109		

Lab Sample ID: LCSD 280-544563/32
Matrix: Water
Analysis Batch: 544563

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
Total Alkalinity			200	208		mg/L		104	89 - 109	0	10

Lab Sample ID: LCSD 280-544563/5
Matrix: Water
Analysis Batch: 544563

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
Total Alkalinity			200	207		mg/L		103	89 - 109	0	10

Lab Sample ID: LCSD 280-544563/59
Matrix: Water
Analysis Batch: 544563

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
Total Alkalinity			200	209		mg/L		104	89 - 109	1	10

Lab Sample ID: 280-151093-2 DU
Matrix: Water
Analysis Batch: 544563

Client Sample ID: MW7-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity	140			142		mg/L				1	10

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 280-151111-A-12 DU
Matrix: Water
Analysis Batch: 544563

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity	210			207		mg/L				0.5	10

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

Lab Sample ID: MB 280-544413/13
Matrix: Water
Analysis Batch: 544413

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			07/26/21 16:27	1

Lab Sample ID: LCS 280-544413/11
Matrix: Water
Analysis Batch: 544413

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	23.8		mg/L		95	88 - 112		

Lab Sample ID: LCSD 280-544413/12
Matrix: Water
Analysis Batch: 544413

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
Total Organic Carbon - Average			25.0	23.8		mg/L		95	88 - 112	0	15

Lab Sample ID: MB 280-544573/30
Matrix: Water
Analysis Batch: 544573

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			07/28/21 00:14	1

Lab Sample ID: LCS 280-544573/29
Matrix: Water
Analysis Batch: 544573

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	24.1		mg/L		96	88 - 112		

Lab Sample ID: 280-151166-1 MS
Matrix: Water
Analysis Batch: 544573

Client Sample ID: MW6-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Average	2.0		25.0	26.3		mg/L		97	88 - 112		

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

Lab Sample ID: 280-151166-1 MSD
Matrix: Water
Analysis Batch: 544573

Client Sample ID: MW6-072121
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	2.0		25.0	26.2		mg/L		97	88 - 112	0	15

Lab Sample ID: MB 280-544867/35
Matrix: Water
Analysis Batch: 544867

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			07/29/21 23:15	1

Lab Sample ID: MB 280-544867/4
Matrix: Water
Analysis Batch: 544867

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			07/29/21 15:29	1

Lab Sample ID: LCS 280-544867/34
Matrix: Water
Analysis Batch: 544867

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	24.5		mg/L		98	88 - 112

Lab Sample ID: 280-151093-1 MS
Matrix: Water
Analysis Batch: 544867

Client Sample ID: MW5-072121
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average	1.1		25.0	25.9		mg/L		99	88 - 112

Lab Sample ID: 280-151093-1 MSD
Matrix: Water
Analysis Batch: 544867

Client Sample ID: MW5-072121
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	1.1		25.0	25.7		mg/L		98	88 - 112	0	15

GC/MS VOA

Analysis Batch: 590818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-1	MW5-072121	Total/NA	Water	8260C SIM	
280-151093-2	MW7-072121	Total/NA	Water	8260C SIM	
280-151093-3	MW12I-072121	Total/NA	Water	8260C SIM	
280-151093-4	MW13D-072121	Total/NA	Water	8260C SIM	
280-151093-5	MW14-072121	Total/NA	Water	8260C SIM	
280-151093-6	SW1-072121	Total/NA	Water	8260C SIM	
280-151093-7	SW4-072121	Total/NA	Water	8260C SIM	
280-151093-8	SW7-072121	Total/NA	Water	8260C SIM	
280-151093-9	SW6-072121	Total/NA	Water	8260C SIM	
280-151093-11	MW20DD-072121	Total/NA	Water	8260C SIM	
280-151093-12	TB1	Total/NA	Water	8260C SIM	
MB 480-590818/9	Method Blank	Total/NA	Water	8260C SIM	
LCS 480-590818/6	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 480-590818/7	Lab Control Sample Dup	Total/NA	Water	8260C SIM	

Analysis Batch: 590980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151166-1	MW6-072121	Total/NA	Water	8260C SIM	
MB 480-590980/9	Method Blank	Total/NA	Water	8260C SIM	
LCS 480-590980/6	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 480-590980/7	Lab Control Sample Dup	Total/NA	Water	8260C SIM	
480-187724-I-3 MS	Matrix Spike	Total/NA	Water	8260C SIM	
480-187724-I-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C SIM	

Metals

Prep Batch: 544189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-1	MW5-072121	Dissolved	Water	3005A	
280-151093-2	MW7-072121	Dissolved	Water	3005A	
280-151093-3	MW12I-072121	Dissolved	Water	3005A	
280-151093-4	MW13D-072121	Dissolved	Water	3005A	
280-151093-5	MW14-072121	Dissolved	Water	3005A	
280-151093-6	SW1-072121	Dissolved	Water	3005A	
280-151093-7	SW4-072121	Dissolved	Water	3005A	
280-151093-8	SW7-072121	Dissolved	Water	3005A	
280-151093-9	SW6-072121	Dissolved	Water	3005A	
280-151093-11	MW20DD-072121	Dissolved	Water	3005A	
MB 280-544189/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-544189/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-150781-B-6-B MS	Matrix Spike	Dissolved	Water	3005A	
280-150781-B-6-C MSD	Matrix Spike Duplicate	Dissolved	Water	3005A	

Analysis Batch: 544402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-1	MW5-072121	Dissolved	Water	6020	544189
280-151093-3	MW12I-072121	Dissolved	Water	6020	544189
280-151093-5	MW14-072121	Dissolved	Water	6020	544189
280-151093-6	SW1-072121	Dissolved	Water	6020	544189
280-151093-7	SW4-072121	Dissolved	Water	6020	544189
280-151093-9	SW6-072121	Dissolved	Water	6020	544189

Metals (Continued)

Analysis Batch: 544402 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-11	MW20DD-072121	Dissolved	Water	6020	544189
MB 280-544189/1-A	Method Blank	Total Recoverable	Water	6020	544189
LCS 280-544189/2-A	Lab Control Sample	Total Recoverable	Water	6020	544189
280-150781-B-6-B MS	Matrix Spike	Dissolved	Water	6020	544189
280-150781-B-6-C MSD	Matrix Spike Duplicate	Dissolved	Water	6020	544189

Analysis Batch: 544449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-2	MW7-072121	Dissolved	Water	6020	544189
280-151093-4	MW13D-072121	Dissolved	Water	6020	544189
280-151093-8	SW7-072121	Dissolved	Water	6020	544189

Prep Batch: 544692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151166-1	MW6-072121	Dissolved	Water	3005A	
MB 280-544692/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-544692/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-151166-1 MS	MW6-072121	Dissolved	Water	3005A	
280-151166-1 MSD	MW6-072121	Dissolved	Water	3005A	

Analysis Batch: 544955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151166-1	MW6-072121	Dissolved	Water	6020	544692
MB 280-544692/1-A	Method Blank	Total Recoverable	Water	6020	544692
LCS 280-544692/2-A	Lab Control Sample	Total Recoverable	Water	6020	544692
280-151166-1 MS	MW6-072121	Dissolved	Water	6020	544692
280-151166-1 MSD	MW6-072121	Dissolved	Water	6020	544692

General Chemistry

Analysis Batch: 544216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-1	MW5-072121	Total/NA	Water	350.1	
280-151093-2	MW7-072121	Total/NA	Water	350.1	
280-151093-3	MW12I-072121	Total/NA	Water	350.1	
280-151093-5	MW14-072121	Total/NA	Water	350.1	
280-151093-6	SW1-072121	Total/NA	Water	350.1	
280-151093-7	SW4-072121	Total/NA	Water	350.1	
280-151093-8	SW7-072121	Total/NA	Water	350.1	
280-151093-11	MW20DD-072121	Total/NA	Water	350.1	
MB 280-544216/55	Method Blank	Total/NA	Water	350.1	
MB 280-544216/90	Method Blank	Total/NA	Water	350.1	
LCS 280-544216/53	Lab Control Sample	Total/NA	Water	350.1	
LCS 280-544216/88	Lab Control Sample	Total/NA	Water	350.1	
LCSD 280-544216/54	Lab Control Sample Dup	Total/NA	Water	350.1	
LCSD 280-544216/89	Lab Control Sample Dup	Total/NA	Water	350.1	
280-151093-11 MS	MW20DD-072121	Total/NA	Water	350.1	
280-151093-11 MSD	MW20DD-072121	Total/NA	Water	350.1	

General Chemistry

Analysis Batch: 544234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-4	MW13D-072121	Total/NA	Water	350.1	
280-151093-9	SW6-072121	Total/NA	Water	350.1	
MB 280-544234/20	Method Blank	Total/NA	Water	350.1	
LCS 280-544234/18	Lab Control Sample	Total/NA	Water	350.1	
LCSD 280-544234/19	Lab Control Sample Dup	Total/NA	Water	350.1	
280-151093-4 MS	MW13D-072121	Total/NA	Water	350.1	
280-151093-4 MSD	MW13D-072121	Total/NA	Water	350.1	
280-151093-9 MS	SW6-072121	Total/NA	Water	350.1	
280-151093-9 MSD	SW6-072121	Total/NA	Water	350.1	

Analysis Batch: 544320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-1	MW5-072121	Total/NA	Water	300.0	
280-151093-2	MW7-072121	Total/NA	Water	300.0	
280-151093-3	MW12I-072121	Total/NA	Water	300.0	
280-151093-4	MW13D-072121	Total/NA	Water	300.0	
280-151093-5	MW14-072121	Total/NA	Water	300.0	
280-151093-6	SW1-072121	Total/NA	Water	300.0	
280-151093-7	SW4-072121	Total/NA	Water	300.0	
280-151093-8	SW7-072121	Total/NA	Water	300.0	
280-151093-9	SW6-072121	Total/NA	Water	300.0	
280-151093-11	MW20DD-072121	Total/NA	Water	300.0	
MB 280-544320/6	Method Blank	Total/NA	Water	300.0	
LCS 280-544320/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-544320/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 280-544320/3	Lab Control Sample	Total/NA	Water	300.0	
280-151093-2 MS	MW7-072121	Total/NA	Water	300.0	
280-151093-2 MSD	MW7-072121	Total/NA	Water	300.0	
280-151093-2 DU	MW7-072121	Total/NA	Water	300.0	

Analysis Batch: 544413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-3	MW12I-072121	Total/NA	Water	SM 5310B	
280-151093-6	SW1-072121	Total/NA	Water	SM 5310B	
280-151093-7	SW4-072121	Total/NA	Water	SM 5310B	
280-151093-8	SW7-072121	Total/NA	Water	SM 5310B	
280-151093-9	SW6-072121	Total/NA	Water	SM 5310B	
MB 280-544413/13	Method Blank	Total/NA	Water	SM 5310B	
LCS 280-544413/11	Lab Control Sample	Total/NA	Water	SM 5310B	
LCSD 280-544413/12	Lab Control Sample Dup	Total/NA	Water	SM 5310B	

Analysis Batch: 544490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151166-1	MW6-072121	Total/NA	Water	350.1	
MB 280-544490/20	Method Blank	Total/NA	Water	350.1	
LCS 280-544490/18	Lab Control Sample	Total/NA	Water	350.1	
LCSD 280-544490/19	Lab Control Sample Dup	Total/NA	Water	350.1	
280-150881-A-10 MS	Matrix Spike	Total/NA	Water	350.1	
280-150881-A-10 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	

General Chemistry

Analysis Batch: 544552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151166-1	MW6-072121	Total/NA	Water	300.0	
MB 280-544552/6	Method Blank	Total/NA	Water	300.0	
LCS 280-544552/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-544552/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 280-544552/3	Lab Control Sample	Total/NA	Water	300.0	
280-150655-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
280-150655-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
280-150655-A-1 DU	Duplicate	Total/NA	Water	300.0	

Analysis Batch: 544563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-1	MW5-072121	Total/NA	Water	SM 2320B	
280-151093-2	MW7-072121	Total/NA	Water	SM 2320B	
280-151093-3	MW12I-072121	Total/NA	Water	SM 2320B	
280-151093-4	MW13D-072121	Total/NA	Water	SM 2320B	
280-151093-5	MW14-072121	Total/NA	Water	SM 2320B	
280-151093-6	SW1-072121	Total/NA	Water	SM 2320B	
280-151093-7	SW4-072121	Total/NA	Water	SM 2320B	
280-151093-8	SW7-072121	Total/NA	Water	SM 2320B	
280-151093-9	SW6-072121	Total/NA	Water	SM 2320B	
280-151093-11	MW20DD-072121	Total/NA	Water	SM 2320B	
280-151166-1	MW6-072121	Total/NA	Water	SM 2320B	
MB 280-544563/33	Method Blank	Total/NA	Water	SM 2320B	
MB 280-544563/6	Method Blank	Total/NA	Water	SM 2320B	
MB 280-544563/60	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-544563/31	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 280-544563/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 280-544563/58	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-544563/32	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
LCSD 280-544563/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
LCSD 280-544563/59	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
280-151093-2 DU	MW7-072121	Total/NA	Water	SM 2320B	
280-151111-A-12 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 544573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-2	MW7-072121	Total/NA	Water	SM 5310B	
280-151093-4	MW13D-072121	Total/NA	Water	SM 5310B	
280-151093-5	MW14-072121	Total/NA	Water	SM 5310B	
280-151093-11	MW20DD-072121	Total/NA	Water	SM 5310B	
280-151166-1	MW6-072121	Total/NA	Water	SM 5310B	
MB 280-544573/30	Method Blank	Total/NA	Water	SM 5310B	
LCS 280-544573/29	Lab Control Sample	Total/NA	Water	SM 5310B	
280-151166-1 MS	MW6-072121	Total/NA	Water	SM 5310B	
280-151166-1 MSD	MW6-072121	Total/NA	Water	SM 5310B	

Analysis Batch: 544867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-151093-1	MW5-072121	Total/NA	Water	SM 5310B	
MB 280-544867/35	Method Blank	Total/NA	Water	SM 5310B	
MB 280-544867/4	Method Blank	Total/NA	Water	SM 5310B	

General Chemistry (Continued)

Analysis Batch: 544867 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-544867/34	Lab Control Sample	Total/NA	Water	SM 5310B	
280-151093-1 MS	MW5-072121	Total/NA	Water	SM 5310B	
280-151093-1 MSD	MW5-072121	Total/NA	Water	SM 5310B	

Lab Chronicle

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-151093-1

Client Sample ID: MW5-072121
Date Collected: 07/21/21 10:00
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-1
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	590818	07/28/21 21:09	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544189	07/26/21 09:20	MAB	TAL DEN
Dissolved	Analysis	6020		1			544402	07/27/21 01:26	LMT	TAL DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	544320	07/26/21 19:36	JMB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	544216	07/24/21 12:09	RKD	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/27/21 20:46	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544867	07/29/21 23:47	RAF	TAL DEN

Client Sample ID: MW7-072121
Date Collected: 07/21/21 08:10
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-2
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	590818	07/28/21 21:33	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544189	07/26/21 09:20	MAB	TAL DEN
Dissolved	Analysis	6020		1			544449	07/27/21 11:06	LMT	TAL DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	544320	07/26/21 19:50	JMB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	544216	07/24/21 12:11	RKD	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/27/21 21:26	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544573	07/28/21 01:29	RAF	TAL DEN

Client Sample ID: MW12I-072121
Date Collected: 07/21/21 11:40
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-3
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	590818	07/28/21 21:57	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544189	07/26/21 09:20	MAB	TAL DEN
Dissolved	Analysis	6020		1			544402	07/27/21 01:33	LMT	TAL DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	544320	07/26/21 21:14	JMB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	544216	07/24/21 12:13	RKD	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/27/21 21:55	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544413	07/26/21 18:25	RAF	TAL DEN

Client Sample ID: MW13D-072121
Date Collected: 07/21/21 12:55
Date Received: 07/23/21 09:20

Lab Sample ID: 280-151093-4
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	590818	07/28/21 22:21	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544189	07/26/21 09:20	MAB	TAL DEN
Dissolved	Analysis	6020		1			544449	07/27/21 10:51	LMT	TAL DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	544320	07/26/21 21:28	JMB	TAL DEN

Lab Chronicle

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-151093-1

Client Sample ID: MW13D-072121

Lab Sample ID: 280-151093-4
Matrix: Water
Date Collected: 07/21/21 12:55
Date Received: 07/23/21 09:20

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	544234	07/25/21 15:20	RKD	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/27/21 21:50	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544573	07/28/21 01:44	RAF	TAL DEN

Client Sample ID: MW14-072121

Lab Sample ID: 280-151093-5
Matrix: Water
Date Collected: 07/21/21 14:10
Date Received: 07/23/21 09:20

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	590818	07/28/21 22:46	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544189	07/26/21 09:20	MAB	TAL DEN
Dissolved	Analysis	6020		1			544402	07/27/21 01:40	LMT	TAL DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	544320	07/26/21 21:42	JMB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	544216	07/24/21 12:17	RKD	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/27/21 20:34	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544573	07/28/21 01:59	RAF	TAL DEN

Client Sample ID: SW1-072121

Lab Sample ID: 280-151093-6
Matrix: Water
Date Collected: 07/21/21 11:20
Date Received: 07/23/21 09:20

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	590818	07/28/21 23:10	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544189	07/26/21 09:20	MAB	TAL DEN
Dissolved	Analysis	6020		1			544402	07/27/21 01:44	LMT	TAL DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	544320	07/26/21 21:56	JMB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	544216	07/24/21 12:25	RKD	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/27/21 20:40	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544413	07/26/21 19:09	RAF	TAL DEN

Client Sample ID: SW4-072121

Lab Sample ID: 280-151093-7
Matrix: Water
Date Collected: 07/21/21 12:10
Date Received: 07/23/21 09:20

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	590818	07/28/21 23:34	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544189	07/26/21 09:20	MAB	TAL DEN
Dissolved	Analysis	6020		1			544402	07/27/21 01:48	LMT	TAL DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	544320	07/26/21 22:10	JMB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	544216	07/24/21 12:45	RKD	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/27/21 21:44	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544413	07/26/21 19:23	RAF	TAL DEN

Lab Chronicle

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-151093-1

Client Sample ID: SW7-072121

Lab Sample ID: 280-151093-8

Date Collected: 07/21/21 14:00

Matrix: Water

Date Received: 07/23/21 09:20

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	590818	07/28/21 23:59	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544189	07/26/21 09:20	MAB	TAL DEN
Dissolved	Analysis	6020		1			544449	07/27/21 10:55	LMT	TAL DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	544320	07/26/21 22:24	JMB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	544216	07/24/21 12:47	RKD	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/27/21 21:38	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544413	07/26/21 19:38	RAF	TAL DEN

Client Sample ID: SW6-072121

Lab Sample ID: 280-151093-9

Date Collected: 07/21/21 13:00

Matrix: Water

Date Received: 07/23/21 09:20

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	590818	07/29/21 00:23	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544189	07/26/21 09:20	MAB	TAL DEN
Dissolved	Analysis	6020		1			544402	07/27/21 01:55	LMT	TAL DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	544320	07/26/21 22:38	JMB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	544234	07/25/21 14:34	RKD	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/27/21 20:23	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544413	07/26/21 20:22	RAF	TAL DEN

Client Sample ID: MW20DD-072121

Lab Sample ID: 280-151093-11

Date Collected: 07/21/21 00:00

Matrix: Water

Date Received: 07/23/21 09:20

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	590818	07/29/21 00:47	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544189	07/26/21 09:20	MAB	TAL DEN
Dissolved	Analysis	6020		1			544402	07/27/21 01:59	LMT	TAL DEN
Total/NA	Analysis	300.0		1	10 mL	10 mL	544320	07/26/21 22:52	JMB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	544216	07/24/21 13:35	RKD	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/27/21 20:29	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544573	07/28/21 02:13	RAF	TAL DEN

Client Sample ID: TB1

Lab Sample ID: 280-151093-12

Date Collected: 07/21/21 08:10

Matrix: Water

Date Received: 07/23/21 09:20

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	590818	07/29/21 01:11	WJD	TAL BUF

Lab Chronicle

Client: Aspect Consulting
Project/Site: Hansville Landfill

Job ID: 280-151093-1

Client Sample ID: MW6-072121

Date Collected: 07/21/21 16:05
Date Received: 07/26/21 09:10

Lab Sample ID: 280-151166-1

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	590980	07/29/21 21:17	WJD	TAL BUF
Dissolved	Prep	3005A			50 mL	50 mL	544692	07/29/21 16:30	LRD	TAL DEN
Dissolved	Analysis	6020		1			544955	07/30/21 18:33	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	544552	07/28/21 20:00	JMB	TAL DEN
Total/NA	Analysis	350.1		1	10 mL	10 mL	544490	07/27/21 12:51	JJM	TAL DEN
Total/NA	Analysis	SM 2320B		1			544563	07/28/21 01:21	ECC	TAL DEN
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	544573	07/28/21 00:45	RAF	TAL DEN

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

09 August 2021

Betsy Sara
Eurofins - 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)
21G0262	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.

ARI

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

21G0262

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: DCB/CEB	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-23414-6845.1
Client Contact: Meiani Lanier-Kamaha'o	Phone: (206)413-5408	E-Mail: Betsy.Sara@Eurofinset.com		Page: 1/1
Company: Aspect Consulting, LLC				Job #: 160423
Address: 350 Madison Ave N	Due Date Requested:			
City: Bainbridge Island	TAT Requested (days):			
State, Zip: WA, 98110				
Phone: (206) 413-5408	PO #: Purchase Order not required			
Email: mlkamahao@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		
MW-5-072121	7/21/21	1000	G	W							X	X	X		
MW-7-072121		0810													
MW-12I-072121		1140													Diss As,NO3,NO2,o-phos subbed direct to ARI
MW-13D-072121		1255													
MW-14-072121		1410													
SW-1-072121		1120													
SW-4-072121		1210													
SW-6-072121		1300													
SW-7-072121		1400													
MW-6-072121		1605													
MW-20DD-072121	↓	—	↓	↓							↓	↓	↓		

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:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Chelsea Burr	7/22/21 1218	Aspect	D. Lanier	07/22/21 1218	ARI
Relinquished by:	Date/Time:	Company	Received by: Dimitri Laminadze	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:

Page 39 of 81

8/9/2021

Analytical Report

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-5-072121	21G0262-01	Water	21-Jul-2021 10:00	22-Jul-2021 12:18
MW-7-072121	21G0262-02	Water	21-Jul-2021 08:10	22-Jul-2021 12:18
MW-12I-072121	21G0262-03	Water	21-Jul-2021 11:40	22-Jul-2021 12:18
MW-13D-072121	21G0262-04	Water	21-Jul-2021 12:55	22-Jul-2021 12:18
MW-14-072121	21G0262-05	Water	21-Jul-2021 14:10	22-Jul-2021 12:18
SW-1-072121	21G0262-06	Water	21-Jul-2021 11:20	22-Jul-2021 12:18
SW-4-072121	21G0262-07	Water	21-Jul-2021 12:10	22-Jul-2021 12:18
SW-6-072121	21G0262-08	Water	21-Jul-2021 13:00	22-Jul-2021 12:18
SW-7-072121	21G0262-09	Water	21-Jul-2021 14:00	22-Jul-2021 12:18
MW-20DD-072121	21G0262-10	Water	21-Jul-2021 00:00	22-Jul-2021 12:18
MW-6-072121	21G0262-11	Water	21-Jul-2021 16:05	22-Jul-2021 12:18

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

Work Order Case Narrative

Client: Eurofins - Test America - Denver
Project: Hansville
Work Order: 21G0262

Sample receipt

Samples as listed on the preceding page were received 22-Jul-2021 12:18 under ARI work order 21G0262. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Dissolved Metals - EPA Method 200.8

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Sample specific QC was performed in association with sample 21G0262-01 in batch BJH0103. The matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

Wet Chemistry

The sample(s) were prepared and analyzed within the recommended holding times except sample 21G0262-10. The instrument stopped mid run on day two of hold time. The instrument was restarted and the sample was analyzed out of hold. This may also be due to no sample time provided so midnight is the assumed collection time.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Eurofins

Project Name: Hansville Landfill

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:_____

Assigned ARI Job No: 21G0262

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 1218	3.3	____	____	____	____	____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D00522

Cooler Accepted by: D2 Date: 07/22/21 Time: 1218

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: SC Date: 7/22/21 Time: 1238 Labels checked by: SC

*** 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:

Sample MW-6-072021 was not received.

By: SC Date: 7/22/21

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Test America / Eurofins Project Name: Hansville

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

Assigned ARI Job No: 21G0262 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	1458	4.2					

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: DOO52060

Cooler Accepted by: SC Date: 7/22/21 Time: 1458

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: SC Date: 7/22/21 Time: 1533 Labels checked by: SC

*** 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:

This is sample MW-6-072121 from work order 21G0262 that had been missing.

By: SC Date: 7/22/21

WORK ORDER

21G0262

Client: Test America - Denver	**Project Manager:** Shelly Fishel
Project: Hansville	**Project Number:** 28006013

Preservation Confirmation

Container ID	Container Type	pH	
21G0262-01 A	Miscellaneous container, 1:1 HN03 (FF)	<2	Pass (P)
21G0262-01 B	Miscellaneous Container		
21G0262-01 C	Miscellaneous Container		
21G0262-02 A	Miscellaneous container, 1:1 HN03 (FF)	<2	P
21G0262-02 B	Miscellaneous Container		
21G0262-02 C	Miscellaneous Container		
21G0262-03 A	Miscellaneous container, 1:1 HN03 (FF)	<2	P
21G0262-03 B	Miscellaneous Container		
21G0262-03 C	Miscellaneous Container		
21G0262-04 A	Miscellaneous container, 1:1 HN03 (FF)	<2	P
21G0262-04 B	Miscellaneous Container		
21G0262-04 C	Miscellaneous Container		
21G0262-05 A	Miscellaneous container, 1:1 HN03 (FF)	<2	P
21G0262-05 B	Miscellaneous Container		
21G0262-05 C	Miscellaneous Container		
21G0262-06 A	Miscellaneous container, 1:1 HN03 (FF)	<2	P
21G0262-06 B	Miscellaneous Container		
21G0262-06 C	Miscellaneous Container		
21G0262-07 A	Miscellaneous container, 1:1 HN03 (FF)	<2	P
21G0262-07 B	Miscellaneous Container		
21G0262-07 C	Miscellaneous Container		
21G0262-08 A	Miscellaneous container, 1:1 HN03 (FF)	<2	P
21G0262-08 B	Miscellaneous Container		
21G0262-08 C	Miscellaneous Container		
21G0262-09 A	Miscellaneous container, 1:1 HN03 (FF)	<2	P
21G0262-09 B	Miscellaneous Container		
21G0262-09 C	Miscellaneous Container		
21G0262-10 A	Miscellaneous container, 1:1 HN03 (FF)	<2	P
21G0262-10 B	Miscellaneous Container		
21G0262-10 C	Miscellaneous Container		
21G0262-11 A	Miscellaneous container, 1:1 HN03 (FF)	<2	P
21G0262-11 B	Miscellaneous Container		
21G0262-11 C	Miscellaneous Container		

Reviewed By

Date

WORK ORDER

21G0262

Client: Test America - Denver	**Project Manager: Shelly Fishel**
Project: Hansville	**Project Number: 28006013**

SC
Preservation Confirmed By

7/22/21
Date

Reviewed By

Date

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-5-072121

21G0262-01 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 10:00

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/04/2021 19:00

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-01 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	1.77	ug/L	

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-5-072121

21G0262-01 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 10:00

Instrument: IC930 Analyst: BF — Analyzed: 07/22/2021 16:37

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-01 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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	2.11	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Orthophosphorus	1426-54-42	1	0.10	0.10	0.13	mg-P/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-7-072121

21G0262-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 08:10

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/05/2021 03:01

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-02 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	1.10	ug/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-7-072121

21G0262-02 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 08:10

Instrument: IC930 Analyst: BF — Analyzed: 07/22/2021 16:57

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-02 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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	0.194	mg/L	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Nitrite-N	14797-65-0	1	0.100	0.100	ND	mg/L	U

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

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-12I-072121

21G0262-03 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 11:40

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/05/2021 03:04

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-03 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	2.44	ug/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-12I-072121

21G0262-03 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 11:40

Instrument: IC930 Analyst: BF — Analyzed: 07/22/2021 17:17

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-03 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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-P/L	U

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-13D-072121

21G0262-04 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 12:55

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/05/2021 03:07

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-04 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	5.62	ug/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-13D-072121

21G0262-04 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 12:55

Instrument: IC930 Analyst: BF — Analyzed: 07/22/2021 17:37

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-04 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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-P/L	U

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-14-072121

21G0262-05 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 14:10

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/05/2021 03:10

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-05 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	14.0	ug/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-14-072121

21G0262-05 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 14:10

Instrument: IC930 Analyst: BF — Analyzed: 07/22/2021 17:57

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-05 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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	0.10	mg-P/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

SW-1-072121

21G0262-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 11:20

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/05/2021 03:15

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-06 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	1.72	ug/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

SW-1-072121

21G0262-06 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 11:20

Instrument: IC930 Analyst: BF — Analyzed: 07/22/2021 18:17

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-06 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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	1.65	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-P/L	U

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

SW-4-072121

21G0262-07 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 12:10

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/05/2021 03:34

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-07 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	1.82	ug/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

SW-4-072121

21G0262-07 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 12:10

Instrument: IC930 Analyst: BF — Analyzed: 07/22/2021 18:37

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-07 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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	1.44	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-P/L	U

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

SW-6-072121

21G0262-08 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 13:00

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/05/2021 03:37

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-08 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	4.74	ug/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

SW-6-072121

21G0262-08 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 13:00

Instrument: IC930 Analyst: BF — Analyzed: 07/23/2021 10:59

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-08 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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-P/L	U

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

SW-7-072121

21G0262-09 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 14:00

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/05/2021 03:40

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-09 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	1.76	ug/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

SW-7-072121

21G0262-09 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 14:00

Instrument: IC930 Analyst: BF — Analyzed: 07/23/2021 11:20

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-09 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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-P/L	U

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-20DD-072121

21G0262-10 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 00:00

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/05/2021 03:44

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-10 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	13.7	ug/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-20DD-072121

21G0262-10 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 00:00

Instrument: IC930 Analyst: BF — Analyzed: 07/23/2021 11:39

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-10 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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	H, 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	H, U

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

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-6-072121

21G0262-11 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED — Sampled: 07/21/2021 16:05

Instrument: ICPMS1 Analyst: MCB — Analyzed: 08/05/2021 03:48

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix — Extract ID: 21G0262-11 A 01

Preparation Batch: BJH0103 — Sample Size: 25 mL

Prepared: 08/04/2021 — Final Volume: 25 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.0373	0.200	1.59	ug/L	

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

MW-6-072121

21G0262-11 (Water)

Wet Chemistry

Method: EPA 300.0 — Sampled: 07/21/2021 16:05

Instrument: IC930 Analyst: BF — Analyzed: 07/23/2021 11:59

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 21G0262-11 C

Preparation Batch: BJG0540 — Sample Size: 10 mL

Prepared: 07/22/2021 — 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	0.928	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-P/L	U

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BJH0103 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS1 Analyst: MCB

QC Sample/Analyte	Isotope	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJH0103-BLK1)						Prepared: 04-Aug-2021 Analyzed: 04-Aug-2021 18:26						
Arsenic, Dissolved	75a	ND	0.0373	0.200	ug/L							U
LCS (BJH0103-BS1)						Prepared: 04-Aug-2021 Analyzed: 04-Aug-2021 18:30						
Arsenic, Dissolved	75a	24.2	0.0373	0.200	ug/L	25.0		96.7	80-120			
Duplicate (BJH0103-DUP1)			**Source: 21G0262-01**			Prepared: 04-Aug-2021 Analyzed: 04-Aug-2021 19:07						
Arsenic, Dissolved	75a	1.80	0.0373	0.200	ug/L		1.77			1.74	20	
Matrix Spike (BJH0103-MS1)			**Source: 21G0262-01**			Prepared: 04-Aug-2021 Analyzed: 04-Aug-2021 19:12						
Arsenic, Dissolved	75a	25.5	0.0373	0.200	ug/L	25.0	1.77	94.9	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

Wet Chemistry - Quality Control

Batch BJG0540 - No Prep Wet Chem

Instrument: IC930 Analyst: BF

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJG0540-BLK1)				Prepared: 22-Jul-2021 Analyzed: 22-Jul-2021 15:57							
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-P/L							U
LCS (BJG0540-BS1)				Prepared: 22-Jul-2021 Analyzed: 22-Jul-2021 16:17							
Nitrate-N	4.94	0.100	0.100	mg/L	5.00		98.9	90-110			
Nitrite-N	4.99	0.100	0.100	mg/L	5.00		99.7	90-110			
Orthophosphorus	5.22	0.10	0.10	mg-P/L	5.00		104	90-110			

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

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	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2022
WADOE	WA Dept of Ecology	C558	06/30/2022
WA-DW	Ecology - Drinking Water	C558	06/30/2022

Eurofins - Test America - Denver	Project: Hansville	
4955 Yarrow Street	Project Number: Hansville	**Reported:**
Arvada CO, 80002	Project Manager: Betsy Sara	09-Aug-2021 11:01

Notes and Definitions

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.

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	Sampler: DCB / CB	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@Eurofinset.com		Page: 1/2
Company: Aspect Consulting, LLC				Job #: 160423
Address: 350 Madison Ave N	Due Date Requested:			
City: Bainbridge Island	TAT Requested (days):			
State, Zip: WA, 98110				
Phone: 206-413-5408	PO #: Purchase Order not required			
Email: mlkamahao@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	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C SIM - Vinyl Chloride (TA Buffalo)	Dissolved Metals	Ammonia/TOC	Alks/Cl/SO4	Ortho-phosphate (field filtered)- direct sub to ARI	Dissolved Arsenice - direct sub to ARI	Nitrate/Nitrite (IC) - direct sub to ARI	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	D	S	N	N	D	N		
MW-5-072121	7/21/21	1000	G	W			X	X	X	X					
MW-7-072121		0810													
MW-12I-072121		1140													Diss As,NO3,NO2,o-phos subbed direct to ARI
MW-13D-072121		1255													
MW-14-072121		1410													
SW-1-072121		1120													
SW-4-072121		1210													
SW-7-072121		1400													
SW-6-072121		1300													
MW-6-072121		1605													
MW-20DD-072121		~													

280-151093 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: 7/22/21 1030	Company: Aspect	Received by:		Date/Time: 7/23/21 0920	Company: ETADEN	
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.: 1562855, 1562865, 1562864, 1562858		Cooler Temperature(s) °C and Other Remarks: 1.8, 1.9 CF+0.6 IR12				

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	Sampler: DCB/CB	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@Eurofinset.com		Page: 2/2
Company: Aspect Consulting, LLC				Job #: 160423
Address: 350 Madison Ave N	Due Date Requested:			
City: Bainbridge Island	TAT Requested (days):			
State, Zip: WA, 98110				
Phone: 206-413-5408	PO #: Purchase Order not required			
Email: mlkamahaoe@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	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C SIM - Vinyl Chloride (TA Buffalo)	Dissolved Metals	Ammonia/TOC	Alks/Cl/SO4	Ortho-phosphate (field filtered)- direct sub to ARI	Dissolved Arsenice - direct sub to ARI	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	—	—	—	W			X								
															Diss As,NO3,NO2,o-phos subbed direct to ARI

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
	[signature]	7/22/21 1030	Aspect	[signature]	7/23/21 0930	ETADEN
	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.: 562855, 562865, 562864, 562858
Cooler Temperature(s) °C and Other Remarks: 1.8, 1.9 CF 0.6 IR 2

eurofins 650 10:30 9011 07 23 Testing

FedEx Express

Expanded Billable Stamp

Use only for shipments within the U.S. Saturday delivery available.

FedEx Priority Overnight

1 From

ORIGIN ID:SEAA

SHIP DATE: 22JUL21
ACTWGT: 57.00 LB
CAD: /SSFE2202
DIMS: 24x13x13 IN

TO SAMPLE RECEIVING
TESTAMERICA DENVER
4955 YARROW ST

ARVADA CO 80002-4517
(303) 736-0100 REF:
INV:
PO: DEPT:

rofins 1.9

1562855

1562865

FedEx Express E

FRI - 23 JUL 10:30A
PRIORITY OVERNIGHT

TRK# 0667 8156 5957 9011

XH LAAA

AHS
80002
CO-US DEN

8/9/2021

eurofins ting

R1 650 4 10:30 9022 07 23 E

ORIGIN ID:SEAA

DATE: 22JUL21
ACTWGT: 44.00 LB
CAD: /SSFE2202
DIMS: 24x13x13 IN

TO SAMPLE RECEIVING
TESTAMERICA DENVER
4955 YARROW ST

ARVADA CO 80002-4517
(303) 736-0100 REF:
DEPT:

fins 1.8

1562864

1562858

FedEx Express E

FRI - 23 JUL 10:30A
PRIORITY OVERNIGHT

TRK# 0667 8156 5957 9022

XH LAAA

AHS
80002
CO-US DEN

280-151093 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 America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-578239.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Betsy.Sara@Eurofinset.com	State of Origin: Washington	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 280-151093-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 8/5/2021			
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	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - 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:						
MW5-072121 (280-151093-1)	7/21/21	10:00 Pacific		Water			X	3	
MW7-072121 (280-151093-2)	7/21/21	08:10 Pacific		Water			X	3	
MW12I-072121 (280-151093-3)	7/21/21	11:40 Pacific		Water			X	3	
MW13D-072121 (280-151093-4)	7/21/21	12:55 Pacific		Water			X	3	
MW14-072121 (280-151093-5)	7/21/21	14:10 Pacific		Water			X	3	
SW1-072121 (280-151093-6)	7/21/21	11:20 Pacific		Water			X	3	
SW4-072121 (280-151093-7)	7/21/21	12:10 Pacific		Water			X	3	
SW7-072121 (280-151093-8)	7/21/21	14:00 Pacific		Water			X	3	
SW6-072121 (280-151093-9)	7/21/21	13:00 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
Relinquished by:	7/26/21 1307	ETA D&N			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	7/28/21 1000	TA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 11.4 #1 ICE

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-578239.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Betsy.Sara@Eurofinset.com	State of Origin: Washington	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 280-151093-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 8/5/2021			
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	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - 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:						
MW5-072121 (280-151093-1)	7/21/21	10:00 Pacific		Water			X	3	
MW7-072121 (280-151093-2)	7/21/21	08:10 Pacific		Water			X	3	
MW12I-072121 (280-151093-3)	7/21/21	11:40 Pacific		Water			X	3	
MW13D-072121 (280-151093-4)	7/21/21	12:55 Pacific		Water			X	3	
MW14-072121 (280-151093-5)	7/21/21	14:10 Pacific		Water			X	3	
SW1-072121 (280-151093-6)	7/21/21	11:20 Pacific		Water			X	3	
SW4-072121 (280-151093-7)	7/21/21	12:10 Pacific		Water			X	3	
SW7-072121 (280-151093-8)	7/21/21	14:00 Pacific		Water			X	3	
SW6-072121 (280-151093-9)	7/21/21	13:00 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
	7/26/21 1307	ETA DEN			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 7/28/21 1000	Company TA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 11.4 #1 ICE

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Sara, Betsy A	Carrier Tracking No(s):	COC No: 280-578360.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Betsy.Sara@Eurofinset.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 280-151166-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 8/8/2021			
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:						
MW6-072121 (280-151166-1)	7/21/21	16:05 Pacific		Water			X	3	151166-E-1 has crushed ice placed in ziploc bag

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]	7/27/21 1443				
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 7/29/21 1000	Company TAB

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

Cooler Temperature(s) °C and Other Remarks: 2.5 #1 ICE

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Aspect Consulting

Job Number: 280-151093-1

Login Number: 151093
List Number: 1
Creator: O'Hara, Jake F

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.	False	Refer to job narrative for details
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	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.	N/A	

Login Sample Receipt Checklist

Client: Aspect Consulting

Job Number: 280-151093-1

Login Number: 151093
List Number: 2
Creator: Sabuda, Brendan D

List Source: Eurofins TestAmerica, Buffalo
List Creation: 07/28/21 01:44 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.	False	No: Water present in cooler; indicates evidence of melted ice
Cooler Temperature is acceptable.	False	
Cooler Temperature is recorded.	True	11.4 #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	

Login Sample Receipt Checklist

Client: Aspect Consulting

Job Number: 280-151093-1

Login Number: 151166
List Number: 1
Creator: Collins, Janice S

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.	False	No: Water present in cooler; indicates evidence of melted ice
Cooler Temperature is acceptable.	False	
Cooler Temperature is recorded.	True	
COC is present.	False	
COC is filled out in ink and legible.	N/A	
COC is filled out with all pertinent information.	N/A	
Is the Field Sampler's name present on COC?	N/A	
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.	False	Refer to job narrative for details
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: 280-151093-1

Login Number: 151166
List Number: 2
Creator: Sabuda, Brendan D

List Source: Eurofins TestAmerica, Buffalo
List Creation: 07/29/21 03:32 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	2.5 #1 ICE
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	