

# ANNUAL GROUNDWATER MONITORING REPORT (2023-2024)

Shelton C Street Landfill  
Shelton, Washington

Prepared for: City of Shelton

Project No. AS150074C • October 14, 2024 FINAL



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Shelton, Washington

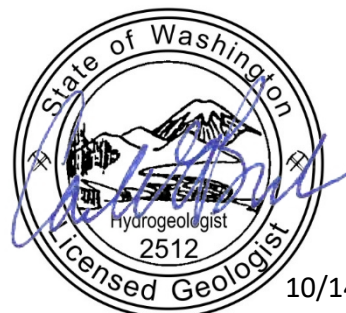
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10/14/2024

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V:\150074 Shelton C Street Landfill Remediation\Deliverables\Annual Groundwatering Monitoring Reports\2023-2024\2023-24 Annual Groundwater Monitoring Report\_2024.10.14.docx



# Contents

<b>Executive Summary</b> .....	<b>ES-1</b>
<b>1 Introduction</b> .....	<b>1</b>
1.1 Report Organization .....	1
<b>2 Site Background</b> .....	<b>1</b>
2.1 Site Use History .....	2
2.2 Cleanup Action Overview.....	2
<b>3 Groundwater Monitoring Activities</b> .....	<b>3</b>
3.1 Field Activities .....	3
3.2 Results .....	4
3.2.1 Hydrogeology.....	4
3.2.2 Analytical Data for Secondary Contaminants .....	4
<b>4 Conclusion</b> .....	<b>5</b>
<b>5 References</b> .....	<b>6</b>
<b>6 Limitations</b> .....	<b>7</b>

## List of Tables

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1	Groundwater Monitoring Data
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## List of Figures

---

1	Site Location Map
2	Groundwater Elevation Contours – August 2023
3	Groundwater Elevation Contours – February 2024

## List of Appendices

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A	Laboratory Reports
B	Report Limitations and Guidelines for Use

## Executive Summary

Aspect Consulting (Aspect) prepared this Annual Groundwater Monitoring Report to present the results of post-cleanup construction semiannual groundwater monitoring conducted at the Shelton C Street Landfill, a former municipal solid waste landfill, located in Shelton, Washington (Site; Figure 1). The Site is located on a 16.7-acre parcel (Property; Figure 1) owned by the City of Shelton. The Property is at the west end of West C Street, just west of the overpass across U.S. Highway 101.

This Annual Groundwater Monitoring Report has been prepared to meet the requirements of Agreed Order No. DE 19541 (Agreed Order) between the Washington State Department of Ecology (Ecology) and the City, executed on December 20, 2021. The cleanup action, as documented in the Construction Completion Report (CCR; Aspect, 2023c), has been determined by Ecology to comply with the Model Toxics Control Act (MTCA), Chapter 70.105D Revised Code of Washington (RCW), and the MTCA Cleanup Regulation, Chapter 173-340 of the Washington Administrative Code (WAC).

The groundwater monitoring events constitute a semiannual effort occurring in August and February of each year following completion of the cleanup construction (see the CCR; Aspect, 2023a). The first post-construction groundwater monitoring event occurred on August 3, 2023, and the second occurred on February 6, 2024. The post-construction monitoring well network is comprised of four monitoring wells consisting of cross- and downgradient wells situated as close as practicable to the landfill waste boundary (AMW-01 to AMW-04; Figures 2 and 3).

During the August 2023 and February 2024 events, groundwater level was measured at 88.70 to 107.20 feet below top of well casing, equivalent to elevations 64.71 to 65.74 feet NAVD88, situated within the layer of Quaternary recessional glacial outwash overlying a layer of compacted Quaternary glacial till below the base of landfill waste debris. Flow direction was toward the southeast in August 2023, and toward south-southeast in February 2024.

Groundwater samples collected from each well were analyzed for total iron and total manganese. During the August 2023 and February 2024 groundwater monitoring events, total iron and/or manganese were detected in all of the four existing monitoring wells at concentrations above and below the Site-specific cleanup levels. Of these, the only well with both total iron and manganese detected below the cleanup level in the same event is AMW-1, the upgradient-most well, during the February 2024 monitoring event.

Overall, concentrations of total iron and manganese in samples collected during the August 2023 were generally higher than in samples collected during the February 2024 monitoring event from the same wells. The February 2024 event also showed lower turbidity in all samples relative to the August 2023 event, which likely contributed to the lower detected concentrations in February 2024.

## ASPECT CONSULTING

Groundwater monitoring events will continue on a semiannual basis occurring in August and February of each year for a minimum period of 5 years (through February 2028) and for at least 2 years after compliance is achieved. Compliance will be achieved when the average concentration of four consecutive sampling events is below the cleanup level or background concentration.

*This Executive Summary should only be used in the context of the full report.*

# 1 Introduction

Aspect Consulting (Aspect) prepared this Annual Groundwater Monitoring Report (2023-2024) to present the results of post-cleanup construction groundwater monitoring and sampling conducted at the Shelton C Street Landfill, a former municipal solid waste landfill, located in Shelton, Washington (Site; Figure 1). The Site is located on a 16.7-acre parcel (Property; Figure 1) owned by the City of Shelton (City). The Property is at the west end of West C Street, just west of the overpass across U.S. Highway 101.

This Annual Groundwater Monitoring Report has been prepared to meet the requirements of Agreed Order No. DE 19541 (Agreed Order) between the Washington State Department of Ecology (Ecology) and the City, executed on December 20, 2021, which provides requirements for the remedial action at the Site. Ecology has determined that the remedial action complies with the Model Toxics Control Act (MTCA), Chapter 70.105D Revised Code of Washington (RCW), and the MTCA Cleanup Regulation, Chapter 173-340 of the Washington Administrative Code (WAC).

The activities described in this report were conducted in accordance with the Cleanup Action Plan (CAP; Ecology, 2021) and the Engineering Design Report (EDR: Aspect, 2022a and 2022b) which collectively provide the plans, specifications, and monitoring requirements for the engineering concepts of the cleanup action. The cleanup action construction is documented in the Construction Completion Report (CCR; Aspect, 2023c).

## 1.1 Report Organization

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The following sections of this report are organized as follows:

- **Section 2 – Background** describes the use history of the Property and gives an overview of the cleanup action.
- **Section 3 – Groundwater Monitoring Activities** describes the purpose, scope, methods, and results of the semiannual groundwater monitoring events.
- **Section 4 – Conclusion** briefly evaluates the groundwater monitoring results relative to cleanup goals and presents the schedule for ongoing monitoring.
- **Section 5 – References** lists the documents cited in this report.
- **Section 6 – Limitations** provides guidelines for additional information governing the use of this report.

## 2 Site Background

In 2016, the City entered into Agreed Order No. DE 12929 with Ecology to perform a Remedial Investigation and Feasibility Study (RI/FS) and submit a draft CAP for the Site.

The RI field work was conducted between 2017 and 2020. The final RI/FS report and draft CAP were provided to Ecology in 2021, fulfilling the requirements of Agreed Order No. DE 12929.

In 2021, the City entered into Agreed Order No. DE 19541 with Ecology to implement the cleanup action described in the draft CAP following its finalization in February 2021. As of the date of this report, the completed requirements of the 2021 Agreed Order include preparation of the EDR with Compliance Monitoring Plan, construction plans, and specifications between 2021 and July 2022 (Aspect, 2022a); conducting the cleanup construction between January and June 2023; preparation of the Construction Completion Report (CCR) in October 2023 (Aspect, 2023c); and preparation of the Environmental Covenant in early 2024.

## 2.1 Site Use History

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The Property was purchased by the City in May 1928, including both the parcel and a perpetual easement for access; landfilling activities started the same year. In July 1931, the City sold the property to Rainier Pulp and Paper Company but retained the right to continue to use the land as a garbage dump. Rayonier, Incorporated, successor of Rainier Pulp and Paper Company, sold the property back to the City in July 1949.

The landfill received municipal solid waste between approximately 1928 and the mid-1980s. Early on, waste consolidation practices included open burning and on-Property incineration, common for the era (Aspect, 2021). Between 1931 and 1974, the landfill received by-products, research waste, and demolition debris from nearby pulp mills. Sludge from the City's wastewater treatment plant (WWTP) was brought to the landfill between 1973 and the mid-1980s. From 1976 to 1981, fly ash from the wood-burning power plant at the Simpson Timber Company mill was mixed with the WWTP sludge and put in the landfill. The WWTP sludge was disposed of in the northwestern part of the landfill and is estimated to be up to 5 feet thick. The cover soil and WWTP sludge overlies municipal solid waste that is approximately 20 to 25 feet thick.

The Property has been generally unused since the mid-1980s, and public access to the Property and surrounding properties is restricted for safety reasons. There is no available information that documents landfill closure activities, and it is not known whether any were completed, but the results of investigation activities indicate that some of the landfill waste was covered with imported soil.

## 2.2 Cleanup Action Overview

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The cleanup activities were designed to improve protection of human health and the environment at the Site and are documented in the CCR (Aspect, 2023c). Cleanup action construction occurred between April and June 2023, and consisted of construction of a low permeability soil cap over the full extent of landfill waste, and installation of a fence with signage at the cap perimeter to restrict unauthorized access to the landfill. Prior to cap construction, landfill waste present in areas south of the Property boundary was excavated and relocated to on-Property areas of the landfill (Aspect, 2023a). An environmental covenant, in the form a deed restriction, is under Ecology review. Once recorded, an environmental covenant will prevent future unrestricted development or any other activities resulting in potential exposure to landfill waste.

Long-term monitoring is being conducted to verify the remedy remains protective over time, guided by the Inspection, Monitoring, and Maintenance (I, M, and M) program described in the I, M, and M Plan (Aspect, 2023d). The I, M, and M program includes the following:

- Periodic inspection of Site conditions to verify integrity of the soil cap, signage, and physical barriers.
- Maintenance of the remedy (e.g., removal of large or deep-rooted vegetation from the cap area<sup>1</sup> and filling of eroded areas), performed on an as-needed basis.
- Semiannual groundwater monitoring at the four existing monitoring wells for iron and manganese concentrations to demonstrate groundwater protection.
- Annual topographic surveys for at least the first 5 years following construction, to compare with as-built conditions and demonstrate soil cap stability.
- Periodic reporting of I, M, and M activities to Ecology, including 5-year reviews.

The initial and second semiannual groundwater monitoring events are described in Section 3. Cleanup action construction was substantially complete on June 14, 2023.

## 3 Groundwater Monitoring Activities

Groundwater monitoring and sampling commenced in August 2023, approximately 2 months after substantial completion of cleanup action construction and will occur semiannually. The first post-construction groundwater monitoring event occurred on August 3, 2023, and the second on February 6, 2024. The monitoring well network at the Site consists of four monitoring wells, AMW-1 through AMW-4, that were originally installed as part of the RI. The monitoring wells are constructed with a 20-foot screened interval at the top of the water bearing zone, which is present within recessional outwash, to total depths of 105 to 120 feet below ground surface (bgs) (Aspect, 2021). The locations of the post-construction groundwater monitoring wells are shown relative to the landfill and other Property features on Figures 2 and 3.

### 3.1 Field Activities

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The groundwater monitoring events consisted of measuring groundwater levels and collecting groundwater samples for laboratory analysis. Groundwater levels were measured using an electronic water level indicator (decontaminated between wells) from top of the north side of the well casing stickup ranging between 2.42 to 2.89 ft. above ground level. Each water level measurement was recorded to the nearest hundredth of a foot, relative to the top of the north side of the well casing. Groundwater samples were

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<sup>1</sup> Trees are not to be allowed to grow in the capped area, since roots of large trees could extend into the landfill waste and bring it to the surface if a tree is blown over (for example).



collected from the monitoring wells using low-flow sampling methodology<sup>2</sup> following purging and stabilization of field parameters (temperature, specific conductivity, dissolved oxygen, pH, oxidation reduction potential, and turbidity).

Samples were collected using a bladder pump installed in each well, with the sample intake placed at the midpoint of the submerged portion of the well screen. Dedicated bladder pumps were installed in each monitoring well as part of the RI; however, during the initial monitoring event in August 2023, the dedicated bladder pumps in wells AMW-3, AMW-2, and AMW-1 were not effectively discharging groundwater due to blockage of the sample intake caused by siltation and sediment, and damaged pump fittings. A portable QED bladder pump, decontaminated between wells, was used for groundwater low-flow purging and sampling during the August 2023 monitoring event. After an in-house inspection and repair of the damaged dedicated bladder pumps, all pumps were reassembled and re-deployed into their designated wells and were used for groundwater low-flow purging and sampling during the February 2024 monitoring event.

The groundwater samples were submitted for laboratory analysis of total iron and total manganese in accordance with the EDR (Aspect, 2022a) and its addendum (Aspect, 2023b). Groundwater samples were placed in a cooler on ice and transported under standard chain-of-custody procedures to Friedman & Bruya, Inc. of Seattle, Washington for analysis using EPA Method 200.8.

## 3.2 Results

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This section summarizes the results of the groundwater sampling, including hydrogeologic conditions and chemical analytical testing of groundwater samples.

### 3.2.1 Hydrogeology

Groundwater elevations for the August 2023 monitoring event ranged from 64.71 to 65.75 ft. NAVD88 and groundwater elevations for the February 2024 monitoring event ranged from 72.06 to 72.68 ft. NAVD88 (Table 1). Groundwater in the wells is situated within the layer of Quaternary recessional glacial outwash overlying the Quaternary glacial till deposits, as illustrated in the RI/FS (Aspect, 2021).

Based on the depth-to-well measurements during both monitoring events, groundwater levels fluctuated up to 7.58 feet between August 2023 and February 2024, with higher groundwater levels observed in February 2024, attributed to higher precipitation in the winter season. The inferred groundwater flow direction on August 3, 2023, was to the southeast, and to the south-southeast on February 6, 2024, as shown on Figures 2 and 3. The inferred groundwater flow directions are consistent with historical groundwater flow direction observed at the Site.

### 3.2.2 Analytical Data for Secondary Contaminants

The chemical analytical results of the groundwater samples were evaluated relative to the Site-specific cleanup levels developed during the RI/FS (Aspect, 2021) in accordance

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<sup>2</sup> U.S. Environmental Protection Agency (EPA), *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*, dated January 19, 2010

with the procedures outlined in MTCA. Groundwater samples were analyzed for total iron and total manganese using EPA method 200.8.

Total iron and manganese were detected in all samples collected during each of the two sampling events, as follows:

#### **August 2023 Results**

- Total iron concentrations in all wells exceeded the Site-specific cleanup level of 300 µg/L, ranging from 325 µg/L in AMW-3 to 2,670 µg/L in AMW-4.
- Total manganese concentrations in all wells exceeded the Site-specific cleanup level of 50 µg/L, ranging from 95.6 µg/L in AMW-4 to 2,880 µg/L in AMW-3.

#### **February 2024 Results**

- Total iron concentrations exceeded the Site-specific cleanup level of 300 µg/L in two of the four wells, AMW-3 (360 µg/L) and AMW-4 (1,150 µg/L).
- Total manganese concentrations exceeded the Site-specific cleanup level of 50 µg/L in two of the four wells, AMW-2 (1,290 µg/L) and AMW-3 (864 µg/L).

Results from the semiannual groundwater sampling events are summarized in Table 1. Laboratory reports are included in Appendix A.

#### **3.2.2.1 Quality Assurance and Quality Control**

Aspect performed a Data Quality Review (DQR) of all analytical data for this study. Aspect's standard DQR is based on the EPA Stage 2A data validation, with minor modifications designed to meet Aspect's internal data quality and management program goals and the project-specific objectives. The results of QA/QC samples (field duplicate samples as summarized in Table 1), laboratory-applied flags, and laboratory-provided analysis comments are reviewed. Qualifier flags are assigned to the data where appropriate, which indicate data usability for study goals and objectives.

Based on review of the laboratory QA/QC results, the results of Aspect's DQR, and review of the data qualifiers, it is Aspect's opinion that the data for this study are of known quality and are acceptable for use for project goals and objectives are qualified.

Validated data has been updated to Ecology's Environmental Information Management (EIM) System in accordance with the Agreed Order.

## **4 Conclusion**

During the August 2023 and February 2024 groundwater monitoring events, the first and second monitoring events following completion of cleanup construction, total iron and manganese were detected in all the four monitoring wells at concentrations above the Site-specific cleanup levels. Iron and manganese are secondary contaminants in the groundwater that are attributable to the subtle reducing and/or slightly acidic conditions associated with carbon dioxide in landfill gas resulting in dissolution of naturally

occurring constituents from native soils (Aspect, 2021). Groundwater monitoring will continue on a semiannual basis occurring in August and February of each year for a minimum period of 5 years (through February 2028).

## 5 References

- Aspect Consulting, LLC (Aspect), 2021, Final Remedial Investigation and Feasibility Study Report, Shelton C Street Landfill, Shelton, Washington, December 16, 2021.
- Aspect Consulting, LLC (Aspect), 2022a, Engineering Design Report, Shelton C Street Landfill, Shelton, Washington, July 11, 2022.
- Aspect Consulting, LLC (Aspect), 2022b, Engineering Design Report Addendum, Shelton C Street Landfill, Shelton, Washington, October 6, 2022.
- Aspect Consulting, LLC (Aspect), 2023a, Geotechnical Engineering Recommendations, C Street Landfill Waste Excavation Expansion, Shelton, Washington, April 3, 2023.
- Aspect Consulting, LLC (Aspect), 2023b, Engineering Design Report Addendum No. 2, Shelton C Street Landfill, Shelton, Washington, April 12, 2023.
- Aspect Consulting, LLC (Aspect), 2023c, Construction Completion Report, Shelton C Street Landfill, Shelton, Washington, October 25, 2023.
- Aspect Consulting, LLC (Aspect), 2023d, Inspection, Monitoring, and Maintenance Plan, Shelton C Street Landfill, Shelton, Washington, November 27, 2023.
- Washington State Department of Ecology (Ecology), 2021, Cleanup Action Plan, Shelton C Street Landfill, City of Shelton, August 10, 2021.

## 6 Limitations

Work for this project was performed for the City of Shelton (Client), and this report 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 report 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.

**Please refer to Appendix B titled "Report Limitations and Guidelines for Use" for additional information governing the use of this report.**

# **TABLES**

**Table 1. Groundwater Monitoring Data**

Project No. AS150074C, C Street Landfill, Shelton, Washington

Location			AMW-1			AMW-2		AMW-3		AMW-4		
Date	Sample Name	Sample Type	08/03/2023	08/03/2023	02/06/2024	08/03/2023	02/06/2024	08/03/2023	02/06/2024	08/03/2023	02/06/2024	02/06/2024
	AMW-1-080323	Parent	AMW-1-080323	AMW-5-080323*	AMW-1-020624	AMW-2-080323	AMW-2-020624	AMW-3-080323	AMW-3-020624	AMW-4-080323	AMW-4-020624	AMW-5-020624*
	DTW (feet bTOC)		90.85	Field Duplicate	83.22	90.83	83.48	107.20	100.32	88.70	81.12	Field Duplicate
	Water Level Elevation (feet NAVD88)		65.05		72.68	64.71	72.06	65.74	72.62	64.98	72.56	
Analyte	Unit	Site-Specific Cleanup Level										
<b>Field Parameters</b>												
Temperature	deg C		13.95	13.95	10.08	13.94	9.68	18.90	9.76	15.84	10.56	10.56
Specific Conductance	uS/cm		296.24	296.24	214.35	229.4	233.17	708.35	579.59	841.1	831.35	831.35
Dissolved Oxygen	mg/L		0.45	0.45	5.70	3.37	0.87	0.29	1.05	2.83	3.49	3.49
pH	pH units		6.34	6.34	6.16	6.17	6.45	7.35	7.20	6.55	6.69	6.69
Oxidation Reduction Potential	mV		156.1	156.1	127.8	200.7	141.5	189.8	146.5	186.9	140.8	140.8
Turbidity	NTU		13.4	13.4	2.37	6.00	2.03	7.94	4.34	38.0	24.1	24.1
<b>Metals, total</b>												
Iron	ug/L	300	<b>703</b>	<b>768</b>	<b>193</b>	<b>325</b>	<b>181</b>	<b>1030</b>	<b>360</b>	<b>2670</b>	<b>1150</b>	<b>1120</b>
Manganese	ug/L	50	<b>1010</b>	<b>873</b>	<b>20</b>	<b>1220</b>	<b>1290</b>	<b>2880</b>	<b>864</b>	<b>95.6</b>	<b>25.4</b>	<b>25.4</b>

**Notes:**

**Bold** indicates a detected concentration

Gray shading indicates a concentration that exceeds the Site-specific screening level

mg/L = milligrams per liter

ug/L = micrograms per liter

deg C = degrees Celsius

uS/cm = microSiemens per centimeter

mV = millivolts

NTU = Nephelometric Turbidity Units

DTW = Depth to Water

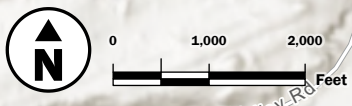
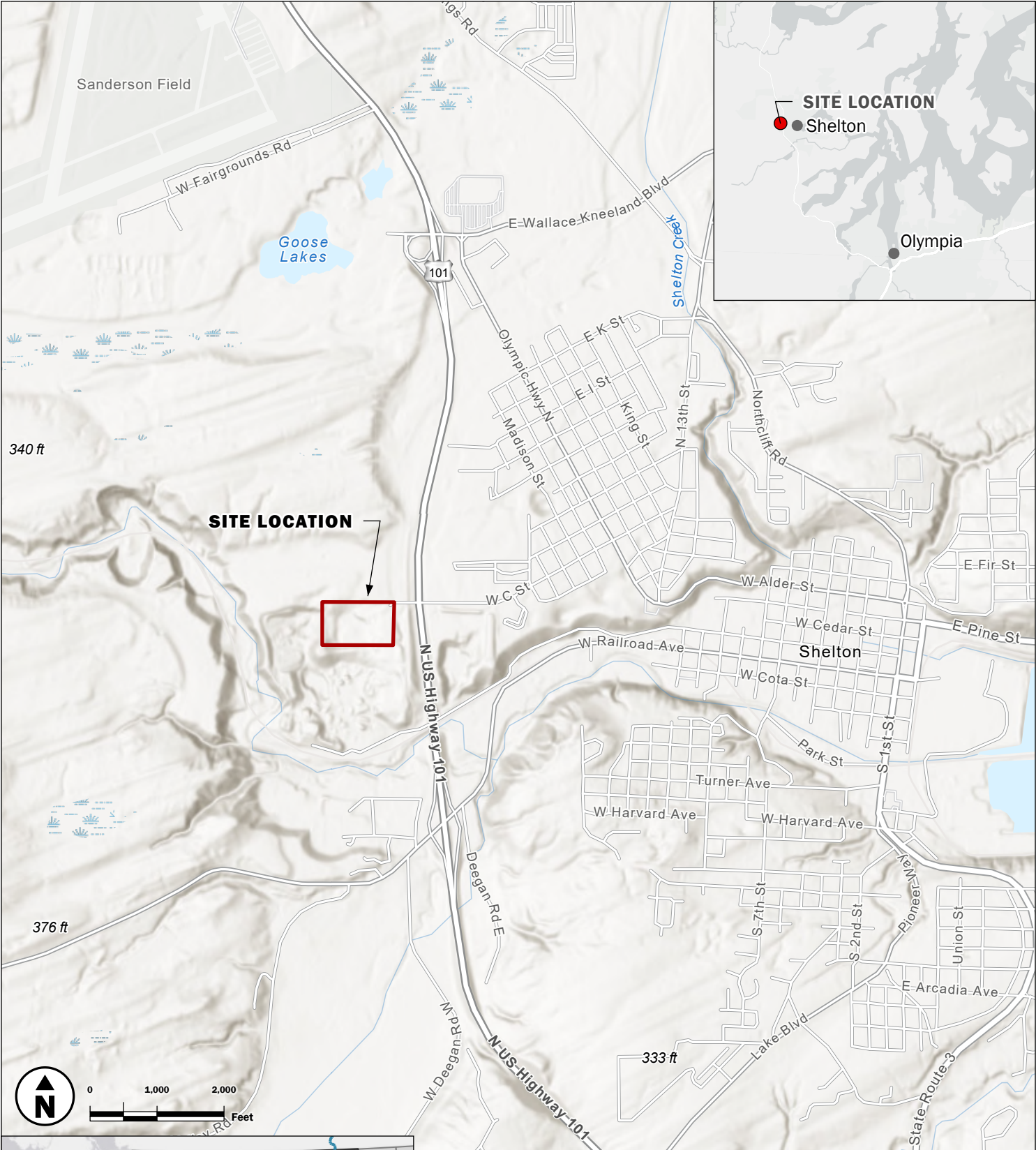
bTOC = below Top of Casing

NAVD88 = North American Vertical Datum of 1988

\* identifies a field duplicate

# FIGURES

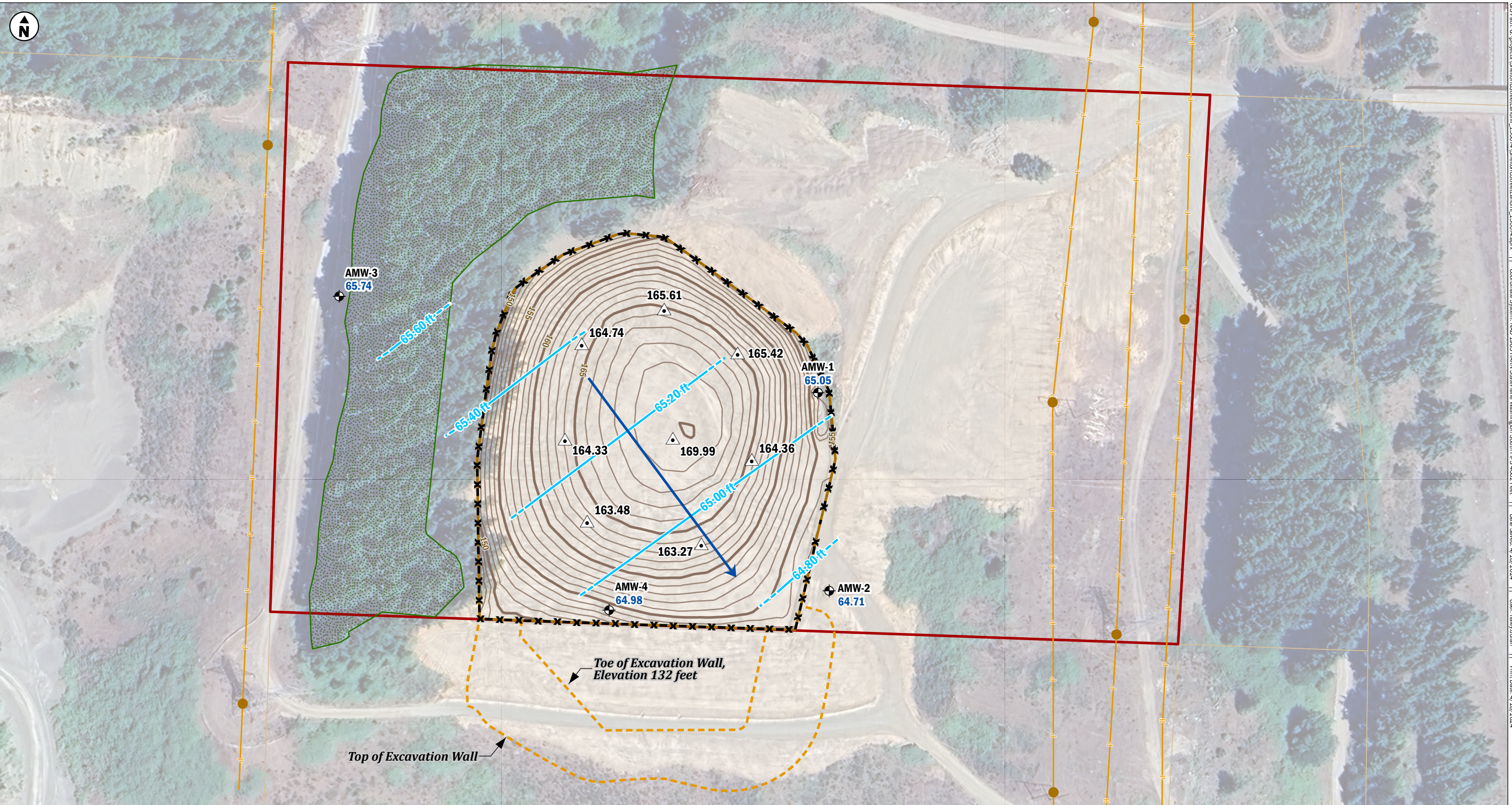
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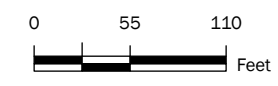
<h2>Site Vicinity Map</h2> <p>Annual Groundwater Monitoring Report C Street Landfill Shelton, WA</p>			<b>FIGURE NO.</b>  <b>1</b>
<b>Aspect</b> CONSULTING	<b>FEB-2024</b> <small>PROJECT NO.</small> 150074	<small>BY:</small> RWN / HMD  <small>REVISED BY:</small> --- / ---	

Data source credits: None | Basemap Service Layer Credits: Esri, NASA, NGA, USGS, FEMA, WA State Parks GIS, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USFWS, Esri, HERE, Garmin, USGS, EPA, NPS, WA State Parks GIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS





- Compliance Groundwater Monitoring Well
- Settlement Survey Benchmarks
- Landfill Parcel
- Transmission Tower
- Transmission Line
- Extent Landfill Waste Excavation South Property
- Landfill Cap
- Chain Link Fence
- Forested Area
- Inferred Groundwater Flow Direction
- Groundwater Elevation Contour (ft. NAVD88)
- Inferred Groundwater Elevation Contour (ft. NAVD88)
- Topography Contours 1 ft
- Topography Contours 5 ft
- Mason County Tax Parcels



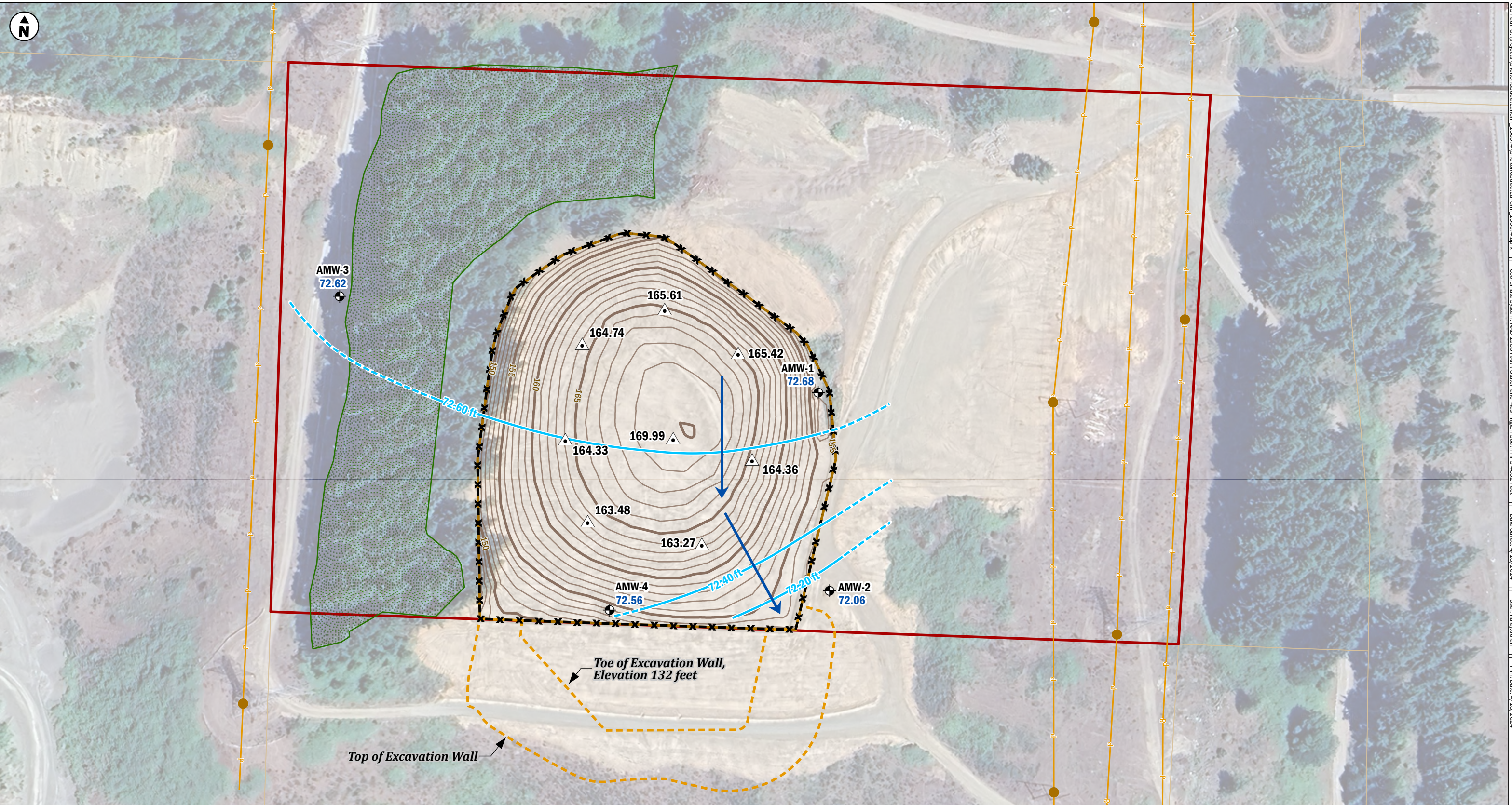
**Note:**  
 1) All site feature locations are approximate.  
 2) Aerial imagery from July 2023 Google Satellite Imagery.  
 3) GW levels measured August 3rd 2023

## Groundwater Elevation Contours

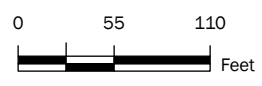
### August 2023

Annual Groundwater Monitoring Report  
 C Street Landfill  
 Shelton, WA

	APR-2024	BY: RWN / HMD	FIGURE NO. <b>2</b>
	PROJECT NO. 150074	REVISED BY: ---/---	



Compliance Groundwater Monitoring Well	Extent Landfill Waste Excavation South Property	Inferred Groundwater Flow Direction	Topography Contours 5 ft
Settlement Survey Benchmarks	Landfill Cap	Groundwater Elevation Contour (ft. NAVD88)	Topography Contours 1 ft
Landfill Parcel	Chain Link Fence	Inferred Groundwater Elevation Contour (ft. NAVD88)	Mason County Tax Parcels
Transmission Tower	Forested Area		
Transmission Line			



**Note:**  
 1) All site feature locations are approximate.  
 2) Aerial imagery from July 2023 Google Satellite Imagery.  
 3) GW levels measured February 6th 2024

<b>Groundwater Elevation Contours</b> <b>February 2024</b>		
Annual Groundwater Monitoring Report C Street Landfill Shelton, WA		
APR-2024 PROJECT NO. 150074	BY: RWN / HMD REVISED BY: ---/---	FIGURE NO. <b>3</b>

## **APPENDIX A**

### **Laboratory Reports**

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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February 13, 2024

Ali Cochrane, Project Manager  
Aspect Consulting, LLC  
710 2<sup>nd</sup> Ave S, Suite 550  
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on February 6, 2024 from the C Street Landfill PO 150074 WO 137000399, F&BI 402080 project. There are 11 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
c: Aspect Data  
ASP0213R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 6, 2024 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC C Street Landfill PO 150074 WO 137000399, F&BI 402080 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
402080 -01	AMW-1-020624
402080 -02	AMW-2-020624
402080 -03	AMW-3-020624
402080 -04	AMW-4-020624
402080 -05	AMW-5-020624

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-1-020624	Client:	Aspect Consulting, LLC
Date Received:	02/06/24	Project:	C Street Landfill PO 150074
Date Extracted:	02/07/24	Lab ID:	402080-01
Date Analyzed:	02/08/24	Data File:	402080-01.043
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	193
Manganese	20.0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-2-020624	Client:	Aspect Consulting, LLC
Date Received:	02/06/24	Project:	C Street Landfill PO 150074
Date Extracted:	02/07/24	Lab ID:	402080-02
Date Analyzed:	02/08/24	Data File:	402080-02.045
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Iron	181
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-2-020624	Client:	Aspect Consulting, LLC
Date Received:	02/06/24	Project:	C Street Landfill PO 150074
Date Extracted:	02/07/24	Lab ID:	402080-02 x10
Date Analyzed:	02/08/24	Data File:	402080-02 x10.044
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Manganese	1,290



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-3-020624	Client:	Aspect Consulting, LLC
Date Received:	02/06/24	Project:	C Street Landfill PO 150074
Date Extracted:	02/07/24	Lab ID:	402080-03
Date Analyzed:	02/07/24	Data File:	402080-03.198
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Iron	360
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-3-020624	Client:	Aspect Consulting, LLC
Date Received:	02/06/24	Project:	C Street Landfill PO 150074
Date Extracted:	02/07/24	Lab ID:	402080-03 x10
Date Analyzed:	02/08/24	Data File:	402080-03 x10.053
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Manganese	864
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-4-020624	Client:	Aspect Consulting, LLC
Date Received:	02/06/24	Project:	C Street Landfill PO 150074
Date Extracted:	02/07/24	Lab ID:	402080-04 x10
Date Analyzed:	02/08/24	Data File:	402080-04 x10.054
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	1,150
Manganese	25.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-5-020624	Client:	Aspect Consulting, LLC
Date Received:	02/06/24	Project:	C Street Landfill PO 150074
Date Extracted:	02/07/24	Lab ID:	402080-05 x10
Date Analyzed:	02/08/24	Data File:	402080-05 x10.055
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	1,120
Manganese	25.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	C Street Landfill PO 150074
Date Extracted:	02/07/24	Lab ID:	I4-96 mb
Date Analyzed:	02/07/24	Data File:	I4-96 mb.062
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/13/24

Date Received: 02/06/24

Project: C Street Landfill PO 150074 WO 137000399, F&BI 402080

**QUALITY ASSURANCE RESULTS  
FOR THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 402080-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	181	101 b	92 b	70-130	9 b
Manganese	ug/L (ppb)	20	20.4	92 b	89 b	70-130	3 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	85	85-115
Manganese	ug/L (ppb)	20	96	85-115

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The analyte is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits due to sample matrix effects.
- j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

402080

Report To: Ali Cochran

Company: Aspect Consulting

Address: 710 2nd Ave Suite #550

City, State, ZIP: Seattle, WA 98104

Phone: (206) 838-6994 Email: Ali.Cochran@aspectconsulting.com

SAMPLE CHAIN OF CUSTODY

02/06/24 1 of 1 K2

SAMPLERS (signature)		PROJECT NAME		PO #	
		C Street Landfill Groundwater Monitoring		PO# 150074 WO# 137000399	
REMARKS		INVOICE TO		ASPECT CONSULTING	
Project specific RIs? - Yes / No					
ANALYSES REQUESTED		SAMPLE DISPOSAL		TURNAROUND TIME	
<input type="checkbox"/> NWTPH-Dx <input type="checkbox"/> NWTPH-Gx <input type="checkbox"/> BTEX EPA 8021 <input type="checkbox"/> NWTPH-HCID <input type="checkbox"/> VOCs EPA 8260 <input type="checkbox"/> PAHs EPA 8270 <input type="checkbox"/> PCBs EPA 8082 <input checked="" type="checkbox"/> Total Fe EPA 200.8 <input checked="" type="checkbox"/> Total Mn EPA 200.8		<input checked="" type="checkbox"/> Standard turnaround <input type="checkbox"/> RUSH Rush charges authorized by:		<input type="checkbox"/> Archive samples <input type="checkbox"/> Other	
		Default: Dispose after 30 days			

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Total Fe EPA 200.8	Total Mn EPA 200.8	Notes
AMW-1-020624	01	02/06/2024	1350	Grw	1								X	X	
AMW-2-020624	02		1225												
AMW-3-020624	03		1120												
AMW-4-020624	04		1515												
AMW-5-020624	05		1630												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Rishi Noor	Aspect Consulting	02/06/24	1740
Relinquished by:				
Received by:	JOE MARKERS		02/06/24	1740
Relinquished by:				
Received by:	Samples received at 4 °C			

Friedman & Bruya, Inc.  
Ph. (206) 285-8282



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Yelena Aravkina, M.S.  
Michael Erdahl, B.S.  
Vineta Mills, M.S.  
Eric Young, B.S.

5500 4th Avenue South  
Seattle, WA 98108  
(206) 285-8282  
fbi@isomedia.com  
www.friedmanandbruya.com

August 11, 2023

Ali Cochrane, Project Manager  
Aspect Consulting, LLC  
710 2<sup>nd</sup> Ave S, Suite 550  
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on August 4, 2023 from the C Street Landfill Post-Construction Groundwater Monitoring 170054, F&BI 308086 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
c: Aspect Data  
ASP0811R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 4, 2023 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC C Street Landfill Post-Construction Groundwater Monitoring 170054, F&BI 308086 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
308086 -01	AMW-1-080323
308086 -02	AMW-2-080323
308086 -03	AMW-3-080323
308086 -04	AMW-4-080323
308086 -05	AMW-5-080323

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-1-080323	Client:	Aspect Consulting, LLC
Date Received:	08/04/23	Project:	170054, F&BI 308086
Date Extracted:	08/07/23	Lab ID:	308086-01 x10
Date Analyzed:	08/10/23	Data File:	308086-01 x10.240
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	703
Manganese	1,010

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-2-080323	Client:	Aspect Consulting, LLC
Date Received:	08/04/23	Project:	170054, F&BI 308086
Date Extracted:	08/07/23	Lab ID:	308086-02 x10
Date Analyzed:	08/10/23	Data File:	308086-02 x10.241
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	325
Manganese	1,220

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-3-080323	Client:	Aspect Consulting, LLC
Date Received:	08/04/23	Project:	170054, F&BI 308086
Date Extracted:	08/07/23	Lab ID:	308086-03 x10
Date Analyzed:	08/10/23	Data File:	308086-03 x10.255
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	1,030
Manganese	2,880

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-4-080323	Client:	Aspect Consulting, LLC
Date Received:	08/04/23	Project:	170054, F&BI 308086
Date Extracted:	08/07/23	Lab ID:	308086-04 x10
Date Analyzed:	08/10/23	Data File:	308086-04 x10.269
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	2,670
Manganese	95.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	AMW-5-080323	Client:	Aspect Consulting, LLC
Date Received:	08/04/23	Project:	170054, F&BI 308086
Date Extracted:	08/07/23	Lab ID:	308086-05 x10
Date Analyzed:	08/10/23	Data File:	308086-05 x10.290
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	768
Manganese	873

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	170054, F&BI 308086
Date Extracted:	08/07/23	Lab ID:	I3-614 mb
Date Analyzed:	08/09/23	Data File:	I3-614 mb.052
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	<5
Manganese	<1



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/11/23

Date Received: 08/04/23

Project: C Street Landfill Post-Construction Groundwater Monitoring 170054, F&BI 308086

**QUALITY ASSURANCE RESULTS  
FOR THE ANALYSIS OF WATER SAMPLES  
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 308042-07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	<50	98	100	70-130	2
Manganese	ug/L (ppb)	20	1.03	97	99	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	94	85-115
Manganese	ug/L (ppb)	20	95	85-115

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### **Data Qualifiers & Definitions**

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The analyte is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits due to sample matrix effects.
- j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- k - The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



## **APPENDIX B**

### **Report Limitations and Guidelines for Use**

# REPORT LIMITATIONS AND USE GUIDELINES

## Reliance Conditions for Third Parties

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This report was prepared for the exclusive use of the Client. No other party may rely on this report or the product of our services without the express written consent of Aspect Consulting (Aspect). This limitation is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual conditions or limitations and guidelines governing their use of the report. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and recognized standards of professionals in the same locality and involving similar conditions.

## Services for Specific Purposes, Persons and Projects

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Aspect has performed the services in general accordance with the scope and limitations of our Agreement. This report has been prepared for the exclusive use of the Client and their authorized third parties, approved in writing by Aspect. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

This report is not, and should not, be construed as a warranty or guarantee regarding the presence or absence of hazardous substances or petroleum products that may affect the subject property. The report is not intended to make any representation concerning title or ownership to the subject property. If real property records were reviewed, they were reviewed for the sole purpose of determining the subject property's historical uses. All findings, conclusions, and recommendations stated in this report are based on the data and information provided to Aspect, current use of the subject property, and observations and conditions that existed on the date and time of the report.

Aspect structures its services to meet the specific needs of our clients. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and subject property. This report should not be applied for any purpose or project except the purpose described in the Agreement.

## This Report Is Project-Specific

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Aspect considered a number of unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you
- Not prepared for the specific purpose identified in the Agreement
- Not prepared for the specific real property assessed
- Completed before important changes occurred concerning the subject property, project or governmental regulatory actions

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

## **Geoscience Interpretations**

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The geoscience practices (geotechnical engineering, geology, and environmental science) require interpretation of spatial information that can make them less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Use Guidelines" apply to your project or site, you should contact Aspect.

## **Discipline-Specific Reports Are Not Interchangeable**

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The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually address any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding the subject property.

## **Environmental Regulations Are Not Static**

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Some hazardous substances or petroleum products may be present near the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or petroleum products or do not otherwise present potential liability. Changes may occur in the standards for appropriate inquiry or regulatory definitions of hazardous substance and petroleum products; therefore, this report has a limited useful life.

## **Property Conditions Change Over Time**

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This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time (for example, Phase I ESA reports are applicable for 180 days), by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope failure or groundwater fluctuations. If more than six months have passed since issuance of our report, or if any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

## **Phase I ESAs – Uncertainty Remains After Completion**

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Aspect has performed the services in general accordance with the scope and limitations of our Agreement and the current version of the “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process”, ASTM E1527, and U.S. Environmental Protection Agency (EPA)'s Federal Standard 40 CFR Part 312 "Innocent Landowners, Standards for Conducting All Appropriate Inquiries".

No ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with subject property. Performance of an ESA study is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental conditions affecting the subject property. There is always a potential that areas with contamination that were not identified during this ESA exist at the subject property or in the study area. Further evaluation of such potential would require additional research, subsurface exploration, sampling and/or testing.

## **Historical Information Provided by Others**

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Aspect has relied upon information provided by others in our description of historical conditions and in our review of regulatory databases and files. The available data does not provide definitive information with regard to all past uses, operations or incidents affecting the subject property or adjacent properties. Aspect makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others.

## **Exclusion of Mold, Fungus, Radon, Lead, and HBM**

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Aspect's services do not include the investigation, detection, prevention or assessment of the presence of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detection, assessment, prevention or abatement of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Aspect's services also do not include the investigation or assessment of hazardous building materials (HBM) such as asbestos, polychlorinated biphenyls (PCBs) in light ballasts, lead based paint, asbestos-containing building materials, urea-formaldehyde insulation in on-site structures or debris or any other HBMs. Aspect's services do not include an evaluation of radon or lead in drinking water, unless specifically requested.