



FOCUSED PHASE II ENVIRONMENTAL SITE ASSESSMENT



East Side Plating Plants 1-3

8400 SE 26th Place Portland, Oregon Multnomah County Parcel R123721 Clackamas County Parcel 00004738 ODEQ ECSI No. 644

Prepared for:

ESP Holding Company, LLC

2601 Crestview Drive Newberg, Oregon 97132

Issued on:

February 13, 2023

EVREN NORTHWEST, INC. Project No. 351-22009-05

Focused Phase II Environmental Site Assessment

East Side Plating Plants 1-3

8400 SE 26th Place
Portland, Oregon 97202
Multnomah County Parcel R123721
Clackamas County Parcel 00004738
ODEQ ECSI No. 644

This report has been prepared for the sole benefit and use of our Client:

ESP Holding Company, LLC

2601 Crestview Drive Newberg, Oregon 97132

and its assignees

Issued February 13, 2023 by:

Creekside Environmental

Consulting, LLC 40 SE 24th Avenue

40 SE 24th Avenue Portland, Oregon 97214

T. (503) 692-8118



Erik RD Chapman, R.G.

Principal Geologist

)0/1

Lynn D. Green, C.E.G.

Principal Engineering Geologist

OREGON
UMM DELAVA GREEN

E2332

E2332

FAREFRING GEON

EXP. 2/1/2024

1.0	Intro	duction	2
2.0	Back	ground	2
	2.1	Site Regulatory Background	2
	2.2	Phase I ESA Findings and Recommendations	3
	2.3	Purpose	4
	2.4	Scope of Work	4
3.0	Site D	Description	4
4.0	Field	Investigation	6
	4.1	Objectives	6
	4.2	Roles and Responsibilities	6
	4.3	Preparation Activities	6
	4.4	Soil Borings	6
		4.4.1 Pit Water Sampling	7
	4.5	Laboratory Analytical Methods	7
	4.6	Cleanup Standards	8
5.0	Findi	ngs	9
	5.1	Soil Boring Locations and General Subsurface Conditions	10
	5.2	Laboratory Results - Soil	11
		5.2.1 Total Petroleum Hydrocarbons	11
		5.2.2 Total Metals	12
		5.2.3 Toxicity Characteristic Leachate Procedure Metals	12
		5.2.4 Volatile Organic Compounds	12
		5.2.5 Pesticides/Herbicides	13
	5.3	Laboratory Results – Pit Water	13
		5.3.1 Total Metals	13
	5.4	Quality Assurance/Quality Control Samples	13
6.0	Prelir	minary Screening for Risk Drivers	14
	6.1	Soil	14
	6.2	Scoping Level Ecological Risk Assessment	14
7.0	Sumn	mary and Conclusions	15
8.0	Reco	mmendations	15
0.0	1 : :		10

i

List of Tables, Figures and Appendices

Tables

IN TEXT (labeled by Section – Number)

- 4-1 Analytical Plan
- 5-1 Summary of Samples Collected

AFTER TEXT (following 'Tables' tab)

- 1 Summary of Analytical Data, Soil
- 2 Summary of Analytical Data, Leachable Lead
- 3 Summary of Analytical Data, Reconnaissance Pit Water
- 4 Summary of Analytical Data, Equipment Blank (QC)
- 5 Further Evaluation of COPC in Soil (Risk Drivers)
- 6 Further Evaluation of COPC in Ground Water (Risk Drivers)

Figures

- 1 Site Vicinity Map
- 2 Site Plan
- 3 Sample Location Diagram

Appendices

- A Site Photographs
- B Soil Boring Logs
- C Field Sampling Data Forms
- D Laboratory Analytical Report

List of Acronyms and Abbreviations

ASTM	American Society of Testing and	NFA	no further action
Materials		NPDES	National Pollutant Discharge
bgs	below ground surface	Elimination S	System
CERCLIS	Comprehensive Environmental	OAR	Oregon Administrative Rules
Response Co	ompensation and Liability Recovery	ODEQ	Oregon Department of
Information	System	Environment	tal Quality
CFSLs	clean fill screening levels	PA	Preliminary Assessment
Client	ESP Holding Company, LLC	PID	photoionization detector
COPCs	Constituents of Potential Concern	ppm	parts per million
DRO	diesel-range organics	RBDM	ODEQ's Risk-Based Decision
DPT	direct push technology		Making for the Remediation
ECSI	Environmental Cleanup Site		of Contaminated Sites
Information			guidance document
ENW	EVREN Northwest, Inc.	RCRA	Resource Conservation and
EPA	US Environmental Protection		Recovery Act
Agency		REC	recognized environmental
ESA	Environmental Site Assessment		condition
F&BI	Freidman and Bruya, Inc.	RPD	relative percent difference
GRO	gasoline-range organics	RRO	residual (oil)-range organics
LQG	Large Quantity Generator	RSLs	Regional Screening Levels
mg/Kg	milligrams per kilogram	SLRBCs	screening-level risk-based
MRL	method reporting limit	concentratio	ns
SOW	scope of work	USGS	US Geological
SWI	soil/water interface	UST	underground storage tank
TCLP	Toxicity Characteristic Leachate	VCP	Voluntary Cleanup Program
Procedure		VOCs	volatile organic constituents

1.0 Introduction

At the request of ESP Holding Company, LLC (Client), EVREN Northwest, Inc. (ENW) conducted this Focused Phase II Environmental Site Assessment (ESA) at the subject site (8400 SE 26th Place, Portland, Oregon; see Figures 1 and 2). This Focused Phase II ESA was completed in accordance with the scope of work presented in ENW's "Focused Supplemental Site Investigation Work Plan," dated November 15, 2022. ¹ The work plan supports ongoing environmental due diligence and cleanup activities, and follows the findings and recommendations presented in a recent Phase I ESA completed by ENW at the subject site. ²

This report presents site background information including a summary of identified environmental concerns, and the methods and findings of the Focused Phase II assessment.

2.0 Background

The subject property was first developed from residential and agricultural land into industrial use in the 1970s. Three industrial warehouse structures were constructed on the site between approximately 1975 and 1981, replacing the previous residence and several open agricultural fields. The initial tenants of the buildings were Pacific Coatings, Inc., Amcoat Enameling, and East Side Plating, which collectively used the property for application of industrial coatings and plating operations. East Side Plating expanded into all three buildings in 1991 and has since continued to use the property for metal surface preparation, industrial coatings, and plating.

2.1 Site Regulatory Background

Environmental and regulatory involvement begin in the 1980s following commencement of industrial activities at the site. In 1988, the site was first entered into the Oregon Department of Environmental Quality's (ODEQs) Environmental Cleanup Site Information (ECSI) database (ECSI Site ID 93) for a release of paint waste to the onsite storm water drainage system. In 1989, the site underwent a basic preliminary assessment (PA) under Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), which resulted in a No Further Action under the federal Superfund program. ODEQ overtook the regulatory oversight of the site shortly thereafter. In 2003, the site was listed to the ECSI database for a second time (ECSI Site ID 644) for a release of nickel-plating fluid containing oil and grease, copper and zinc. In 2011, a third release of nickel-plating fluid was reported at the north end of Plant 2, triggering additional investigations, including installation of monitoring wells and a soil removal action (the extent of which is shown on Figure 3).

The nickel-plating release received regulatory closure under ODEQs Voluntary Cleanup Program (VCP)in 2013; however, the ECSI listing remains open for ongoing investigations into potential surface and subsurface contamination associated with residual impacts beneath the main production plant (Plant 2, Figure 2), ground water impacts near monitoring wells MW-7 and MW-9, and possible ecological impacts

¹ ENW 2022. Focused Supplemental Site Investigation Work Plan, East Side Plating Plants 1-3, 8400 SE 26th Place, Portland, OR, November 15, 2022.

² ENW 2022. *Phase I Environmental Site Assessment*, East Side Plating Plants 1-3, 8400 SE 26th Place, Portland, OR, Site Conditions as of May, 2022.

in Johnson Creek. The site is close to completing their investigations under ODEQ's VCP and expects to receive a site-wide No Further Action in the coming months.

In addition to the above listings for investigative and remedial actions, the site is currently a Large Quantity Generator (LQG) of hazardous waste under the Resource Conservation and Recovery Act (RCRA) hazardous waste program and is currently managing storm water discharges under a National Pollutant Discharge Elimination System (NPDES) 1200-Z storm water discharge permit.

A more thorough summary of previous investigations and findings are presented in ENW's Phase I ESA, ENW's Work Plan, and reports available at ODEQs ECSI website.

2.2 Phase I ESA Findings and Recommendations

ENW completed a Phase I ESA of the subject property on behalf of ESP Holdings Company, LLC in May 2022, in accordance with American Society of Testing and Materials (ASTM) Standard Practice 1527-13.3 The purpose of the assessment was to identify any remaining recognized environmental conditions (RECs) in connection with the subject property in anticipation of a planned business partnership between the current property and ESP Holdings Company, LLC. The Phase I ESA supplements the ongoing environmental investigations, which are being finalized by the current property owner under ODEQ's oversight.

ENW's review of available documents have revealed the following significant data gaps and observations:

- Given the long history of industrial activity on site, Creekside recommends continued cooperation
 with ODEQ in order to pursue closure of this listing including further investigation of areas of past
 known release and areas of potential unknown release such as sump areas in the northern portion
 of Plant 2 and the former wastewater treatment area in Plant 2.
- Mounding of ground water has been observed in ground water monitoring well MW-7 on site and total zinc and nickel are elevated in monitoring wells MW-7 and MW-9. GW elevation is currently being monitored; however, the cause of the mounding is unknown. Creekside recommends further investigation into the cause of the mounding, including investigation into the wastewater treatment system and former release areas as possible sources, and additional testing of soils under the northern portion of building 2 to determine if the source of mounding is related to fluids draining or leaking in this portion of the building.
- Historically, portions of the subject site have been used for agricultural purposes, including row crops. Historically, row crops are known for heavy pesticide, i.e., herbicide, insecticide, and fungicide use. Many pesticide formulations are no longer in use due to their detrimental effects on humans. Pesticides and herbicides, especially those that are federally banned, are persistent in the environment. Therefore, residual concentrations of these substances may be found at properties formerly occupied by row crops. Creekside recommends further investigation into soils of the former row crop area.
- A previous Phase I ESA identified the presence of a 6,000-gallon UST on site in local fire department records. No records regarding the removal of this UST were found. Additionally, given the site's

³ ENW 2021. DRAFT Phase I Environmental Site Assessment, East Side Plating Plants 1-3 Property, 8400 SE 26th Place, Portland, Oregon. May 2022.

extensive industrial history, and former presence of residential structures on site, it is possible that additional USTs are present on site. Creekside recommends a geophysical survey of the site to assess for potential additional USTs.

Based on the findings of the Phase I ESA, ENW developed the aforementioned Work Plan to further investigate each of the identified areas of concern. Although the Work Plan recommended a geophysical survey, a geophysical assessment was not included in the scope of work completed for this assessment, but rather was completed by others and will be reported under separate cover.

2.3 Purpose

The purpose of this assessment was to further investigate, through sampling and laboratory analysis, whether petroleum hydrocarbons and/or regulated hazardous substances are present beneath the subject property. ENW understands the findings of this Focused Phase II ESA will be used to support decision making as part of ongoing environmental due diligence.

2.4 Scope of Work

This Focused Phase II ESA was completed in accordance with the scope of work presented in ENW's ODEQ-approved work plan.¹ The Focused Phase II ESA scope of work (SOW) included the following tasks:

- Preparing an appropriate in-house Sampling and Analysis Plan based on findings of the Phase I ESA.
- Advancing seven (7) temporary soil borings including one proximate to the former nickel spill area
 inside Building 2, one in the former nickel wastewater treatment area inside Building 2, and four
 in the areas of reported former row crops and undocumented fill in the southern portion of the
 site. Borings were advanced to a maximum depth of 15 feet below ground surface (bgs) following
 industry standards.
- Collecting soil samples from all soil borings and reconnaissance ground water samples from select borings for laboratory analysis.
- Submitting samples to an independent laboratory for analysis.
- Evaluating sample results against human health screening levels and other numeric criteria developed by ODEQ.
- Completing this report describing the above activities and findings.

Appendix A presents photos of work conducted on site during this SOW.

3.0 Site Description

Site and Vicinity General Description. The subject property consists of two tax lots located in an industrial and residential area of Portland, Oregon. Details are noted in the table below. The subject site is irregular in shape and measures approximately 6.25 acres in area. A site vicinity map is presented as Figure 1. The subject site is located at the southern end of SE 26th Place, south of SE Tacoma Street and north of the

Springwater Corridor Trail in Portland, Oregon. Surrounding properties are primarily industrial and residential in use. Site features and nearby properties are shown on the Site Plan on Figure 2.

Geographic Setting. The site is located within the Portland Basin, a lowland area surrounding the confluence of the Columbia and Willamette Rivers and bounded by the Tualatin Mountains and Portland Hills to the west and the Cascade Range and Columbia Gorge to the east. The subject site is located within the United States Geological Survey (USGS) Lake Oswego, OR 7.5-minute quadrangle, at an approximate elevation of 64 feet above mean sea level. The subject site and the vicinity slope generally to the west toward the Willamette River, located approximately 1.25 miles to the west of the subject site (see Figure 1).

Geologic Setting The floor of the Portland Basin largely consists of Holocene sediments in the streambeds and flood plains of the active rivers and tributaries, and glacial outburst flood deposits of the late Pleistocene Missoula Floods which have been mapped at up to 400 feet elevation amsl. The west part of the subject site is mapped as channel facies (Qfch) of the catastrophic flood deposits, the east part is mapped as fine-grained facies of the catastrophic flood deposits (Qff), and the northern part near Johnson Creek is mapped as Quaternary alluvium (Qal).4 Channel facies sediments are described as complexly interlayered and variable silts, sands, and gravels deposited in major flood channels cut in earlier fine- or coarse-grained flood facies. The irregular surfaces of these channels have been filled by bog or pond sediments, and by overbank deposits from local creeks. Fine-grained facies sediments are typically composed of coarse sand to silt in this area. The coarser sediments are predominantly Columbia River basalt fragments, and the finer sediments are predominantly quartz and feldspar and also contain white mica. In outcrop, beds are 1 to 3 feet thick and poorly defined. Significant clay is introduced by soil development in the upper 6-15 feet of the deposits. Quaternary alluvium sediments consist of very poorly consolidated sand, silt, clay, and gravel deposited on the flood plains of the modern Columbia and Willamette Rivers and their tributaries, i.e., Johnson Creek. The site is located on the downthrown side of an inferred northwest-trending buried fault mapped west of the site. 4

Soil borings completed at the site in October 2018 generally encountered interbedded silts, sands, and gravels to the maximum depth explored of 20 feet bgs. ⁵

Surface and Ground Water. Johnson Creek traverses the northern margin of the subject site, from the northeast to the west. Its confluence with the Willamette River is approximately 1.25 miles to the west of the subject site.

Twelve monitoring wells are currently located on site. According to the online mapper, depth to ground water is expected to be between approximately 12 and 18 feet bgs. Previous investigations performed on site reported static water levels as shallow as approximately ten feet bgs. For example, ground water was encountered in soil borings completed at the site in October 2018 at depths ranging between 9 and 17 feet bgs.⁵ During this investigation, saturated conditions in exploratory borings were encountered at around 8 to 10 feet bgs.

⁴ Madin, I.P., 1990, Earthquake-Hazard Geology Maps of the Portland Metropolitan Area, Oregon: Text and Map Explanation: Oregon Department of Geology and Mineral Industries Open-File Report 0-90-2, 21 pages plus 8 maps.

⁵ PNG, November 7, 2018. *Technical Memorandum - Focused Site Investigation*, East Side Plating Facility, 8400 SE 26th Place, Portland, Oregon.

4.0 Field Investigation

4.1 Objectives

The Focused Phase II ESA was completed in consideration of the following general objectives:

- To perform the work efficiently and cost-effectively, minimizing interference with any site operations.
- To perform the work in a safe manner for technical personnel and site employees / visitors.
- To document information and data generated in a professional manner that is valid for the intended use.

4.2 Roles and Responsibilities

ENW was the contracted environmental consultant, who arranged for the following subcontracted services:

- For soil sample collection, direct-push drilling equipment and services were provided by Cascade Drilling of Clackamas, Oregon.
- Soil and ground water samples were analyzed by Friedman and Bruya, Inc. (F&BI) of Seattle, Washington. Herbicide analysis was subcontracted to Fremont Analytical in Seattle, Washington.

4.3 Preparation Activities

ENW performed or coordinated the following activities prior to conducting site characterization activities:

Plan Preparation. A Work Plan and Health and Safety Plans were prepared for the project. These documents were reviewed and approved by the client and ODEQ prior to implementing the field work activities.

One Call Notification. Prior to any subsurface site work, a call was placed with One Call Utility Notification Service to identify and locate all public utilities near each of the proposed sampling locations.

Private Utility Locate. In addition to the public utility locate, a private utility locate was conducted by Pacific Northwest Locating. All boring locations were cleared of public and private underground utilities prior to conducting subsurface exploration.

Planning. ENW scheduled and coordinated with the Client to begin site work.

4.4 Soil Borings

ENW installed seven (7) exploratory borings (EB01-EB07) for the purposes of collecting soil and reconnaissance ground water samples for laboratory analysis. Borings EB01 through EB03 were installed inside the interior of Plant 2 using a hand auger and manual direct-push technology (DPT) drilling equipment. ENW contracted with Cascade Drilling of Clackamas, Oregon to advance soil borings EB04 through EB07 using a hydraulic DPT drill rig under the direction of a ENW geologist. The locations of the exploratory borings EB01 through EB07 are illustrated on Figure 3.

Soil borings were advanced to a maximum depth of 15 feet bgs. Soil materials recovered from the direct-push borings were retained within 2.25-inch diameter by 5-foot-long direct-push samplers lined with plastic sleeves. Soils from interior borings were recovered as disturbed soils within the 6-inch-long hand auger bucket or as soil cores collected inside a 3-foot long manual DPT sample core. Soils were inspected from all boring continuously from the surface to the total depth of the boring. During drilling, subsurface soil samples were periodically field screened using a photoionization detector (PID). Soil lithology, field screening results, and other observations were recorded by a ENW geologist onto soil boring logs presented in Appendix B.

Soils were retained for laboratory analysis from zones where field screening indicated the presence of impacts. In the absence of impacts, at least one soil sample was collected from the soil/water interface. Soil samples were transferred directly into laboratory-prepared sample containers sealed with a Teflon-lined cap to minimize headspace, uniquely labeled, and preserved on artificial ice in a cooler pending delivery to the laboratory.

Samples were transferred into laboratory-supplied containers with appropriate preservative, uniquely labelled, documented on a chain-of-custody record, and placed in a cooler on ice pending transport to the laboratory. Ground water field sampling data forms are included in Appendix C.

Samples were labelled by boring number and depth by appending it to the boring number (e.g., EB01/4-5) would indicate a soil sample collected from four (4) to five (5) feet bgs in boring EB01).

Soil boring construction notices (start cards) and reports (well logs) were prepared and submitted to OWRD as required by Oregon Administrative Rules (OAR) 690-240-090. On the same day as drilling, each of the direct-push borings was backfilled with bentonite and sealed at the surface using appropriate materials to match existing conditions.

4.4.1 Pit Water Sampling

Upon reaching shallow refusal in boring EB02, and confirmation that the boring was likely sited within a former sump location, the drill tooling was removed, and a temporary well point was installed in the open borehole in preparation for pit water sampling. Approximately two (2) liters of pit water was purged from the temporary well-point using a low-flow peristaltic pump and dedicated polyethylene tubing to purge the standing water from the borehole, and to draw representative pit water into the temporary well-point. Following purging, a pit water sample was collected using the peristaltic pump set at a low rate.

4.5 Laboratory Analytical Methods

Fourteen soil samples and one (1) pit water sample, and two (2) rinsate blank samples were delivered to Friedman & Bruya, Inc. (F&BI) of Seattle, Washington by courier under chain-of-custody protocol. Laboratory analytical reports and chain-of-custody documents are included in Appendix C. Soil, ground water, and rinsate samples were analyzed in accordance with the laboratory analytical schedule as presented in Table 4-1.

Table 4-1. Analytical Plan

Analytical Method	Constituents	Soil	Water
EPA 5032\8260B	Organic volatile constituents (VOCs): Full Suite	All depth-discrete samples with PID readings greater than 10 ppmv and/or based on observations during sampling (odor, visual, etc.).	
EPA 8081B	Organochlorine Pesticides (OCPs)	Depth-discrete samples from EB04 through EB07 just below contact	
EPA 8151A	Chlorinated Herbicides (CH)	with fill soil. Deeper samples will be held and analyzed if warranted.	
EPA 200.8/6020	Priority Pollutant (PP) Metals:	All depth-discrete samples from EB01 and EB03 Depth-integrated samples from EB04 through EB07	Equipment Blank Pit Water (EB02)
	Select Metals:	Depth-discrete samples from EB04 through EB07 just below contact with fill soil. Deeper samples will be held and analyzed if warranted.	
EPA 1631/7041	Mercury	Depth-discrete samples from EB04 through EB07 just below contact with fill soil. Deeper samples will be held and analyzed if warranted.	Equipment Blank Pit Water (EB02)
NWTPH-Gx	Gasoline-range organics (GRO)	Depth-discrete samples from EB04	Equipment Blank from EB04-
NWTPH-Dx	Diesel-range and Residual-range organics (DRO and RRO, respectively)	through EB07 just below contact with fill soil. Deeper samples will be	EB07 Drilling
EPA 8270	Semi-volatile organic constituents	held and analyzed if warranted.	
EPA 8082	Polychlorinated Biphenyls	All samples with detections of DRO and/or RRO	

4.6 Cleanup Standards

The assessment and remediation of hazardous substances in Oregon are conducted according to OAR 340, Division 122, *Hazardous Substance Remedial Action Rules*. The following cleanup standards and numeric criteria may be applied in evaluating site assessment results.

Risk-Based Cleanup (ODEQ). Risk-based cleanup standards are derived in accordance with ODEQ's *Risk-Based Decision Making for the Remediation of Contaminated Sites* (RBDM) guidance document for:

- Underground storage tanks regulated under the Cleanup Rules for Leaking Petroleum Underground Storage Tank Systems (OAR 340-122-0205 through 340-122-0360).
- Other sources of contamination regulated under the Hazardous Substance Remedial Action Rules (OAR 340-122-0010 through 340-122-0115).

Risk-based concentrations (RBCs) are based on Oregon unacceptable additional risk criteria for cancer occurrence and for non-carcinogenic health impacts. The State of Oregon considers acceptable additional risk of cancer from contact with carcinogenic constituents at less than one in one million incidences, or, for non-carcinogenic constituents, below the constituent threshold concentration at which health impacts would occur. RBCs are generally used to evaluate sampling analytical results as follows:

- ODEQ's lowest RBC for all pathways for residential receptors is used as an initial 'conservative' screening of a constituent. If a constituent's concentration exceeds its screening-level RBC (SLRBC), it requires further evaluation. Otherwise, the constituent is considered unlikely to pose unacceptable risk to any human receptor.
- Those constituents identified by initial screening as exceeding their SLRBC should be further evaluated through a risk-based assessment, which evaluates site-specific exposure pathways and receptors against generic ODEQ-provided RBCs.

Should constituents be identified that also exceed their generic, but exposure pathway- and receptor-specific RBCs, then the appropriateness of additional site-specific methods allowed under the RBDM guidance document will be evaluated (e.g., the development of site-specific RBCs, sampling of soil gas and/or vapor, etc.).

Other Numeric Criteria. In addition to the above risk-based cleanup standards, concentrations were also compared to the following numeric criteria to determine if possible enrichment was occurring, and/or determine if there may be offsite soil disposal restrictions.

- Background Metals. Analytical data were compared with background concentrations established by the ODEQ.⁶ ODEQ does not require cleanup for metals concentrations below default background concentrations.
- Clean Fill Screening Levels. Analytical data for organics were compared to clean fill screening levels (CFSLs) for upland sites established by the ODEQ. ODEQ does not require materials in which contaminant concentrations are less than or equal to CFSLs to be regulated as a solid waste. Rather, these materials may be placed at upland locations that are far enough away from a surface water body, or where there are sufficient controls to avoid erosion into surface water. CFSLs are used to determine if impacts to soil may require future management and are not used for risk screening.

In reviewing Table 1, there are instances where a constituent was not detected but the detection limit is greater than the screening level. ODEQ guidance states that in general, such cases will be considered acceptable proof that the contaminant is not present in that medium. These instances are noted with a "(Y)" in the final column of the table.

5.0 Findings

The findings of this Focused Phase II ESA are presented in this section. Field work is documented in the photographic log presented in Appendix A. Soil boring logs are presented in Appendix B. Ground water field sampling data forms are provided in Appendix C. Analytical reports, chain of custody, and a data validation sheet are provided in Appendix D.

⁶ ODEQ. March 20, 2013, Fact Sheet: Background Levels of Metals in Soils for Cleanups.

⁷ ODEQ. July 2014. Clean Fill Determinations: Internal Management Directive, last updated February 21, 2019, by Heather Kuoppamaki.

5.1 Soil Boring Locations and General Subsurface Conditions

Soil borings were advanced, and samples collected in general accordance with ENW's Work Plan. Any deviations to the work plan are noted below. Subsurface conditions encountered in the borings and sampling rationale are described as follows:

Boring EB01 was advanced through the concrete floor of Plant 2 rectifier room, just south of the former nickel-plating spill cleanup area. A roto-hammer drill was used to penetrate approximately 6-inches of concrete and a manual DPT was used to advance the remainder of the boring. EB01 encountered approximately 18 inches of aggregate base material underlain by fine grained sand with silt and silt layers. Coarse gravels with silt were present beginning at approximately eight (8) feet bgs and extending to the total depth of the boring. As per the Work Plan, one soil sample was collected from directly beneath the aggregate base material (EB01-2), one sample was collected at approximately five (5) feet bgs (EB01-4-5), and one soil sample was collected from the bottom of the boring (EB01-9-10). Ground water was not encountered in the boring.

Borings EB02 was advanced through the concrete floor in the northern portion of Plant 2, at the former wastewater treatment area. Boring EB02 encountered approximately three (3) feet of pea gravel before meeting refusal at between 3.5 and four (4) feet bgs. The ENW field geologist reported a piece of orange-yellow fiberglass material was retrieved inside the core barrel from approximately 3.5 feet bgs. This material is consistent with sump lining material. Therefore, the boring is likely to have met refusal on the concrete floor of the former sump feature. Water was present inside the sump at a sufficient level to collect a water sample. ENW collected a sample of standing water to assess the sump fluids for metals (sample EB02-SUMP-3.5).

Boring EB03 was advanced a few feet west of EB02 to avoid the sump. EB03 encountered stiff silt and a small piece of wood debris before meeting refusal at 7.5 feet bgs. Soil samples were collected from three discrete depths across the silt unit at depths of 2-2.5 feet, 4.5-5.5, and 6.5-7.5 feet bgs. The purpose of the soil samples was to assess soil conditions near the former wastewater treatment area and proximate to the abandoned sump location. Ground water was not encountered in the boring.

Borings EB04 through EB07 were advanced in the southwest portion of the site where historical agricultural use was suggested. Borings penetrated approximately 6 inches of surface gravels (parking lot base rock) overlying unconsolidated soil materials containing various amounts of interstitial debris, interpreted as fill soils within thickness ranging from 3 to 7 feet. Underlying the suspected fill materials were native soils consisting primarily of gray to brown silt with fine sands. As per the Work Plan, ENW collected one depth integrated sample of the fill material comprised of individual discrete samples collected every 1-foot of depth across the fill layer, and one sample of the underlying native soil within 6 inches of the contact with the overlying fill. Suspected fill material are represented by composite soil samples EB04/0.5-6.5, EB05/1-4, EB06/1.5-6.5, and EB07/0.5-7; underlying native soils are represented by discrete samples EB04-7, EB05-4.5, EB06-7, and EB07-7.5.

A summary of soil boring locations and sample IDs is presented on Table 5-1. Boring locations are shown on the sample location diagram on Figure 3.

Quality Assurance/Quality Control Samples. As per the Work Plan, ENW collected one field duplicate soil sample from similar depths as one of the primary discrete samples from boring B05 (sample FD01). In addition, a rinsate sample was collected by pouring deionized water over non-disposable sampling

equipment following the standard decontamination procedures. One rinsate sample was collected on each day of sampling and are identified as RINSATE 01 and RINSATE 02.

Table 5-1. Summary of Samples Collected

Borehole / Location ID	Date Sampled	Depth Sampled (feet)	Sampled By	Location
Soil				
	11/18/2022	2	ENW	Farman On ill Assa /Daskifian Das
EB01	11/18/2022	4-5	ENW	Former Spill Area/Rectifier Rm. Plant 2
	11/18/2022	9-10	ENW	
	11/18/2022	2-2.5	ENW	
EB03	11/18/2022	4.5-5.5	ENW	Former Wastew ater Treatment Area Plant 2
	11/18/2022	6.5-7.5	ENW	TIMIN 2
ED04	11/28/2022	0.5-6.5	ENW	
EB04	11/28/2022	7	ENW	
EB05	11/28/2022	1-4	ENW	
EB05	11/28/2022	4.5	ENW	Area of Former Agricultural Use /
EB06	11/28/2022	1.5-6.5	ENW	Undocumented Fill Soil
EB00	11/28/2022	7	ENW	
EB07	11/28/2022	0.5-7	ENW	
EBU/	11/28/2022	7.5	ENW	
FD01	11/28/2022		ENW	Field Duplicate
Water				
EB02	11/18/2022	3.5	ENW	Pit Water Sample Former Wastew ater Treatment Area Sump, Plant 2
RINSATE-01	11/18/2022		ENW	Equipment Blank Sample Day 1 (QC)
RINSATE-02	11/18/2022		ENW	Equipment Blank Sample Day 2 (QC)

In Tables 1, 2, and 3 (behind text), soil, leaching, and water analytical results are screened against conservative ODEQ risk-based standards (further discussed in Sections 5.2 and 5.3).

5.2 Laboratory Results - Soil

5.2.1 Total Petroleum Hydrocarbons

Depth discrete soil samples from EB04, EB05, EB06 and EB07 were analyzed for GRO and DRO/RRO to assess the presence of total petroleum hydrocarbons. Laboratory analysis by NWTPH-Gx and NWTPH-Dx did not detect the presence of GRO, DRO nor RRO above the laboratory method reporting limit (MRL).

5.2.2 Total Metals

Soil samples from borings EB01 and EB03 and depth-integrated soil samples from EB04 through EB07 were analyzed for Priority Pollutant 13 total metals by EPA 6020B. Depth-discrete soil samples from EB04 through EB07 were analyzed for a smaller group of select metals associated with legacy pesticides and herbicides.

- Antimony was detected in samples from EB04, EB05, EB07 and field duplicate FD01. ODEQ has
 not established a SLRBC for antimony; however, antimony exceeded ODEQ's regional default
 background concentration for the Portland Basin and ODEQ's CFSL of 056 milligram per kilogram
 (mg/Kg) in all borings where it was detected, suggesting antimony may be enriched at these
 locations.
- Arsenic was detected above ODEQ's SLRBC of 0.43 milligrams per kilogram (mg/Kg) at all sample locations. However, the maximum concentration of arsenic does not exceed ODEQ's regional default background concentration of 8.8 mg/Kg, suggesting arsenic may not be enriched the locations sample for this assessment.
- Copper and nickel were detected above their respective regional default background concentrations at some locations, suggesting these constituents may be enriched in areas at the site. However, none of the constituent concentrations exceeded their respective SLRBCs.
- Zinc was detected in soil from all borings. ODEQ has not established a SLRBC for zinc; however, zinc concentrations exceeded ODEQ's regional default background concentration for the Portland Basin and ODEQ's CFSL of 180 mg/Kg in borings EB05, EB06, suggesting zinc nay be enriched at these locations.
- Beryllium, cadmium, chromium, mercury, selenium, silver and thallium were either not detected above the laboratory MRL or were detected at or below their respective SLRBCs, CFSLs and background concentrations in all samples analyzed.

5.2.3 Toxicity Characteristic Leachate Procedure Metals

Since lead was detected at a concentration 20 times its respective RCRA Characteristic Toxicity Concentration (which is used for screening purposes), the soil sample from EB05 at 4.5 feet bgs and the field duplicate were further analyzed for TCLP lead by EPA Method 6020B and 1311 to evaluate the potential for leaching of lead from soil under conservative leachate conditions (i.e., simulating acidic landfill conditions). The laboratory analysis by TCLP methods did not detect the presence of lead in the sample above the laboratory MRL, which was below the EPA's established Toxicity Characteristic limit of 5 micrograms per liter (μ g/L).

5.2.4 Volatile Organic Compounds

Select soil samples from EB01, EB03, and EB06 were analyzed for the full list of VOCs by EPA 8260D. Laboratory analysis detected only two VOC constituents in the sample from EB06.

 Naphthalene was present in the sample at 0.8 mg/Kg, which exceeds the ODEQ SLRBC of 0.077 mg/Kg. • 1,2,4-trimethylbenzene was detected in the same sample at 0.069 mg/Kg, below is respective SLRBC.

All remaining VOCS were not detected above their respective laboratory method reporting limit (MRL).

5.2.5 Pesticides/Herbicides

Laboratory analysis of depth-discrete soil samples from EB04 through EB07 did not detect the presence of pesticides by EPA 8081B or herbicides by EPA 8151A (GS/MS) at concentrations exceeding their respective MRL.

5.3 Laboratory Results – Pit Water

5.3.1 Total Metals

The water sample from boring EB02 (former wastewater treatment sump) was analyzed for Priority Pollutant 13 total metals by EPA 6020B.

- Arsenic at 9.95 micrograms per liter (μg/L) exceeded its ODEQ's SLRBC of 0.052 ug/L (for ground water) and the ODEQs background concentration for natural waters of the state of 2 ug/L.
- Copper was detected at 9500 μ g/L which exceeds its SLRBC of 800 μ g/L (for ground water) and its background concentration of 9 μ g/L (for natural waters of the state).
- Nickel was detected at 25,300 μ g/L, which exceeds its SLRBC of 400 μ g/L (for ground water) and its background concentration of 5.5 μ g/L (for natural waters of the state).
- Silver was detected at 880 μ g/L, which exceeds its SLRBC of 100 μ g/L and its background concentration of 1 μ g/L (for natural waters of the state).
- Zinc was detected at 40.4 μ g/L, which exceeds its exceeded its background concentration of 38 μ g/L (for natural waters of the state).
- Antimony, beryllium, cadmium, chromium, lead, mercury, selenium, and thallium were either not detected above the laboratory MRL or were detected below their respective SLRBCs and background concentrations.

5.4 Quality Assurance/Quality Control Samples

A review of the F&BI and Fremont Analytical laboratory reports indicates that samples were analyzed within appropriate and Quality Assurance/Quality Control (QA/QC) procedures and specified holding times.

Quality Control Samples. The laboratory results of quality control samples are presented on Tables 1 and 4, and summarized below.

• Blind Sample Duplicate. Laboratory analysis of a blind sample duplicate collected from soil boring EB05 (sample "FD01") reflect a relative percent difference (RPD) ranging from approximately 0.1% for arsenic up to approximately 16.2% for zinc. Generally, an RPD of 20% represents the limit of acceptable variance for duplicate samples. Results of the quality control samples suggest that the accuracy and precision of both field and laboratory testing methods are within the data quality objectives for this project.

- Equipment Blank Sample. All analytes were "non-detect", except for the following constituents in rinsate samples collected from soil sampling equipment (auger bucket and/or sample core barrels).
 - \circ Chromium was detected on both days at 1.33 µg/L and 3.04 µg/L, respectively.
 - O Nickel was detected on both days at 3.75 μg/L and 5.28 μg/L, respectively.
 - \circ Silver was detected on both days at 2.7 µg/L and 1.51 µg/L, respectively.

These results suggest that some cross-contamination has occurred between samples during soil sample collection activities and/or that the decontamination water may contain low levels of these constituents and therefore the laboratory results might be biased slightly high. However, since the concentrations detected for these constituents did not exceed their respective screening levels, these results are not considered to alter the conclusions of this assessment.

6.0 Preliminary Screening for Risk Drivers

To better understand potential risk drivers and environmental liabilities, a preliminary risk screening was conducted to evaluate the presence of naphthalene in soil at EB06, lead in soil at borings EB04 and EB05.

6.1 Soil

Table 5 further evaluates impact in soil against the default RBCs for all soil exposure pathways. Based on this evaluation, the following risk drivers were identified:

Leaching to Ground Water (follow by ingestion).

However, based on a previous evaluation of human health risk performed by others at the site, the site is currently, and will likely remain industrial in use, and ground water is not reasonably likely to be used for domestic consumption. Therefore, based on current and reasonable likely future land and ground-water uses, this pathway is likely incomplete.

6.2 Scoping Level Ecological Risk Assessment

ODEQ regulations (OAR 340-122-244(3)) generally do not require screening for potential ecological impact if the Site is devoid of ecologically important species and habitat and if the following conditions can be demonstrated:

- 1. Contaminated soils are only present at depths greater than 3 feet bgs, or, if present at a shallower depth, such soils cover an area no greater than 0.125 acre,
- 2. Surface water has not been affected by the release,
- 3. Contaminated ground water does not, and is not, reasonably likely to discharge to surface waters or otherwise reach the surface in a manner that might result in contact with ecological receptors, and
- 4. Contaminated ground water does not and is not reasonably likely to come into contact with aquatic sediments (OAR 340-122-0244(3)).

Use of the site for foraging is limited for all species given the industrial land use, impermeable ground cover in areas investigated. The lack of receptors strongly suggests ecological risks are unlikely due to site related COPCs in surface soil. Therefore, since conditions 1 through 4 listed above appear to be true for the Site, ENW concludes that ecological screening is not warranted.

7.0 Summary and Conclusions

This Focused Phase II ESA was conducted to assess potential residual soil impacts near the former nickelliquid spill area and former wastewater treatment area in Plant 2 and an area of former agricultural use and undocumented fill soils in the southwest portion of the site.

The findings of this Phase II ESA are as follows:

- Low concentrations of naphthalene and possible enriched concentrations of lead were detected in soil in the southwest portion of the site where former agricultural use and undocumented fill soil is documented. The concentration of naphthalene and lead in soil would only present a potential risk should future use of the shallow water-bearing unit be anticipated, which is unlikely; therefore, naphthalene and lead in soil do not appear to pose an unacceptable human health risk under the anticipated industrial land use scenario and no current or reasonable likely future use of the shallow water-bearing unit. However, soils containing naphthalene, antimony, cadmium, copper, lead, nickel and zinc, if removed, may not qualify as unrestricted clean fill.
- Investigation of the former wastewater treatment area in the northern portion of Plant 2 encountered an abandoned concrete structure at boring location EB02. Standing water was observed in the sump confines and ENW collected a sample of the sump water for metals analysis. The sample results reported elevated levels of arsenic, copper, nickel, and silver at concentrations above their respective SLRBCs (which are based on the RBCs for drinking water).

8.0 Recommendations

The findings of the Focused Phase II ESA have led ENW to the following conclusions:

- The residual impacts pose an ongoing risk of a release in the event that the concrete containment is breached. The sump should be pumped out and decommissioned by pressure grouting. Impacted sump water should be appropriately disposed of according to applicable regulations.
- ➤ Given the occurrence of residual impacted soil, a Contaminated Media Management Plan (CMMP) is recommended to ensure property management and handling of impacted media at the site.
- Given that the building foundation currently acts as a physical barrier for the infiltration of storm water onsite, a Soil Cap Management Plan is recommended to maintain the physical infiltration barrier such that underlying ground-water impacts are not exacerbated.

We recommend this report is kept as part of the permanent property records.

9.0 Limitations

The scope of this report is limited to observations made during on-site work; interviews with knowledgeable sources; and review of readily available published and unpublished reports and literature. As a result, these conclusions are based on information supplied by others as well as interpretations by qualified parties.

The focus of the site closure does not extend to the presence of the following conditions unless they were the express concerns of contacted personnel, report and literature authors or the work scope.

- Naturally occurring toxic or hazardous substances in the subsurface soils, geology and water,
- Toxicity of substances common in current habitable environments, such as stored chemicals, products, building materials and consumables,
- Contaminants or contaminant concentrations that are not a concern now but may be under future regulatory standards,
- Unpredictable events that may occur after ENW's site work, such as illegal dumping or accidental spillage.

There is no practice that is thorough enough to absolutely identify the presence of all hazardous substances that may be present at a given site. ENW's investigation has been focused only on the potential for contamination that was specifically identified in the Scope of Work. Therefore, if contamination other than that specifically mentioned is present and not identified as part of a limited Scope of Work, ENW's environmental investigation shall not be construed as a guaranteed absence of such materials. ENW have endeavored to collect representative analytical samples for the locations and depths indicated in this report. However, no sampling program can thoroughly identify all variations in contaminant distribution.

We have performed our services for this project in accordance with our agreement and understanding with the client. This document and the information contained herein have been prepared solely for the use of the client.

ENW performed this study under a limited scope of services per our agreement. It is possible, despite the use of reasonable care and interpretation, that ENW may have failed to identify regulation violations related to the presence of hazardous substances other than those specifically mentioned at the closure site. ENW assumes no responsibility for conditions that we did not specifically evaluate or conditions that were not generally recognized as environmentally unacceptable at the time this report was prepared.

	Location ID		EB01			EB03		EE	304	EB	305	EB	306
	Sample ID	EB01-2	EB01/4-5	EB01/9-10	EB03/2-2.5	EB03/4.5-5.5	EB03/6.5-7.5	EB04/0.5-6.5	EB04-7	EB05/1-4	EB05-4.5	EB06/1.5-6.5	EB06-7
	Date Sampled	11/18/2022	11/18/2022	11/18/2022	11/18/2022	11/18/2022	11/18/2022	11/28/2022	11/28/2022	11/28/2022	11/28/2022	11/28/2022	11/28/2022
]	Depth Sampled (feet)	2	4-5	9-10	2-2.5	4.5-5.5	6.5-7.5	0.5-6.5	7	1-4	4.5	1.5-6.5	7
	Sampled By	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
	Location	Fo	rmer Spill Area/Rectifier F Bldg 2	Rm.	Form	ner Wastewater Treatmen Bldg 2	t Area		Former Agricultural Use / inted Fill Soil	NE Portion of Area of F Undocumer	ormer Agricultural Use / nted Fill Soil		Former Agricultural Use / nted Fill Soil
Constituent of Interest	Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)
Volatile Organic Constituents	<u> </u>			<u> </u>	<u> </u>			, , , ,	, , , , ,	, , ,	, , , ,		<u> </u>
Benzene	C, V		<0.03 (ND)		<0.03 (ND)		<0.03 (ND)					<0.03 (ND)	
Bromodichloromethane	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Bromoform	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Bromomethane	nc, v		<0.5 (ND)		<0.5 (ND)		<0.5 (ND)					<0.5 (ND)	
Carbon tetrachloride	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Chlorobenzene	nc, v		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Chlorodibromomethane (dibromochloromethane)	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Chloroethane (ethyl chloride)	nc, v		<0.5 (ND)		<0.5 (ND)		<0.5 (ND)					<0.5 (ND)	
Chloroform	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Chloromethane	nc, v		<0.5 (ND)		<0.5 (ND)		<0.5 (ND)					<0.5 (ND)	
1,2-Dichlorobenzene	nc, v		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
1,4-Dichlorobenzene	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
1,1-Dichloroethane	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
1,1-Dichloroethene	nc, v		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
cis-1,2-Dichloroethene	nc, v		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
trans-1,2-Dichloroethene	nc, v		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Dichloromethane	C, V		<0.5 (ND)		<0.5 (ND)		<0.5 (ND)					<0.5 (ND)	
EDB (1,2-dibromoethane)	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
EDC (1,2-dichloroethane)	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Ethylbenzene	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
MTBE (methyl t-butyl ether)	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Naphthalene	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					0.8	
iso-Propylbenzene (cumene)	nc, v		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Tetrachloroethene (PCE)	C, V		<0.025 (ND)		<0.025 (ND)		<0.025 (ND)					<0.025 (ND)	
Toluene	nc, v		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
1,1,1-Trichloroethane	nc, v		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
1,1,2-Trichloroethane	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Trichloroethene	NA, v		<0.02 (ND)		<0.02 (ND)		<0.02 (ND)					<0.02 (ND)	
Trichlorofluoromethane (Freon 11)	nc, v		<0.5 (ND)		<0.5 (ND)		<0.5 (ND)					<0.5 (ND)	
1,2,4-Trimethylbenzene	nc, v		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					0.069	
1,3,5-Trimethylbenzene	nc, v		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Vinyl chloride	C, V		<0.05 (ND)		<0.05 (ND)		<0.05 (ND)					<0.05 (ND)	
Xylenes	nc, v		<0.1 (ND)		<0.1 (ND)		<0.1 (ND)					<0.1 (ND)	

	Location ID	FF	307	QAQC		1				
	Sample ID	EB07/0.5-7	EB07-7.5	FD01				Background		Exceeds ODEQs
	Date Sampled	11/28/2022	11/28/2022	11/28/2022	Maximum Soil	Soil Matrix	ODEQs Screening- Level Risk-Based	Concentrations (Regional Default)	Clean Fill Screening Levels or Background	Screening-Level SLRBCs (Soil) and/or Soil Matrix Cleanup
Dept	th Sampled (feet)	0.5-7	7.5		Concentration (remaining soil)	Cleanup Level	Concentrations		Concentrations (as applicable)	Level
	Sampled By	ENW	ENW	ENW	(SLRBCs ¹ (Soil)			
	Location	SW Portion of Area of F Undocume	I Former Agricultural Use / nted Fill Soil	gricultural Use / Field Duplicate	•			Portland Basin		TRUE OR Y
Constituent of Interest	Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)		•	mg/Kg (ppm)			FALSE OR N
Volatile Organic Constituents	,				•					
Benzene	C, V				<0.03 (ND)	NE	0.023		0.023	(Y)
Bromodichloromethane	C, V				<0.05 (ND)	NE	0.002		0.002	(Y)
Bromoform	C, V				<0.05 (ND)	NE	0.046		0.046	(Y)
Bromomethane	nc, v				<0.5 (ND)	NE	0.083		0.083	(Y)
Carbon tetrachloride	C, V				<0.05 (ND)	NE	0.013		0.013	(Y)
Chlorobenzene	nc, v				<0.05 (ND)	NE	5.8		2.4	N
Chlorodibromomethane (dibromochloromethane)	C, V				<0.05 (ND)	NE	0.0024		0.0024	(Y)
Chloroethane (ethyl chloride)	nc, v				<0.5 (ND)	NE	310		310	N
Chloroform	C, V				<0.05 (ND)	NE	0.0034		0.0034	(Y)
Chloromethane	nc, v				<0.5 (ND)	NE	2.2		2.2	N
1,2-Dichlorobenzene	nc, v				<0.05 (ND)	NE	36		0.92	N
1,4-Dichlorobenzene	C, V				<0.05 (ND)	NE	0.057		0.057	N
1,1-Dichloroethane	C, V				<0.05 (ND)	NE	0.044		0.044	(Y)
1,1-Dichloroethene	nc, v				<0.05 (ND)	NE	6.7		6.7	N
cis-1,2-Dichloroethene	nc, v				<0.05 (ND)	NE	0.63		0.63	N
trans-1,2-Dichloroethene	nc, v				<0.05 (ND)	NE	7.0		7	N
Dichloromethane	C, V				<0.5 (ND)	NE	0.14		0.14	(Y)
EDB (1,2-dibromoethane)	C, V				<0.05 (ND)	NE	0.00012		0.00012	(Y)
EDC (1,2-dichloroethane)	C, V				<0.05 (ND)	NE	0.0028		0.0028	(Y)
Ethylbenzene	C, V				<0.05 (ND)	NE	0.22		0.22	N
MTBE (methyl t-butyl ether)	C, V				<0.05 (ND)	NE	0.11		0.11	N
Naphthalene	C, V				0.8	NE	0.077		0.077	Y
iso-Propylbenzene (cumene)	nc, v				<0.05 (ND)	NE	96		96	N
Tetrachloroethene (PCE)	C, V				<0.025 (ND)	NE	0.46		0.18	N
Toluene	nc, v				<0.05 (ND)	NE	83		23	N
1,1,1-Trichloroethane	nc, v				<0.05 (ND)	NE	190		190	N
1,1,2-Trichloroethane	C, V				<0.05 (ND)	NE	0.0063		0.0063	(Y)
Trichloroethene	NA, v				<0.02 (ND)	NE	0.013		0.013	(Y)
Trichlorofluoromethane (Freon 11)	nc, v				<0.5 (ND)	NE	61		52	N
1,2,4-Trimethylbenzene	nc, v				0.069	NE	10		10	N
1,3,5-Trimethylbenzene	nc, v				<0.05 (ND)	NE	11		11	N
Vinyl chloride	C, V				<0.05 (ND)	NE	0.00057		0.00057	(Y)
Xylenes	nc, v				<0.1 (ND)	NE	23		1.4	N

	Location ID		EB01			EB03		E	304	EB	305	E	306
	Sample ID	EB01-2	EB01/4-5	EB01/9-10	EB03/2-2.5	EB03/4.5-5.5	EB03/6.5-7.5	EB04/0.5-6.5	EB04-7	EB05/1-4	EB05-4.5	EB06/1.5-6.5	EB06-7
	Date Sampled	11/18/2022	11/18/2022	11/18/2022	11/18/2022	11/18/2022	11/18/2022	11/28/2022	11/28/2022	11/28/2022	11/28/2022	11/28/2022	11/28/2022
	Depth Sampled (feet)	2	4-5	9-10	2-2.5	4.5-5.5	6.5-7.5	0.5-6.5	7	1-4	4.5	1.5-6.5	7
	Sampled By	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
	Location	Fo	I rmer Spill Area/Rectifier F Bldg 2	Rm.	Forr	L ner Wastewater Treatmen Bldg 2	I t Area		I Former Agricultural Use / nted Fill Soil	NE Portion of Area of F Undocumer	L Former Agricultural Use / nted Fill Soil		I Former Agricultural Use / nted Fill Soil
Constituent of Interest	Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)
Pesticides													
Aldrin	C, V								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
Chlordane	C, V								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
DDD (4,4'-Dichlorodiphenyldichloroethane)	c, nv								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
DDE (4,4'-Dichlorodiphenyldichloroethene)	C, V								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
DDT (4,4'-Dichlorodiphenyltrichloroethane)	c, nv								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
2,4-Dichlorophenoxyacetic acid (2,4-D)	nc, nv								<34.5 (ND)		<36.5 (ND)		<32.5 (ND)
Dieldrin	c, nv								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
Endosulfan (alpha-beta)	nc, v								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
Endrin	nc, nv								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
Heptachlor	C, V								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
Heptachlor Epoxide	C, V								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
Hexachlorobenzene	C, V								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
alpha-Hexachlorocyclohexane (alpha-HCH)	c, nv								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
gamma-Hexachlorocyclohexane (Lindane)	c, nv								<0.01 (ND)		<0.01 (ND)		<0.01 (ND)
MCPA ((4-chloro-2-methylphenoxy)acetic acid)	nc, nv								<57.4 (ND)		<60.8 (ND)		<54.2 (ND)
Toxaphene	c, nv								<1 (ND)		<1 (ND)		<1 (ND)
Metals	_												
Antimony		<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	1.76		1.21		<1 (ND)	
Arsenic	c, nv	3.42	3.49	1.8	5.46	3.75	1.83	5.03	1.34	6.47	6.1	3.23	3.32
Beryllium	c, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)		<1 (ND)		<1 (ND)	
Cadmium	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	0.548		0.59		0.335	
Chromium (III)	nc, nv	12	9.59	9.03	14.8	21.2	15.5	16	11	18.7	52.5	47.2	17.9
Copper	nc, nv	17.7	15.7	10.8	16.4	14.5	17.0	22.8		38.8		33	
Lead	NA, nv	6.24	4.28	2.38	8.55	10.3	12.9	56.7	6.11	143	61.2	19.9	6.48
Mercury	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)
Nickel	c, nv	57.1	17.7	9.05	13.5	9.95	7.40	11.6		14.6		17.2	
Selenium		<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)		<1 (ND)		<1 (ND)	
Silver	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)		<1 (ND)		<1 (ND)	
Thallium		<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)	<1 (ND)		<1 (ND)		<1 (ND)	
Zinc		61.9	40.4	33.6	44.9	48.3	37.2	106		160		294	

	Location ID		307	QAQC		-				<u> </u>
					†					
	Sample ID	EB07/0.5-7	EB07-7.5	FD01	_			Background Concentrations		Exceeds ODEQs Screening-Level
D:	ite Sampled	11/28/2022	11/28/2022	11/28/2022	Maximum Soil Concentration	Soil Matrix	ODEQs Screening- Level Risk-Based	(Regional Default)	Clean Fill Screening Levels or Background	SLRBCs (Soil) and/or Soil Matrix Cleanup
Depth Sa	mpled (feet)	0.5-7	7.5		(remaining soil)	Cleanup Level	Concentrations		Concentrations (as	Level
	Sampled By	ENW	ENW	ENW			SLRBCs ¹ (Soil)		applicable)	
	Location	SW Portion of Area of F	Former Agricultural Use / nted Fill Soil	Field Duplicate				Portland Basin		TRUE OR Y FALSE OR N
Constituent of Interest	Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)			mg/Kg (ppm)			TALGE ON IV
Pesticides										
Aldrin	C, V		<0.01 (ND)		<0.01 (ND)	NE	0.023		0.023	N
Chlordane	C, V	-	<0.01 (ND)	1	<0.01 (ND)	NE	0.91		0.91	N
DDD (4,4'-Dichlorodiphenyldichloroethane)	c, nv		<0.01 (ND)	-	<0.01 (ND)	NE	1.1		0.0063	N
DDE (4,4'-Dichlorodiphenyldichloroethene)	C, V	1	<0.01 (ND)	1	<0.01 (ND)	NE	1.6		0.01	N
DDT (4,4'-Dichlorodiphenyltrichloroethane)	c, nv	1	<0.01 (ND)	1	<0.01 (ND)	NE	1.9		0.01	N
2,4-Dichlorophenoxyacetic acid (2,4-D)	nc, nv	-	<37.2 (ND)		<37.2 (ND)	NE	2.3		2.3	(Y)
Dieldrin	c, nv	1	<0.01 (ND)	1	<0.01 (ND)	NE	0.01		0.0045	N
Endosulfan (alpha-beta)	nc, v	-	<0.01 (ND)		<0.01 (ND)	NE	200		0.64	N
Endrin	nc, nv	-	<0.01 (ND)		<0.01 (ND)	NE	11		0.0014	N
Heptachlor	C, V		<0.01 (ND)		<0.01 (ND)	NE	0.017		0.017	N
Heptachlor Epoxide	C, V		<0.01 (ND)		<0.01 (ND)	NE	0.0042		0.0042	(Y)
Hexachlorobenzene	C, V		<0.01 (ND)		<0.01 (ND)	NE	0.018		0.018	N
alpha-Hexachlorocyclohexane (alpha-HCH)	c, nv		<0.01 (ND)		<0.01 (ND)	NE	0.0063		0.0063	(Y)
gamma-Hexachlorocyclohexane (Lindane)	c, nv		<0.01 (ND)		<0.01 (ND)	NE	0.036		0.0095	N
MCPA ((4-chloro-2-methylphenoxy)acetic acid)	nc, nv		<62.1 (ND)		<62.1 (ND)	NE	0.097		0.097	(Y)
Toxaphene	c, nv		<1 (ND)		<1 (ND)	NE	0.36		0.36	(Y)
Metals										
Antimony		1.14		1.04	1.76	NE	NE	0.56	0.56	N
Arsenic	c, nv	6.84	1.83	6.48	6.84	NE	0.43	8.8	8.8	BKG
Beryllium	c, nv	<1 (ND)		<1 (ND)	<1 (ND)	NE	160	2	2	N
Cadmium	nc, nv	0.468		0.669	0.669	NE	78	0.63	0.63	N
Chromium (III)	nc, nv	19	12.1	17.2	52.5	NE	120000	76	76	N
Copper	nc, nv	35.1		35.5	38.8	NE	3100	34	34	N
Lead	NA, nv	24	10.2	137	143	NE	30	28	28	Y
Mercury	nc, nv	<0.5 (ND)	<0.5 (ND)	<0.5 (ND)	<1 (ND)	NE	23	0.23	0.23	N
Nickel	c, nv	13.9		15.6	57.1	NE	1500	47	47	N
Selenium		<1 (ND)		<1 (ND)	<1 (ND)	NE	NE	0.71	0.71	N
Silver	nc, nv	<1 (ND)		<1 (ND)	<1 (ND)	NE	390	0.82	0.82	(Y)
Thallium		<1 (ND)		<1 (ND)	<1 (ND)	NE	NE	5.2	5.2	(Y)
Zinc		94.4		124	294	NE	NE	180	180	N

ENW

Location ID		EB01			EB03		EB	04	EB	05	EB	06
Sample ID	EB01-2	EB01/4-5	EB01/9-10	EB03/2-2.5	EB03/4.5-5.5	EB03/6.5-7.5	EB04/0.5-6.5	EB04-7	EB05/1-4	EB05-4.5	EB06/1.5-6.5	EB06-7
Date Sampled	11/18/2022	11/18/2022	11/18/2022	11/18/2022	11/18/2022	11/18/2022	11/28/2022	11/28/2022	11/28/2022	11/28/2022	11/28/2022	11/28/2022
Depth Sampled (feet)	2	4-5	9-10	2-2.5	4.5-5.5	6.5-7.5	0.5-6.5	7	1-4	4.5	1.5-6.5	7
Sampled By	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW	ENW
Location	Fc	rmer Spill Area/Rectifier F Bldg 2	Rm.	Form	Former Wastewater Treatment Area Bldg 2		NW Portion of Area of Former Agricultural Use / Undocumented Fill Soil		/ NE Portion of Area of Former Agricultural Use / Undocumented Fill Soil		SE Portion of Area of Former Agricultural Use / Undocumented Fill Soil	
Constituent of Interest Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)
Total Petroleum Hydrocarbons												
Generic Gasoline (GRO) nc, v								<5 (ND)		<5 (ND)		<5 (ND)
Generic Diesel / Heating Oil (DRO) nc, v								<50 (ND)		<50 (ND)		<50 (ND)
Generic Mineral Insulating Oil (RRO) nc, nv								<250 (ND)		<250 (ND)		<250 (ND)

Notes

mg/Kg = milligram per kilogram or parts per million (ppm).

<# (ND) = not detected at or above the laboratory method reporting limit shown.</p>

NE = not established.

— = not analyzed or not applicable.

c = carcinogenic

nc = noncarcinogenic

v = volatile

nv = nonvolatile

GRO = gasoline-range organics.

DRO = diesel-range organics.

RRO = residual-range organics.

concentrations and background concentrations, as applicable.

1 Lowest Risk-Based Concentration for soil (screening level assumes

Shaded concentrations exceed screening level risk-based

residential use, from ODEQ RBCs dated May 2018).

(Y) indicates analyte not detected, but detection limit is above screening concentration.

BKG = constituent exceeded its SLRBC; however, was not detected above default backgound concentrations in soil

L	ocation ID	EB	307	QAQC						
	Sample ID	EB07/0.5-7	EB07-7.5	FD01				Background Concentrations		Exceeds ODEQs Screening-Level
Date	Sampled	11/28/2022	11/28/2022	11/28/2022	Maximum Soil Concentration	Soil Matrix	ODEQs Screening- Level Risk-Based	(Regional Default)	Clean Fill Screening Levels or Background	SLRBCs (Soil) and/or Soil Matrix Cleanup
Depth Sam	oled (feet)	0.5-7	7.5		(remaining soil)	Cleanup Level	Concentrations		Concentrations (as	Level
Sa	ampled By	ENW	ENW	ENW]		SLRBCs ¹ (Soil)		applicable)	
	Location	SW Portion of Area of F Undocumen	Former Agricultural Use / nted Fill Soil	Field Duplicate				Portland Basin		TRUE OR Y FALSE OR N
Constituent of Interest	Note	mg/Kg (ppm)	mg/Kg (ppm)	mg/Kg (ppm)			mg/Kg (ppm)			TALGE ON N
Total Petroleum Hydrocarbons										
Generic Gasoline (GRO)	nc, v		<5 (ND)		<5 (ND)	80	31		520	N
Generic Diesel / Heating Oil (DRO)	nc, v		<50 (ND)		<50 (ND)	500	1100		90	N
Generic Mineral Insulating Oil (RRO)	nc, nv		<250 (ND)		<250 (ND)	500	2800		140,000	N

Notes:

mg/Kg = milligram per kilogram or parts per million (ppm).

<# (ND) = not detected at or above the laboratory method reporting limit shown.</p>

NE = not established.

— = not analyzed or not applicable.

c = carcinogenic

nc = noncarcinogenic

v = volatile

nv = nonvolatile

GRO = gasoline-range organics.

DRO = diesel-range organics.

RRO = residual-range organics.

Shaded concentrations exceed screening level risk-based concentrations and background concentrations, as applicable.



(Y) indicates analyte not detected, but detection limit is above screening concentration.

BKG = constituent exceeded its SLRBC; however, was not detected above default backgound concentrations in soil

Table 2. Summary of Analytical Data - Leaching

Lo	cation ID	EB05	QAQC	
	ample ID		FD01	
Date	Sampled			
Depth Samp	led (feet)	4.5		RCRA ¹ Toxicity
Sa	mpled By	ENW	ENW	Characteristic
	Location	Former Agricultural Use Area / Undocumented Fill Soil	Field Duplicate	
Constituent of Interest	Note	mg/L (ppm)	mg/L (ppm)	mg/L (ppm)
Metals				
Lead	NA, nv	<0.1 (ND)	<0.1 (ND)	5

Notes

nv = nonvolatile

Resource Conservation and Recovery Act, 1976
 mg/L = milligram per Liter or parts per million (ppm).
 (ND) = not detected at or above the laboratory method reporting limit shown.
 NE = not established.
 nc = noncarcinogenic

Table 3 - Summary of Analytical Data, Reconnaissance Pit Water

	_ocation ID	EB02				
	Sample ID	EB02-SUMP- 3.5		ODEQs		COPC?
Da	te Sampled		Maximum Ground	Screening-level	Background	00101
Depth Sar	mpled (feet)	3.5	Water	Risk-Based	Concentrations	
·	Sampled By	ENW	Concentration	Concentrations	(metals) ²	
	Location	Former Wastewater Treatment Sump Bldg 2		(SLRBCs) ¹		TRUE OR Y FALSE OR N
Constituent of Interest	Note	μg/L (ppb)		μg/L (ppb)		
Metals						
Antimony	nc, nv	<5 (ND)	<5 (ND)	NE	<1	N
Arsenic	c, nv	9.95	9.95	0.052	2	Y
Beryllium	c, nv	<1 (ND)	<1 (ND)	40	NE	N
Cadmium	nc, nv	<5 (ND)	<5 (ND)	20	1	N
Chromium (III)	nc, nv	25.3	25.3	30000	1	N
Copper	nc, nv	9500	9500	800	9	Y
Lead	NA, nv	1.24	1.24	15	13.3	N
Mercury	nc, nv	2.18	2.18	6	0.1	N
Nickel	c, nv	25300	25300	400	5.5	Y
Selenium	nc, nv	<5 (ND)	<5 (ND)	NE	0.2	N
Silver	nc, nv	880	880	100	1	Y
Thallium	nc, nv	<1 (ND)	<1 (ND)	NE	NE	N
Zinc	nc, nv	40.4	40.4	NE	38	Y

Notes

ug/L = micrograms per Liter or parts per billion (ppb).

<# (ND) = not detected at or above the laboratory method reporting limit shown.</p>

NE = not established.

— = not analyzed or not applicable.

c = carcinogenic

nc = noncarcinogenic

nv = nonvolatile

COPC = constituent of potential concern

Bolded concentrations exceed screening level risk-based concentrations and background concentrations, as applicable.

¹ Lowest Risk-Based Concentration for ground water (screening level assumes residential use, from ODEQ RBCs dated May 2018).

² Default background concetrations for metals (freshwater) based on ODEQ Internal Memorandum dated Oct. 28, 2002 from Toxicology Work Group.

Table 4 - Summary of Analytical Data, Equipment Blanks

	Location ID	RINSATE-01	RINSATE-02						
	Sample ID	RINSATE-01	RINSATE-02		0050		COPC?		
	Date Sampled	11/18/2022	11/18/2022	Maximum Ground	ODEQs Screening-level	Background	COPC?		
	Depth Sampled (feet)			Water Concentration	Risk-Based	Concentrations			
	Sampled By	ENW	ENW	Concentration	Concentrations	(metals)			
	Location	Equipment Blank Sample Day 1	Equipment Blank Sample Day 2		(SLRBCs) ¹		TRUE OR Y FALSE OR N		
Constituent of Interest	Note	μg/L (ppb)	μg/L (ppb)		μg/L (ppb)				
Metals									
Arsenic	c, nv	<1 (ND)	<1 (ND)	<1 (ND)	0.052	2	(Y)		
Beryllium	c, nv	<1 (ND)	<1 (ND)	<1 (ND)	40	NE	N		
Cadmium	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	20	1	N		
Chromium (III)	nc, nv	1.33	3.04	3.04	30000	1	N		
Copper	nc, nv	<5 (ND)	<5 (ND)	<5 (ND)	800	9	N		
Lead	NA, nv	<1 (ND)	<1 (ND)	<1 (ND)	15	13.3	N		
Mercury	nc, nv	<1 (ND)	<1 (ND)	<1 (ND)	6	0.1	N		
Nickel	c, nv	3.75	5.28	5.28	400	5.5	N		
Silver	nc, nv	2.7	1.51	2.7	100	1	N		
Total Petroleum Hydrocarbons									
Generic Gasoline (GRO)	nc, v		<100 (ND)	<100 (ND)	110	NE	N		
Generic Diesel / Heating Oil (DRO)	nc, v		<50 (ND)	<50 (ND)	100	NE	N		
Generic Mineral Insulating Oil (RRO)	nc, nv		<250 (ND)	<250 (ND)	300	NE	N		

Notes

ug/L = micrograms per Liter or parts per billion (ppb).

<# (ND) = not detected at or above the laboratory method reporting limit shown.

NE = not established.

— = not analyzed or not applicable.

c = carcinogenic

nc = noncarcinogenic

v = volatile

nv = nonvolatile

GRO = gasoline-range organics.

DRO = diesel-range organics.

RRO = residual-range organics.

(Y) indicates analyte not detected, but detection limit is above screening concentration.

¹ Lowest Risk-Based Concentration for ground water (screening level assumes residential use, from ODEQ RBCs dated May 2018).

Table 5. Further Evaluation of COPCs in Soil

Contaminated Medium		SOIL mg/Kg (ppm)																						
Exposure Pathway		Soil Ingestion, Dermal Contact, and Inhalation								Volatilization to Outdoor Air					Vapor I	Leaching to Ground Water					Maximum Detected			
		RBC_ss									RBC_so					RBC_{si}					RBC _{sw}			
Receptor Scenario		Residential Urban Residential Occupational Construction Worker				Norker	Excavation	n Worker	Residential	Urban Resi	Urban Residential		nal	Residential	Urban Residential	Occup	Occupational		ial	Urban Residential	Occupational			
Direct or Indirect Pathway (see notes)		DC	DC		DC	DC		DC		IVS	NS		IVS		NS	IVS	IV	IVS			IS	IS		
Contaminant of Concern	Note	Note		Note	Note	:	Note		Note	Note		Note		Note	Note	Note		Note		Note	Note		Note	mg/Kg (ppm)
Volatile Organic Constituents																								
Naphthalene	C, V	5.3	25		23	580	>Csat	16000	>Csat	6.4	15		83		6.4	15	83		0.077		0.37	0.34		0.8
Metals																								
Lead	NA, nv	400 L	400	L	800 L	800	L	800	L	- NV	-	NV	-	NV	- NV	- NV	-	NV	30	L	30 L	30	L	143

Notes:

— = not analyzed or not applicable.

< = not detected above method reporting limit shown.

NE = not established.

mg/Kg = milligrams per Kilogram or parts per million (ppm).

c = carcinogenic

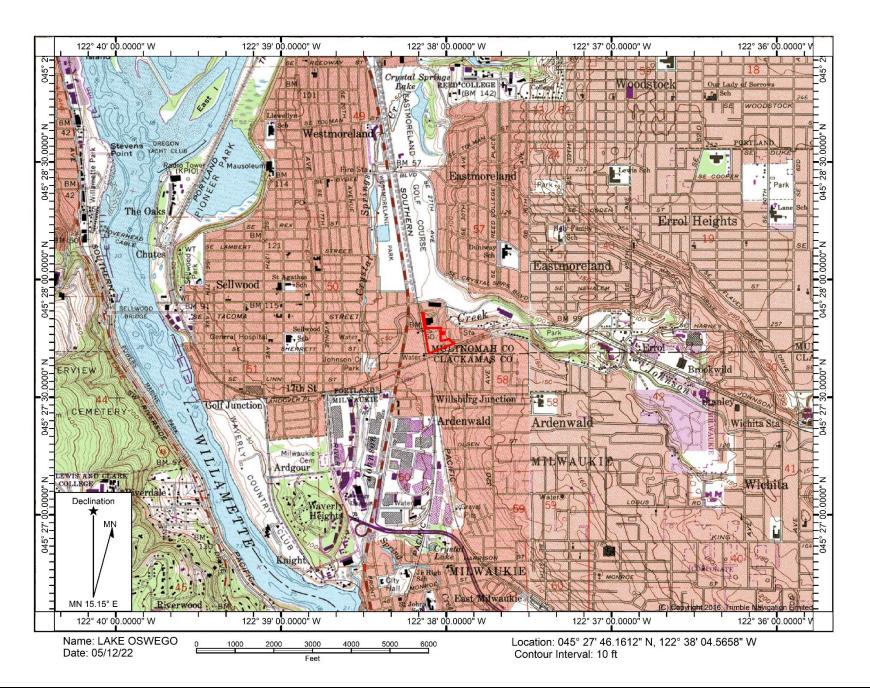
nc = noncarcinogenic

v = volatile

nv = nonvolatile

<Csat = This soil RBC exceeds the limit of three-phase equilibrium partitioning.</p>

Shaded risk-based concentrations are below the maximum detection concentrations and suggest potential unacceptable risk via this pathway/receptor scenario if complete

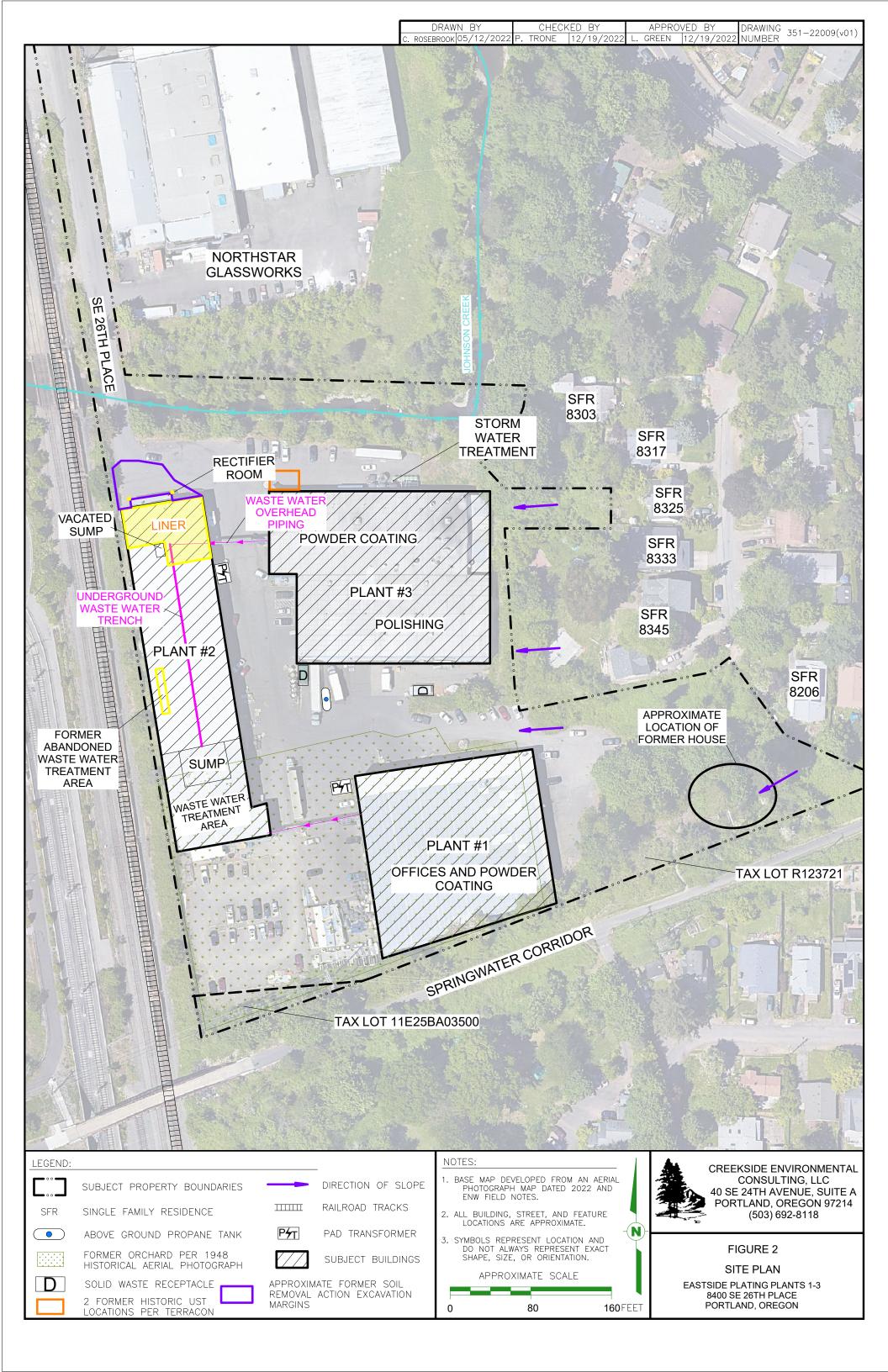


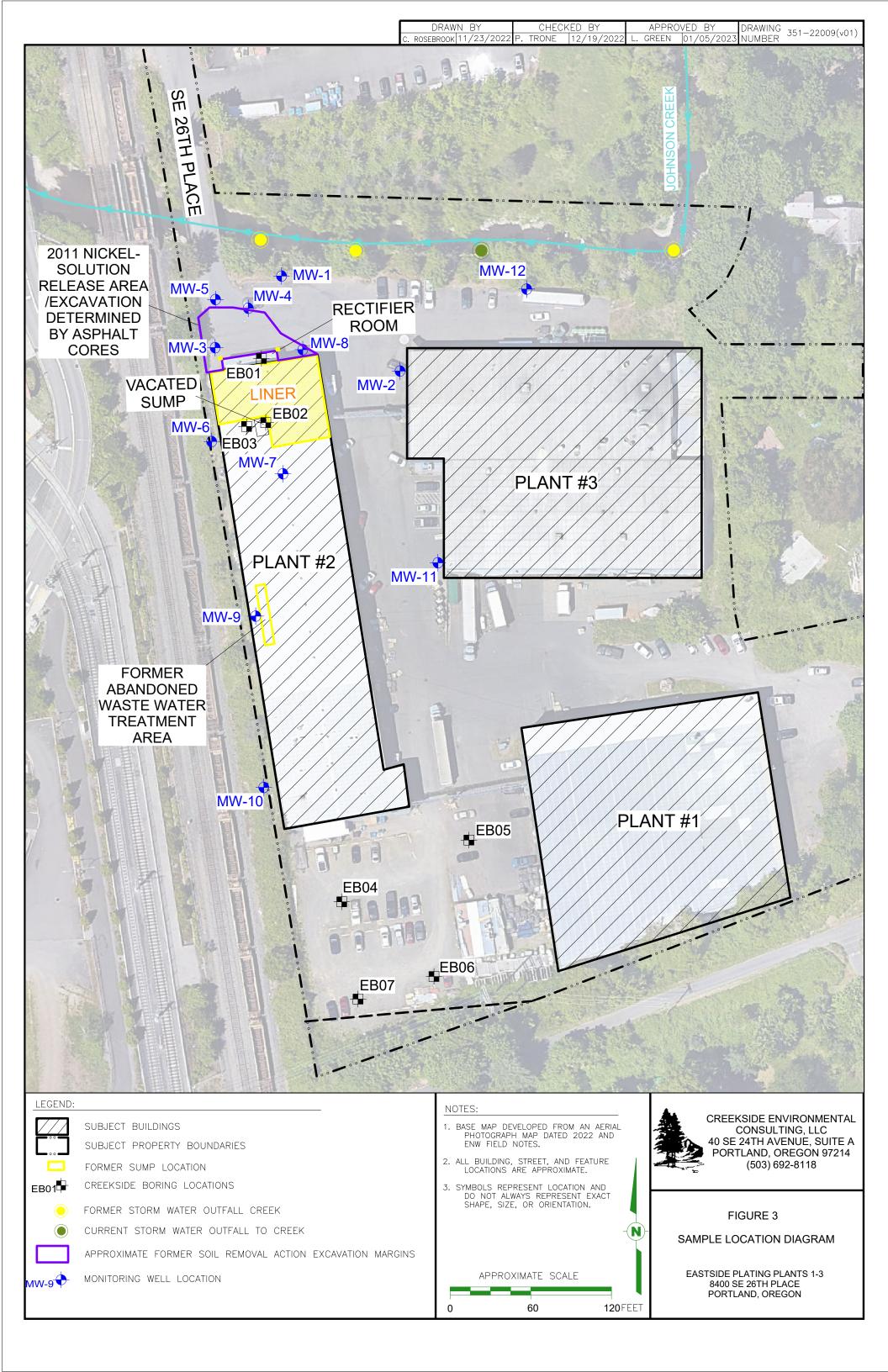
CREEKSIDE ENVIRONMENTAL CONSULTING, LLC 40 SE 24TH AVENUE, SUITE A PORTLAND, OREGON 97214 (503) 692-8118 Date Drawn: 5/12/2022 CAD File Name: 351-22009-01_fig1sv_map Drawn By: CLR Approved By: LDG Eastside Plating Plants 1-3 8400 SE 26th Place Portland, Oregon

Site Vicinity Map

Project No. 351-22009

Figure No.





Appendix A Site Photographs



Advancing EB01 on Nov. 18, 2022, using DPT drill rods.



Soil cores from EB01 retained in liners.



Using DPT to advanced borings EB02 and EB3 inside Bldg. 2.



Collecting a pit water sample from EB03.

CREEKSIDE ENVIRONMENTAL CONSULTING, LLC

East Side Plating Plants 1-3 8400 SE 26th Place Portland, Oregon

Site Photographs

Project No. 351-22009-05 Appendix **A**



A Geoprobe drill rig was used to advance borings in the southern portion of the site on November 28, 2022.



Drill rig set up on boring EB05, looking north.



Soil was retrieved in 60-inch cores.



Close-up view of unconsolidated soil materials retrieved from borings.

CREEKSIDE ENVIRONMENTAL CONSULTING, LLC

East Side Plating Plants 1-3 8400 SE 26th Place Portland, Oregon

Site Photographs

Project No. 351-22009-05 Appendix **A**

Appendix B Soil Boring Logs

DDILL LOO	PROJECT					PROJEC	T NO.		BORING NO.		
DRILL LOG	East Side Plat					35	1-22009	-05	EB01		
SITE		BEGUN		COMPL	ETED	H	OLE SIZE		ANGLE FROM HORIZ.		
8400 SE 26th COORDINATES	Place, Portland, OR	11/18/ DEPTH GROUND WATER	DATE SL	. 8	/18/20/ STATIC	LEVEL	FIRST V	VATER	GROUND ELEVATION		
DRILLER		CORE REC	ÖVERY (%	b) # :	SAMPL	ES	# CORE	BOXES	DEPTH TOP OF ROCK		
DRILL MAKE AND MODEL	ENW	LOGGED BY:			Mana	_			DEPTH BOTTOM OF HOL		
					Morri MPLE D				10 REMARKS:		
DEPTH STRATA ELEVATION/ DEPTH GRAPHIC LOG	DESCRIPTION		SAMPLE		SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion	PID/OVM	NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.		
0	Concrete	-									
	Aggregate base/FILL.	(0) (0)		-				0.0			
2.5 —	Fine SAND with siltand trace gravel medium stiff, brown, micaceous, low plasticity.	(SM), moist, cohesion/	_	-				0.0			
- - 5 —	Fine SAND with silt (SM), very mois micaceous.	st, loose, gray	EB01/4		Soil			0.0			
7.5—	SILT with fine sand (ML), moist, stif rusty mottling.	ff, gray with		- - -				0.0			
	Coarse GRAVEL with some silt (GP dense, brown and gray with rusty mo		_	-				0.0			
			- EB01/9		Soil			0.0 0.0			
10 —	End of boring; backfill with bentonite	e chips.		-							
12.5 —		-	_	-							
-				-							
15 —		-	-	F							
17.5—		-		-							
-				-							

DDII I I	$\overline{\Omega}$	PROJECT				PRO	DJEC	T NO.		BORING NO.		
DRILL L	UG	East Side Pla	ting - Plant	s 1-3			35	1-22009	-05	EB02 ANGLE FROM HORIZ.		
SITE		BEGUN COMPLE				-	IOLE SIZE		ANGLE FROM HORIZ.			
COORDINATES	E 26th 1	Place, Portland, OR	11/18/ DEPTH GROUND WATER	DATE SI	ATE SL STAT			2" FIRST WATER # CORE BOXES		GROUND ELEVATION		
DRILLER			CORE RECOVERY (%) # SAM			AMPLES		# CORE	BOXES	DEPTH TOP OF ROCK		
DRILL MAKE AND MC	DDEL	ENW	LOGGED B	Y:						DEPTH BOTTOM OF HOL		
	77			<u> </u>		Morris MPLE DAT	' A	I		3.75		
DEPTH STRATA ELEVATION/ DEPTH	GRAPHICLOG	DESCRIPTION		SAMPLE			RECOVERY	MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.		
0		Concrete Pea gravel FILL. Fiberglass. Hard refusal; end of boring.		EBOSUMP	- - - - - 2- W	/ater	RE	M O		CONDITIONS.		
- 17.5 — - -				_ _ _	- - - -							

			PROJECT					PROJE	CT NO.		BORING NO.
DRII		OG	East Side Plat	ing - Plants	s 1-3			3:	51-22009	-05	EB03
SITE				BEGUN		COM	PLETED		HOLE SIZE		ANGLE FROM HORIZ.
COORDINA	8400 SI ATES	E 26th	n Place, Portland, OR	11/18/ DEPTH GROUND WATER	DATE SL	•		LEVEL		/ATER	GROUND ELEVATION
DRILLER				CORE RECOVERY (%) # SAI			# SAMPI	LES	# CORE	BOXES	DEPTH TOP OF ROCK
DRILL MAK	KE AND MO	DEL	ENW	LOGGED BY:			J. Morr	ri c			DEPTH BOTTOM OF HOL
	<u></u>	ū					SAMPLE				REMARKS:
рертн	STRATA ELEVATION/ DEPTH	GRAPHICLOG	DESCRIPTION		SAMPLE		SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion	PID/OVM	NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Concrete	-			_				
-			Aggregate base/FILL. SILT (ML), slightly moist, stiff, browled low plasticity.	vn, micaceou	as,		-				
2.5			Small chunk of black wood.	-	EB03/2	-2.5	Soil —			13.5	
-			Grades to include orange mottling.		EB03/4	1.5	Soil			0.0 0.3	
5 —			Becomes soft and moist.	-	5.5		- -				
7.5			Refusal, end of boring; backfilled wi	th hantonita	EB03/6		Soil			11.5	
-			chips.	in bentonne	-	-	-				
-					-	-	-				
-					-	-	-				
10 —				-			_				
							-				
							_				
_					_	-	-				
12.5 —				-	_	}	_				
+					-	}	-				
-					-	}	-				
-						-	-				
15 —				_			-				
10				-			-				
						-	-				
_					_	}	-				
_					-	}	-				
17.5 —				-		}	-				
_						-	-				
							_				

8400 SE 26th Place, Portland, OR DEPTH GROUND WATER DATE SL STATIC LEVEL FIRST WATER GROUND WATER DRILLER CORE RECOVERY (%) # SAMPLES # CORE BOXES DI ENW DRILL MAKE AND MODEL LOGGED BY: DESCRIPTION DESCRIPTION O Gravel (base rock); brown sand with silt and gravel; brick fragments top of fill (estimated) O Gravel (base rock); brown sand with silt and gravel; brick fragments top of fill (estimated) O O O O O O O O O O O O O	EB04 ANGLE FROM HORIZ. GROUND ELEVATION DEPTH TOP OF ROCK DEPTH BOTTOM OF HOL 10 REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING
SITE 8400 SE 26th Place, Portland, OR 11/28/22 11/28/22 2.75" COORDINATES DEPTH GROUND WATER CORE RECOVERY (%) DRILLER CORE RECOVERY (%) DRILL MAKE AND MODEL LOGGED BY: DESCRIPTION DESCRIPTION OF Gravel (base rock); brown sand with silt and gravel; brick fragments top of fill (estimated) OF Gravel (base rock); brown sand with silt and gravel; brick fragments top of fill (estimated) OF GRAVE OF THE SET OF THE S	GROUND ELEVATION DEPTH TOP OF ROCK DEPTH BOTTOM OF HOL 10 REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING,
DRILLER DRILLER DRILL MAKE AND MODEL ENW DRILL MAKE AND MODEL DESCRIPTION DESCRIPTION DESCRIPTION Gravel (base rock); brown sand with silt and gravel; brick fragments top of fill (estimated) DATE SL STATIC LEVEL FIRST WATER GROUND WASHIEL STATIC LEVEL FIRST WATER GROUND WASHIEL SAMPLES # CORE BOXES DI SAMPLE DATA BI ON WASHIEL DATA BI ON WASHIEL DATA WAND Gravel (base rock); brown sand with silt and gravel; brick fragments top of fill (estimated) O O O O O O O O O O O O O O O O O O O	DEPTH TOP OF ROCK DEPTH BOTTOM OF HOL 10 REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING,
DRILLER ENW DRILL MAKE AND MODEL ENW DESCRIPTION Gravel (base rock); brown sand with silt and gravel; brick fragments top of fill (estimated) GROUND WATER CORE RECOVERY (%) # SAMPLES # CORE BOXES DI ##	DEPTH TOP OF ROCK DEPTH BOTTOM OF HOL 10 REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING,
DRILL MAKE AND MODEL LOGGED BY: J. Morris SAMPLE DATA DESCRIPTION O Gravel (base rock); brown sand with silt and gravel; brick fragments top of fill (estimated) O O O O O O O O O O O O O	DEPTH BOTTOM OF HOL 10 REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING,
DRILL MAKE AND MODEL DRILL MAKE AND MODEL LOGGED BY: D. Morris	10 REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING,
SAMPLE DATA DESCRIPTION Or Sample fragments top of fill (estimated) SAMPLE DATA BERNALION OWN SAMPLE DATA OWN SAMPLE DATA OWN OWN SAMPLE DATA OWN OWN OWN OWN OWN OWN OWN OW	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING,
DESCRIPTION O O O O O O O O O O O O	NOTES ON WATER LEVELS, LOSSES, CAVING, CASING,
Gravel (base rock); brown sand with silt and gravel; brick fragments top of fill (estimated) 0.0	LEVELS, LOSSES, CAVING, CASING,
brick fragments top of fill (estimated) 0.0	CONDITIONS.
top of fill (estimated)	
2.5 SII T (MI) with fine sand; gray with slight brown 90	
SILT (ML) with fine sand; grey with slight brown mottling; micaceous; medium dense; moist	
EB04/0.5	
5 increased rounded to sub-rounded gravel 0.0	
Increased rounded to sub-rounded graver	
metal shards	
Native soil (no metal shards or anthropomorphic	
-	
7.5 — EB04-7 soil 100	
orange and brown mottling increases with depth	
EB04-9 soil	
10 End of Boring 0.0	
~ ~	
12.5	
15—	
1	
17.5	

J. Morris 15			PROJECT				PROJEC	T NO.		BORING NO.		
SITE SLOW SE 26th Place, Portland, OR 11/28/22 11/28/22 2.75" COORDINATES ORDINATES O		O G	East Side Plat	ing - Plants	s 1-3		35	51-22009	0-05	EB05		
DRILLER CORR RECOVERY (%) # SAMPLES # CORE BOXES DEPTH TOP OF ROOF FINW LOGGED BY: LOGGED BY: J. Morris SAMPLE DATA SAMPLE DATA DESCRIPTION DESCRIPTION SAMPLE DATA SAMPLE DATA DESCRIPTION DESCRIPTION SAMPLE DATA SAMPLE DATA SAMPLE DATA SOIL SOIL SAMPLE DATA SOIL SOIL SAMPLE DATA SOIL SOIL	SITE		•	BEGUN		COMPLETED)	HOLE SIZE	Ē	ANGLE FROM HORIZ.		
SRUMP FINW DESCRIPTION SAMPLES REDORE BOXES DEPTH TOP OF ROCK	8400 S	E 26th	Place, Portland, OR		3/22	11/28/	22	2.7	5"			
DRILL MAKE AND MODEL LOGGED BY: DEPTH BOTTOM OF 5 15 15 15 15 15 15 15				GROUND WATER								
DESCRIPTION SAMPLE DATA S	DRILLER			CORE REC	OVERY (%) # SAMF	PLES	# CORE	BOXES	DEPTH TOP OF ROCK		
SAMPLE DATA	DRILL MAKE AND MC	DDEL	ENW	LOGGED B	Y:					DEPTH BOTTOM OF HOL		
DESCRIPTION DESCR												
Gravel and sand (base rock); gray; sand and gravel mix; bose; moist top of fill (estimated) 2.5 — EB05/1-4 — 100 0.0 0.0 0.0 0.0 0.0 0.0 0.0	T A NO. T	007						` g	×	REMARKS: NOTES ON WATER		
2.5 SILT (ML); gray and brown; with rounded to subrounded gravel; medium office of subrounded gravel medium soft; moist; medium office of subrounded gravel medium soft; moist; medium office office of subrounded gravel medium office office office of subrounded gravel medium office	DEPTI STRAT ELEVATI		DESCRIPTION		SAMPLE NO.	SAMPLE	CORE	MW Const Completio	PID/OV	LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING		
top of fill (estimated) Sill_T (ML); gray and brown; with rounded to subrounded gravel; medium soft; moist; medium plasicity; no mica Sill_T (ML); gray and brown; with rounded to subrounded gravel; medium plasicity; no mica EB05-4.5	0			and and grave	1							
EB05/1-4 — 100 SILT (ML); gray and brown; with rounded to subrounded gravel; medium soft; moist; medium plasicity; no mica EB05-4.5 woll O.0 EB05-4.5 woll O.0 EB05-6.5 — 0.0 EB05-6.5 — 0.0 SILT (ML); gray and brown; with rounded to subrounded gravel; medium dense; wet to saturated; some medium sand EB05-9. soil SAND (SP); brown; poorly graded sand; loose; wet; medium dense; wet to saturated; some medium sand EB05-9. soil					╗				0.0			
SILT (ML); gray and brown; with rounded to subrounded gravel; medium soft; moist; medium plasicity; no mica O.0 EB05-4.5 woil Increasing orange mottling (strong) Decomes wet SAND (SP); brown; poorly graded sand; loose; wet; no mica SAND (SP); brown; poorly graded sand; loose; wet; medium dense; wet to saturated; some medium sand End of boring End of boring			•			soil						
SILT (ML); gray and brown; with rounded to subrounded gravel; medium soft; moist; medium plasicity; no mica SILT (ML); gray and brown; with rounded to subrounded gravel; medium soft; moist; medium plasicity; no mica EB05-6.5 B0 0.0 0.0 EB05-9- soil 0.0 0.0 0.0 EB05-9- soil 0.0 0.0 12.5 SAND (SP); brown; poorly graded sand; loose; wet; no mica SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand EB05-9- soil EB05-9- soil SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand EB05-9- soil					1							
SILT (ML); gray and brown; with rounded to subrounded gravel; medium soft; moist; medium plasicity; no mica SILT (ML); gray and brown; with rounded to subrounded gravel; medium soft; moist; medium plasicity; no mica EB05-6.5 B0 0.0 0.0 EB05-9- soil 0.0 0.0 0.0 EB05-9- soil 0.0 0.0 12.5 SAND (SP); brown; poorly graded sand; loose; wet; no mica SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand EB05-9- soil EB05-9- soil SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand EB05-9- soil						[400					
Sill_T (ML); gray and brown; with rounded to subrounded gravel; medium soft; moist; medium plasicity; no mica 10 Sand (SP); brown; poorly graded sand; loose; wet; medium dense; wet to saturated; some medium sand EB05-4.5 woil 0.0 0.0 EB05-4.5 woil 0.0 0.0 EB05-9-Swil 0.0 0.0 0.0 EB05-9-Swil 0.0 0.0 0.0 EB05-9-Swil 0.0 0.0 0.0	2.5			-	EBU5/	1-4	100					
SILT (ML); gray and brown; with rounded to subrounded gravel; medium plasicity; no mica 7.5— increasing orange mottling (strong) 10— increasing orange mottling (strong) becomes wet SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand EB05-4.5 woil 0.0 0.0 0.0 0.0 EB05-8- SWI 65 SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand End of boring					1				0.0			
SILT (ML); gray and brown; with rounded to subrounded gravel; medium plasicity; no mica 7.5— increasing orange mottling (strong) 10— increasing orange mottling (strong) becomes wet SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand EB05-4.5 woil 0.0 0.0 0.0 0.0 EB05-8- SWI 65 SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand End of boring					1							
subrounded gravel; medium soft; moist; medium plasicity; no mica 7.5 increasing orange mottling (strong) becomes wet SAND (SP); brown; poorly graded sand; loose; wet; no mica SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand End of boring End of boring												
plasicity; no mica EB05-6.5 0.0	_		SILT (ML); gray and brown; with ro	unded to		4.5 woil			0.3			
To lincreasing orange mottling (strong) 10 EB05-6.5	5			ist; medium -								
10— SAND (SP); brown; poorly graded sand; loose; wet; medium dense; wet to saturated; some medium sand End of boring EB05-9- soil O.0 0.0 0.0 65 End of boring									0.0			
10 — BOS-9- Soil Decomes wet — BOS-9- Soil D					1							
increasing orange mottling (strong) Decomes wet SAND (SP); brown; poorly graded sand; loose; wet; no mica SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand End of boring EB05-9- Soil O.0 0.0 65	-				EB05-6	3.5			0.0			
increasing orange mottling (strong) Decomes wet SAND (SP); brown; poorly graded sand; loose; wet; no mica SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand End of boring EB05-9- Soil O.0 0.0 65					1							
becomes wet EB05-9- Soil 0.0	7.5			-			80					
becomes wet BB05-9-Soil	-		increasing orange mottling (strong)		1							
becomes wet SWI	=				1				0.0			
12.5 SAND (SP); brown; poorly graded sand; loose; wet: no mica SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand End of boring							1					
SAND (SP); brown; poorly graded sand; loose; wet; no mica SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand End of boring	10		becomes wet		3 3 7 7							
12.5	10 —			-	7				0.0			
12.5					1							
12.5 no mica SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand					1							
12.5												
SILT (ML); gray and brown; with rounded gravel; medium dense; wet to saturated; some medium sand End of boring End of boring				and; loose; we	et;		0.5					
medium dense; wet to saturated; some medium sand End of boring End of boring	12.5			unded gravel;			65					
End of boring												
End of boring					1							
End of boring					1							
End of boring	15]				7							
17.5—	15		End of boring									
17.5—	1				1							
17.5—	1				7							
	1				7							
	17.5				7							
	17.5			-								
	1				7							
	1				1							

DDILL		PROJECT				PROJE	CT NO.		BORING NO.		
DRILL I	JUG	East Side Pla	ting - Plants	s 1-3		3	51-22009	-05	EB06		
SITE			BEGUN		COMPLETE		HOLE SIZE		ANGLE FROM HORIZ.		
COORDINATES	SE 26th	Place, Portland, OR	DEPTH GROUND WATER	DATE SL		IC LEVEL		VATER	GROUND ELEVATION		
DRILLER			CORE REC	OVERY (%) # SAMI	PLES	# CORE	BOXES	DEPTH TOP OF ROCK		
DRILL MAKE AND M	MODEL	ENW	LOGGED B	Y:					DEPTH BOTTOM OF HOL		
					J. Mo				10		
_ AO _	COG					E DATA	T > 5	∀	REMARKS: NOTES ON WATER		
DEPTH STRATA ELEVATION/ DEPTH	GRAPHICLOG	DESCRIPTION		SAMPLE NO.	SAMPLE	CORE	MW Const./ Completion	PID/OVM	LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.		
0		Gravel (base rock); brown with sand dense; some asphalt in top 1.5'	l; medium	_							
				1							
				-	soil			2.0			
2.5		SILT with fine sand (ML); gray; wo	od and brick		-	95					
-		debris; moist; stiff; low plasticiy; oc gravel	cass rounded	-	-						
		8-11/12		EB06/1	1.5-						
				6.5							
5 —			-					0.1			
				_	-			0.1			
_				4	-						
-		Fine SAND with silt (SP); gray; med	dium dense;	+	+						
-		moist; strongly mottled brown, orangemicaceous	ge, and red;	EB06-	-7 soil	-		0.0			
7.5		medecous	-	LDOO	' -						
				1	<u> </u>	100					
1				1	-						
				EB06-	g soil						
10 —			_			_		0.0			
		End of Boring			_			0.0			
_				_	-						
-				-	-						
-				+	-						
2.5			-	\dashv	<u> </u>						
-					-						
-				1							
15 —			_								
-			_								
				-	-						
_				-	-						
_				-	F						
17.5			-		-						
-				-	-						
-				-	-						
									Dogo 1 of		

SITE	ILL L	<i>J</i> OG	Fast Side Pla									
			Last Side I ia	ide Plating - Plants 1-3				35	1-22009	EB07		
<u> </u>				BEGUN		COMP	PLETED	F	IOLE SIZE		ANGLE FROM HORIZ.	
	8400 S	SE 26th	Place, Portland, OR		11/28/22		1/28/2	2	2.7	5"		
COORD	INATES			DEPTH GROUND WATER	DATE SL			LEVEL			GROUND ELEVATION	
DRILLEI	R			CORE REC	OVERY (%	5) #	# SAMPL	.ES	# CORE	BOXES	DEPTH TOP OF ROCK	
DRILL N	MAKE AND M	ODEL	ENW	LOGGED B	Y:						DEPTH BOTTOM OF HOL	
						J.	. Morr	is		10		
	È)G				SA	AMPLE				REMARKS:	
DEPTH	STRATA ELEVATION/ DEPTH	GRAPHICLOG	DESCRIPTION		SAMPLE		SAMPLE TYPE	CORE RECOVERY	MW Const./ Completion	PID/OVM	NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.	
0		335	Silge with fine sand and Gravel (bas		n				KXXX			
_			and gray; some orange mottling; sor (wood) debris	ne organic	EB07/0	.5-7	soil					
_		XX	(wood) deblis		-	F						
_		RES			-	F						
_					_	-						
2.5 —		**		-			_	60		0.0		
						L				0.0		
			Large wood chunk separates layers/o amount of organics change abruptly	color and		L						
			amount of organics change abruptly			Γ						
						F			\mathbb{K}			
-					-	F						
5 —			Silt with fine sand; gray; fine rounde	ed gravel;		-	_			0.1		
_			medium soft; significant wood debri	s; big pieces	of	F						
_			bark, branches			L						
_						L						
7			Plastic piece in core							0.0		
7.5 —				-	EB07-	7.5	-	100				
-			Very fine SAND with silt (SP); gray	y; moist to we	t;	F			\mathbb{K}/\mathbb{X}			
_			orange mottling; root at 8.5'		=	F						
_					-	F			\mathbb{K}			
_					EB07-9	0.5						
10 —					EB07-	9.5	soil			0.0		
			End of Boring			L				0.0		
٦					1							
₹						F						
-						r						
2.5 —				-		\vdash	-					
_					-	F						
_					4	F						
_					_	L						
_						L						
15												
15 —				-			-					
-					1	F						
_					+	 						
_					-	F						
_					_	F						
17.5 —						L	_					
٦					1	Γ						
-					7	F						

Appendix C

Ground Water Field Sampling Data Forms

Field Personne Weather Condi	•	deor Dun					Monitoring Well II Start Time	: ENO2 : 13:08	
OTW (prior to p		15'	10.	ELL PURGING	NEODMAT	ION		000000000000000000000000000000000000000	THE RESERVE OF THE PERSON NAMED OF THE PERSON
	DTW During	Pumping	VV	Specific	Dissolved	Water			Total Quantity
Time	Purging (feet)	Rate (L/min)	Temperature (degree C)	Conductivity (mS/cm), ±3%	Oxygen (mg/L) ±10%	pH (S.U.), , ±0.1%	ORP (mV), , ±10 mV	Turbidity (NTU), , ±10%	Purged (gallons/liters
	Vischen	ged 9	urely	after	inArat	ing pa	up-		
	Drychen	sed m	ter 33	+mns (ucent,	slyhtly	gellen	n jar.	
								Total Purge	1.
Decontamination	Rate (approx. L/r on method: n Factors: 2" = 0.			WELLC	ONDITION		Vell casing (in. diar . Pump/Intake Dep		
Recommended	Well Repairs/Add	litional Notes:		WELL O	·		phone successful the booth and send of the sensor	and the control of th	
QA/QC Sample		icate	☐ Lab QA/QC		ment Blank er Pump	☐ None ☐ Dual Valve			
					FORMATION				
	lytical meters	Destinat Laborate	ory F	Preservative	Bottle Size 290M	Number of bottles	Sam	ple ID	Time Sampled
		F\$B	<i>t</i>	11/63	LIUM	. 4	EB02-5UR	1P-3.5	13:15
		-	—						
	sportation of sam	aced into a coole	Courier r and packed with	ice or "blue Ice"	1	Yes	☐ No		
All samples we	tions/Notes of sa	maling avant							

Appendix D Laboratory Analytical Report

Summary:	DATA	VALID?	□YES
oummany.	חות	VALID:	

Analytical Laboratory Data Validation Check Sheet

Project Name: Eastside Plating Plants 1-3 - 8400 SE 26th Place-Portland

Project Number: 351-22009-05

Chain of Custody			
1.) Are all requested analyses reported?	⊠yes	□no	
2.) Were the requested methods used?	⊠yes	□no	
3.) Trip blank submitted?	□yes	⊠no	
4.) Field blank submitted?	□yes	⊠no	
Timing			
5.) Samples extracted within holding times?	\boxtimes yes	□no	
If not, are all discrepancies footnoted?	□yes	□no	\boxtimes NA
6.) Analysis performed within holding times?	\boxtimes yes	□no	
If not, are all discrepancies footnoted?	□yes	□no	\boxtimes NA
Quality Assurance/Quality Control			
7.) Are the required reporting limits reported? (MRLs vs MDLs/PQLs)	⊠yes	□no	
8.) Are all reported values above either MRL or MDL?	⊠yes	□no	
9.) Are all values between the MDL & PQL tagged as trace?	□yes	□no	\boxtimes NA
10a.) Are reporting limits raised for other reason besides high analyte conc.?	□yes	⊠no	
10b.) If so, are they footnoted?	, □yes	□no	⊠NA
11.) Lab method blank completed?	⊠yes	□no	
12.) Lab, Field, or Trip Blank(s) report detections?	□yes	⊠no	
If yes, indicate blank type, chemical(s) and concentration(s):	_,03		
13.) For inorganics and metals, is there one method blank for each analyte?	\boxtimes yes	□no	□NA
If not, are all discrepancies footnoted?	□yes	□no	
14.) For VOCs, is there one method blank for each day of analysis?	⊠yes	□no	□NA
If not, are all discrepancies footnoted?	□yes	□no	
15.) For SVOC's, is there one method blank for each extraction batch?	□yes	□no	⊠NA
If not, are all discrepancies footnoted?	□yes	□no	
Accuracy			
16.) Is there a surrogate spike recovery for all VOC & SVOC samples?	⊠yes	□no	□NA
Do all surrogate spike recoveries meet accepted criteria?	⊠yes	□no	
If not, are all discrepancies footnoted?	□yes	□no	⊠NA
17.) Is there a spike recovery for all Laboratory Control Samples?	⊠yes	□no	□NA
Do all LCS/LCSD spike recoveries meet accepted criteria?	□yes	⊠no	
If not, are all discrepancies footnoted?	⊠yes	□no	□NA
The reported values of bromomethane and acetone fell outside the control limits estab	•		
18.) Are all LCS/LCSD RPDs within acceptable limits?	□yes	□no	⊠NA
If not, are all discrepancies footnoted?	□yes	□no	⊠NA
ii not, are all discrepancies roothoted.	шусз		
<u>Precision</u>			
19.) Are all matrix spike/matrix spike duplicate recoveries within	_		-
acceptable limits?	□yes	⊠no	□NA
If not, are all discrepancies footnoted?	⊠yes	□no	□NA
Nickel was spiked at a level that was less than five times that present in the sample; Th	eretore, i	matrix s	pike recoveries
may not be meaningful (b).			

The reported value of chlorodifluoromethane fell outside the control limits established for the analyte (vo).

20.) Are all matrix spike/matrix spike duplicate RPDs within				
acceptable limits?		□yes	⊠no	□NA
If not, are all discrepancies footnoted?		⊠yes	□no	□NA
Nickel was spiked at a level that was less than five times that present i may not be meaningful (b). Acetone, 1,1-Dichloroethene, bromoform, hexachlorobutadiene (vo).	n the sample; The	refore, n	natrix spi	ke recoveries
21.) Do all RPD calculations for Field Duplicates meet accepted criteria	.2	□ves	□no	⊠NA
21.) Do all NFD calculations for Field Duplicates meet accepted criterio	1:	шуез		△ IVA
Comments: The concentration of selenium present in RINSATE-01 is reported belovalue reported is an estimate (j).	w the lowest calib	ration st	andard; ገ	「herefore, the
Initial Review By: LP	Final Review By:			

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

December 8, 2022

Lynn Green, Project Manager Evren Northwest, Inc. PO Box 14488 Portland, OR 97293

Dear Mr Green:

Included are the results from the testing of material submitted on November 19, 2022 from the 351-22009-05, F&BI 211300 project. There are 30 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: Neil Woller, Paul Trone, Evan Bruggeman

ENW1208R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 19, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 351-22009-05, F&BI 211300 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	Evren Northwest
211300 -01	EB01/4-5
211300 -02	EB01/9-10
211300 -03	EB02-SUMP-3.5
211300 -04	EB03/2-2.5
211300 -05	EB03/4.5-5.5
211300 -06	EB03/6.5-7.5
211300 -07	RINSATE-01
211300 -08	EB01-2

The 8260D matrix spike and matrix spike duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

The 8260D laboratory control sample exceeded the acceptance criteria for several analytes. The compounds were not detected, therefore the data were acceptable.

Dichlorodifluoromethane failed below the acceptance criteria in the matrix spike samples. The laboratory control samples met the acceptance criteria, therefore the data were likely due to sample matrix effect.

All other quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB01/4-5	Client:	Evren Northwest
---------------------	---------	-----------------

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

Antimony <1 Arsenic 3.49 Beryllium <1 Cadmium <1 4.28 Lead Mercury <1 Selenium <1 Silver <1 Thallium <1

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB01/4-5 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Chromium
 9.59

 Copper
 15.7

 Nickel
 17.7

 Zinc
 40.4

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB01/9-10 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

 Date Extracted:
 11/29/22
 Lab ID:
 211300-02

 Date Analyzed:
 11/30/22
 Data File:
 211300-02.135

 Matrix:
 Soil
 Instrument:
 ICPMS2

Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

Antimony <1 Arsenic 1.80 Beryllium <1 Cadmium <1 2.38 Lead Mercury <1 Selenium <1 Silver <1 Thallium <1

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB01/9-10 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Concentration
Analyte: mg/kg (ppm)

 Chromium
 9.03

 Copper
 10.8

 Nickel
 9.05

 Zinc
 33.6

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

 Date Extracted:
 11/29/22
 Lab ID:
 211300-04

 Date Analyzed:
 11/30/22
 Data File:
 211300-04.136

 Matrix:
 Soil
 Instrument:
 ICPMS2

Units: mg/kg (ppm) Dry Weight Operator: SP

Concentration mg/kg (ppm)

Antimony <1 Arsenic 5.46 Beryllium <1 Cadmium <1 Lead 8.55Mercury <1 Selenium <1 Silver <1 Thallium <1

Analyte:

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

 Date Extracted:
 11/29/22
 Lab ID:
 211300-04 x2

 Date Analyzed:
 12/01/22
 Data File:
 211300-04 x2.067

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Chromium
 14.8

 Copper
 16.4

 Nickel
 13.5

 Zinc
 44.9

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

	Client ID:	EB03/4.5-5.5	Client:	Evren Northwest
--	------------	--------------	---------	-----------------

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Units: mg/kg (ppm) Dry Weight Operator: SP

 $\begin{array}{cc} & & Concentration \\ Analyte: & & mg/kg \ (ppm) \end{array}$

Antimony <1 Arsenic 3.75 Beryllium <1 Cadmium <1 10.3 Lead Mercury <1 Selenium <1 Silver <1 Thallium <1

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB03/4.5-5.5 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Chromium
 21.2

 Copper
 14.5

 Nickel
 9.95

 Zinc
 48.3

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB03/6.5-7.5 Client:	Evren Northwest
---------------------------------	-----------------

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

Antimony <1 Arsenic 1.83 Beryllium <1 Cadmium <1 Lead 12.9Mercury <1 Selenium <1 Silver <1 Thallium <1

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB03/6.5-7.5 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Chromium
 15.5

 Copper
 17.0

 Nickel
 7.40

 Zinc
 37.2

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Chent ID: ED01-2 Chent: Evren Northwest	Client ID:	EB01-2	Client:	Evren Northwest
---	------------	--------	---------	-----------------

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

 Date Extracted:
 11/29/22
 Lab ID:
 211300-08

 Date Analyzed:
 11/30/22
 Data File:
 211300-08.139

 Matrix:
 Soil
 Instrument:
 ICPMS2

Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

Antimony <1 Arsenic 3.42 Beryllium <1 Cadmium <1 6.24 Lead Mercury <1 Selenium <1 Silver <1 Thallium <1

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB01-2	Client:	Evren Northwest
-------------------	---------	-----------------

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Chromium
 12.0

 Copper
 17.7

 Nickel
 57.1

 Zinc
 61.9

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: Method Blank Client: Evren Northwest

Date Received: Not Applicable Project: 351-22009-05, F&BI 211300

Date Extracted: 11/29/22 Lab ID: I2-842 mb
Date Analyzed: 11/29/22 Data File: I2-842 mb.116
Matrix: Soil Instrument: ICPMS2

Units: mg/kg (ppm) Dry Weight Operator: SP

 $\begin{array}{cc} & & Concentration \\ Analyte: & & mg/kg \ (ppm) \end{array}$

Antimony <1 Arsenic <1 Beryllium <1 Cadmium <1 Chromium <1 Copper <5 Lead <1 Mercury <1 Nickel <1 Selenium <1 Silver <1 Thallium <1 Zinc <5

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	EB02-SUMP-3.5	Client:	Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Lab ID: Date Extracted: 11/29/22 211300-03 Date Analyzed: 12/01/22 Data File: 211300-03.296 Matrix: Water Instrument: ICPMS2 Units: ug/L (ppb) Operator: SP

	Concentration
Analyte:	ug/L (ppb)

Beryllium	<1
Chromium	25.3
Lead	1.24
Mercury	2.18
Thallium	<1
Zinc	40.4

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB02-SUMP-3.5 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

 Date Extracted:
 11/29/22
 Lab ID:
 211300-03 x5

 Date Analyzed:
 12/02/22
 Data File:
 211300-03 x5.222

Concentration ug/L (ppb)

Antimony <5
Arsenic 9.95
Cadmium <5
Selenium <5

Analyte:

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB02-SUMP-3.5 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Date Extracted: 11/29/22 Lab ID: 211300-03 x10
Date Analyzed: 12/01/22 Data File: 211300-03 x10.295

Concentration

Analyte: ug/L (ppb)

Silver 880

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB02-SUMP-3.5 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

 Date Extracted:
 11/29/22
 Lab ID:
 211300-03 x100

 Date Analyzed:
 12/01/22
 Data File:
 211300-03 x100.134

 $\begin{array}{cccc} \text{Matrix:} & \text{Water} & \text{Instrument:} & \text{ICPMS2} \\ \text{Units:} & \text{ug/L (ppb)} & \text{Operator:} & \text{SP} \end{array}$

Concentration

Analyte: ug/L (ppb)

 Copper
 9,500

 Nickel
 25,300

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	RINSATE-01	Client:	Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Lab ID: Date Extracted: 211300-07 11/29/22 Date Analyzed: 12/01/22 Data File: 211300-07.297 Matrix: Water ICPMS2 Instrument: Units: ug/L (ppb) SPOperator:

e iiito.	as a (pps)	operator.	~1
Analyte:	Concentration ug/L (ppb)		
Antimony	<1		
Arsenic	<1		
Beryllium	<1		
Cadmium	<1		
Chromium	1.33		
Lead	<1		
Mercury	<1		
Nickel	3.75		
Silver	2.70		
Thallium	<1		
Zinc	<5		

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: RINSATE-01 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Lab ID: 11/29/22 211300-07 Date Extracted: Date Analyzed: 12/05/22 Data File: 211300-07.225 Matrix: ICPMS2 Water Instrument: Units: ug/L (ppb) SPOperator:

Concentration

Analyte: ug/L (ppb)

 $\begin{array}{ll} \text{Copper} & <5 \\ \text{Selenium} & <1 \ \mathrm{j} \end{array}$

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest

Date Received: Not Applicable Project: 351-22009-05, F&BI 211300

11/29/22 Lab ID: Date Extracted: I2-843 mbDate Analyzed: 11/29/22 Data File: I2-843 mb.117 Matrix: Water Instrument: ICPMS2 Units: ug/L (ppb) Operator: SP

	Concentration
Analyte:	ug/L (ppb)

Antimony	<1
Arsenic	<1
Beryllium	<1
Cadmium	<1
Chromium	<1
Copper	<5
Lead	<1
Mercury	<1
Nickel	<1
Selenium	<1
Silver	<1
Thallium	<1
Zinc	<5

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID: EB01/4-5 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

Date Extracted: 11/23/22 Lab ID: 211300-01 Date Analyzed: 11/23/22 Data File: 112317.DSoil Matrix: Instrument: GCMS4 Units: mg/kg (ppm) Dry Weight Operator: lm

		Lower	\cup pper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	97	90	109
Toluene-d8	110	89	112
4-Bromofluorobenzene	98	84	115

	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	< 0.5	1,3-Dichloropropane	< 0.05
Chloromethane	< 0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	< 0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	< 0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	< 0.05
Acetone	<5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	< 0.1
Hexane	< 0.25	o-Xylene	< 0.05
Methylene chloride	< 0.5	Styrene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Isopropylbenzene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Bromoform	< 0.05
1,1-Dichloroethane	< 0.05	n-Propylbenzene	< 0.05
2,2-Dichloropropane	< 0.05	Bromobenzene	< 0.05
cis-1,2-Dichloroethene	< 0.05	1,3,5-Trimethylbenzene	< 0.05
Chloroform	< 0.05	1,1,2,2-Tetrachloroethane	< 0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	2-Chlorotoluene	< 0.05
1,1,1-Trichloroethane	< 0.05	4-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	tert-Butylbenzene	< 0.05
Carbon tetrachloride	< 0.05	1,2,4-Trimethylbenzene	< 0.05
Benzene	< 0.03	sec-Butylbenzene	< 0.05
Trichloroethene	< 0.02	p-Isopropyltoluene	< 0.05
1,2-Dichloropropane	< 0.05	1,3-Dichlorobenzene	< 0.05
Bromodichloromethane	< 0.05	1,4-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,2-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	< 0.5
cis-1,3-Dichloropropene	< 0.05	1,2,4-Trichlorobenzene	< 0.25
Toluene	< 0.05	Hexachlorobutadiene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Naphthalene	< 0.05
1,1,2-Trichloroethane	< 0.05	1,2,3-Trichlorobenzene	< 0.25
2-Hexanone	< 0.5		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID: EB03/2-2.5 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

11/23/22 Lab ID: Date Extracted: 211300-04 Date Analyzed: 11/23/22 Data File: 112318.DMatrix: Soil Instrument: GCMS4 Units: mg/kg (ppm) Dry Weight Operator: lm

Lower Upper Surrogates: % Recovery: Limit: Limit: 1,2-Dichloroethane-d4 101 90 109

 Toluene-d8
 109
 89
 112

 4-Bromofluorobenzene
 95
 84
 115

	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	< 0.5	1,3-Dichloropropane	< 0.05
Chloromethane	< 0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	< 0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	< 0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	< 0.05
Acetone	<5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	< 0.1
Hexane	< 0.25	o-Xylene	< 0.05
Methylene chloride	< 0.5	Styrene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Isopropylbenzene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Bromoform	< 0.05
1,1-Dichloroethane	< 0.05	n-Propylbenzene	< 0.05
2,2-Dichloropropane	< 0.05	Bromobenzene	< 0.05
cis-1,2-Dichloroethene	< 0.05	1,3,5-Trimethylbenzene	< 0.05
Chloroform	< 0.05	1,1,2,2-Tetrachloroethane	< 0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	2-Chlorotoluene	< 0.05
1,1,1-Trichloroethane	< 0.05	4-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	tert-Butylbenzene	< 0.05
Carbon tetrachloride	< 0.05	1,2,4-Trimethylbenzene	< 0.05
Benzene	< 0.03	sec-Butylbenzene	< 0.05
Trichloroethene	< 0.02	p-Isopropyltoluene	< 0.05
1,2-Dichloropropane	< 0.05	1,3-Dichlorobenzene	< 0.05
Bromodichloromethane	< 0.05	1,4-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,2-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	< 0.5
cis-1,3-Dichloropropene	< 0.05	1,2,4-Trichlorobenzene	< 0.25
Toluene	< 0.05	Hexachlorobutadiene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Naphthalene	< 0.05
1,1,2-Trichloroethane	< 0.05	1,2,3-Trichlorobenzene	< 0.25
2-Hexanone	< 0.5		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID: EB03/6.5-7.5 Client: Evren Northwest

Date Received: 11/19/22 Project: 351-22009-05, F&BI 211300

11/23/22 Lab ID: Date Extracted: 211300-06 Date Analyzed: 11/23/22 Data File: 112319.DMatrix: Soil Instrument: GCMS4 Units: mg/kg (ppm) Dry Weight Operator: lm

Lower

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	96	90	109
Toluene-d8	110	89	112
4-Bromofluorobenzene	96	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	< 0.5	1,3-Dichloropropane	< 0.05
Chloromethane	<0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	< 0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	< 0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	< 0.05
Acetone	<5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	< 0.1
Hexane	< 0.25	o-Xylene	< 0.05
Methylene chloride	< 0.5	Styrene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Isopropylbenzene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Bromoform	< 0.05
1,1-Dichloroethane	< 0.05	n-Propylbenzene	< 0.05
2,2-Dichloropropane	< 0.05	Bromobenzene	< 0.05
cis-1,2-Dichloroethene	< 0.05	1,3,5-Trimethylbenzene	< 0.05
Chloroform	< 0.05	1,1,2,2-Tetrachloroethane	< 0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	2-Chlorotoluene	< 0.05
1,1,1-Trichloroethane	< 0.05	4-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	tert-Butylbenzene	< 0.05
Carbon tetrachloride	< 0.05	1,2,4-Trimethylbenzene	< 0.05
Benzene	< 0.03	sec-Butylbenzene	< 0.05
Trichloroethene	< 0.02	p-Isopropyltoluene	< 0.05
1,2-Dichloropropane	< 0.05	1,3-Dichlorobenzene	< 0.05
Bromodichloromethane	< 0.05	1,4-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,2-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	< 0.5
cis-1,3-Dichloropropene	< 0.05	1,2,4-Trichlorobenzene	< 0.25
Toluene	< 0.05	Hexachlorobutadiene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Naphthalene	< 0.05
1,1,2-Trichloroethane	< 0.05	1,2,3-Trichlorobenzene	< 0.25
2-Hexanone	< 0.5		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID: Method Blank Client: Evren Northwest

Date Received: Not Applicable Project: 351-22009-05, F&BI 211300

11/23/22 Lab ID: Date Extracted: 02-2818 mb Date Analyzed: 11/23/22 Data File: 112305.DMatrix: Soil Instrument: GCMS4 Units: mg/kg (ppm) Dry Weight Operator: lm

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	90	109
Toluene-d8	108	89	112
4-Bromofluorobenzene	93	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	< 0.5	1,3-Dichloropropane	< 0.05
Chloromethane	<0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	< 0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	< 0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	< 0.05
Acetone	<5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	< 0.1
Hexane	< 0.25	o-Xylene	< 0.05
Methylene chloride	< 0.5	Styrene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Isopropylbenzene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Bromoform	< 0.05
1,1-Dichloroethane	< 0.05	n-Propylbenzene	< 0.05
2,2-Dichloropropane	< 0.05	Bromobenzene	< 0.05
cis-1,2-Dichloroethene	< 0.05	1,3,5-Trimethylbenzene	< 0.05
Chloroform	< 0.05	1,1,2,2-Tetrachloroethane	< 0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	2-Chlorotoluene	< 0.05
1,1,1-Trichloroethane	< 0.05	4-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	tert-Butylbenzene	< 0.05
Carbon tetrachloride	< 0.05	1,2,4-Trimethylbenzene	< 0.05
Benzene	< 0.03	sec-Butylbenzene	< 0.05
Trichloroethene	< 0.02	p-Isopropyltoluene	< 0.05
1,2-Dichloropropane	< 0.05	1,3-Dichlorobenzene	< 0.05
Bromodichloromethane	< 0.05	1,4-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,2-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	< 0.5
cis-1,3-Dichloropropene	< 0.05	1,2,4-Trichlorobenzene	< 0.25
Toluene	< 0.05	Hexachlorobutadiene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Naphthalene	< 0.05
1,1,2-Trichloroethane	< 0.05	1,2,3-Trichlorobenzene	< 0.25
2-Hexanone	< 0.5		

ENVIRONMENTAL CHEMISTS

Date of Report: 12/08/22 Date Received: 11/19/22

Project: 351-22009-05, F&BI 211300

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 211391-01 x5 (Matrix Spike)

-			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Antimony	mg/kg (ppm)	20	<5	110	96	75-125	14
Arsenic	mg/kg (ppm)	10	<5	113	99	75 - 125	13
Beryllium	mg/kg (ppm)	5	<5	112	107	75 - 125	5
Cadmium	mg/kg (ppm)	10	<5	111	108	75 - 125	3
Chromium	mg/kg (ppm)	50	19.4	113	106	75 - 125	6
Copper	mg/kg (ppm)	50	<25	104	111	75 - 125	7
Lead	mg/kg (ppm)	50	<5	110	117	75 - 125	6
Mercury	mg/kg (ppm	5	<5	108	104	75 - 125	4
Nickel	mg/kg (ppm)	25	33.9	71 b	$127 \mathrm{b}$	75 - 125	57 b
Selenium	mg/kg (ppm)	5	<5	97	104	75 - 125	7
Silver	mg/kg (ppm)	10	<5	105	99	75 - 125	6
Thallium	mg/kg (ppm)	5	<5	97	93	75 - 125	4
Zinc	mg/kg (ppm)	50	<25	115	124	75 - 125	8

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Antimony	mg/kg (ppm)	20	117	80-120
Arsenic	mg/kg (ppm)	10	91	80-120
Beryllium	mg/kg (ppm)	5	106	80-120
Cadmium	mg/kg (ppm)	10	110	80-120
Chromium	mg/kg (ppm)	50	111	80-120
Copper	mg/kg (ppm)	50	107	80-120
Lead	mg/kg (ppm)	50	103	80-120
Mercury	mg/kg (ppm)	5	109	80-120
Nickel	mg/kg (ppm)	25	107	80-120
Selenium	mg/kg (ppm)	5	104	80-120
Silver	mg/kg (ppm)	10	98	80-120
Thallium	mg/kg (ppm)	5	97	80-120
Zinc	mg/kg (ppm)	50	109	80-120

ENVIRONMENTAL CHEMISTS

Date of Report: 12/08/22 Date Received: 11/19/22

Project: 351-22009-05, F&BI 211300

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 211362-02 (Matrix Spike)

				Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Antimony	ug/L (ppb)	20	1.33	101	101	75-125	0
Arsenic	ug/L (ppb)	10	<1	91	91	75 - 125	0
Beryllium	ug/L (ppb)	5	<1	100	100	75 - 125	0
Cadmium	ug/L (ppb)	5	<1	100	98	75 - 125	2
Chromium	ug/L (ppb)	20	<1	95	95	75 - 125	0
Copper	ug/L (ppb)	20	15.0	96	93	75 - 125	3
Lead	ug/L (ppb)	10	1.94	94	95	75 - 125	1
Mercury	ug/L (ppb)	5	<1	96	95	75 - 125	1
Nickel	ug/L (ppb)	20	2.39	97	97	75 - 125	0
Selenium	ug/L (ppb)	5	<1	97	101	75 - 125	4
Silver	ug/L (ppb)	5	<1	94	93	75 - 125	1
Thallium	ug/L (ppb)	5	<1	88	88	75 - 125	0
Zinc	ug/L (ppb)	50	109	91	95	75 - 125	4

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Antimony	ug/L (ppb)	20	99	80-120
Arsenic	ug/L (ppb)	10	93	80-120
Beryllium	ug/L (ppb)	5	100	80-120
Cadmium	ug/L (ppb)	5	98	80-120
Chromium	ug/L (ppb)	20	95	80-120
Copper	ug/L (ppb)	20	100	80-120
Lead	ug/L (ppb)	10	100	80-120
Mercury	ug/L (ppb)	5	100	80-120
Nickel	ug/L (ppb)	20	98	80-120
Selenium	ug/L (ppb)	5	95	80-120
Silver	ug/L (ppb)	5	99	80-120
Thallium	ug/L (ppb)	5	92	80-120
Zinc	ug/L (ppb)	50	97	80-120

ENVIRONMENTAL CHEMISTS

Date of Report: 12/08/22 Date Received: 11/19/22

Project: 351-22009-05, F&BI 211300

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 211341-02 (Matrix Spike)

211911 02 (Sample	Percent	Percent		
	Reporting	Spike	Result		Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	1	<0.5	6 vo	6 vo	10-142	0
Chloromethane	mg/kg (ppm)	1	< 0.5	33	36	10-126	9
Vinyl chloride	mg/kg (ppm)	1	< 0.05	28	33	10-138	16
Bromomethane	mg/kg (ppm)	1	< 0.5	73	80	10-163	9
Chloroethane	mg/kg (ppm)	1	< 0.5	45 29	50	10-176 10-176	11 19
Trichlorofluoromethane Acetone	mg/kg (ppm) mg/kg (ppm)	1 5	<0.5 <5	29 112	35 139	10-176	22 vo
1,1-Dichloroethene	mg/kg (ppm)	1	< 0.05	38	47	10-160	21 vo
Hexane	mg/kg (ppm)	1	< 0.25	20	21	10-137	5
Methylene chloride	mg/kg (ppm)	1	< 0.5	67	77	10-156	14
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	< 0.05	61	71	21-145	15
trans-1,2-Dichloroethene	mg/kg (ppm)	1	< 0.05	49	56	14-137	13
1,1-Dichloroethane	mg/kg (ppm)	1	< 0.05	56	66	19-140	16
2,2-Dichloropropane cis-1,2-Dichloroethene	mg/kg (ppm) mg/kg (ppm)	1 1	<0.05 <0.05	55 60	63 70	10-158 25-135	14 15
Chloroform	mg/kg (ppm)	1	< 0.05	60	70 71	21-145	17
2-Butanone (MEK)	mg/kg (ppm)	5	<1	60	73	19-147	20
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	< 0.05	61	72	12-160	17
1,1,1-Trichloroethane	mg/kg (ppm)	1	< 0.05	53	62	10-156	16
1,1-Dichloropropene	mg/kg (ppm)	1	< 0.05	55	63	17-140	14
Carbon tetrachloride	mg/kg (ppm)	1	< 0.05	52	61	9-164	16
Benzene Trichloroethene	mg/kg (ppm)	1 1	<0.03 <0.02	59 60	69 69	29-129 21-139	16 14
1,2-Dichloropropane	mg/kg (ppm) mg/kg (ppm)	1	< 0.02	63	75	30-135	14 17
Bromodichloromethane	mg/kg (ppm)	1	< 0.05	61	69	23-155	12
Dibromomethane	mg/kg (ppm)	1	< 0.05	65	76	23-145	16
4-Methyl-2-pentanone	mg/kg (ppm)	5	<1	59	70	24-155	17
cis-1,3-Dichloropropene	mg/kg (ppm)	1	< 0.05	61	73	28-144	18
Toluene	mg/kg (ppm)	1	< 0.05	51	59	35-130	15
trans-1,3-Dichloropropene	mg/kg (ppm)	1	< 0.05	50	58	26-149	15
1,1,2-Trichloroethane 2-Hexanone	mg/kg (ppm) mg/kg (ppm)	1 5	<0.05 <0.5	54 42	62 50	10-205 15-166	14 17
1,3-Dichloropropane	mg/kg (ppm)	1	< 0.05	52	60	31-137	14
Tetrachloroethene	mg/kg (ppm)	1	< 0.025	51	62	20-133	19
Dibromochloromethane	mg/kg (ppm)	1	< 0.05	53	63	28-150	17
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	< 0.05	53	62	28-142	16
Chlorobenzene	mg/kg (ppm)	1	< 0.05	53	63	32-129	17
Ethylbenzene	mg/kg (ppm)	1	< 0.05	50	60	32-137	18
1,1,1,2-Tetrachloroethane m,p-Xylene	mg/kg (ppm) mg/kg (ppm)	$\frac{1}{2}$	<0.05 <0.1	51 52	59 62	31-143 34-136	15 18
o-Xylene	mg/kg (ppm)	1	< 0.05	52	63	33-134	19
Styrene	mg/kg (ppm)	1	< 0.05	49	59	35-137	19
Isopropylbenzene	mg/kg (ppm)	1	< 0.05	49	59	31-142	19
Bromoform	mg/kg (ppm)	1	< 0.05	53	66	21-156	22 vo
n-Propylbenzene	mg/kg (ppm)	1	< 0.05	50	59	23-146	17
Bromobenzene 1,3,5-Trimethylbenzene	mg/kg (ppm) mg/kg (ppm)	1 1	<0.05 <0.05	52 51	60 61	34-130 18-149	14 18
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	1	< 0.05	49	57	28-140	15
1,2,3-Trichloropropane	mg/kg (ppm)	1	< 0.05	52	60	25-144	14
2-Chlorotoluene	mg/kg (ppm)	1	< 0.05	51	60	31-134	16
4-Chlorotoluene	mg/kg (ppm)	1	< 0.05	50	59	31-136	17
tert-Butylbenzene	mg/kg (ppm)	1	< 0.05	51	61	30-137	18
1,2,4-Trimethylbenzene sec-Butylbenzene	mg/kg (ppm) mg/kg (ppm)	1 1	<0.05 <0.05	50 51	60 61	10-182 23-145	18 18
p-Isopropyltoluene	mg/kg (ppm)	1	< 0.05	51 51	61	21-149	18
1,3-Dichlorobenzene	mg/kg (ppm)	1	< 0.05	53	61	30-131	14
1,4-Dichlorobenzene	mg/kg (ppm)	1	< 0.05	51	61	29-129	18
1,2-Dichlorobenzene	mg/kg (ppm)	1	< 0.05	51	62	31-132	19
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	1	< 0.5	44	53	11-161	19
1,2,4-Trichlorobenzene	mg/kg (ppm)	1	< 0.25	52	62	22-142	18
Hexachlorobutadiene Naphthalene	mg/kg (ppm) mg/kg (ppm)	1 1	<0.25 <0.05	51 47	63 55	10-142 14-157	21 vo 16
1,2,3-Trichlorobenzene	mg/kg (ppm)	1	< 0.25	50	60	20-144	18
, ,		-			30		

ENVIRONMENTAL CHEMISTS

Date of Report: 12/08/22 Date Received: 11/19/22

Project: 351-22009-05, F&BI 211300

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Eastratory coat. Eastratory co	meror sumpre		Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Dichlorodifluoromethane	mg/kg (ppm)	1	47	10-146
Chloromethane	mg/kg (ppm)	1	77 85	27-133
Vinyl chloride Bromomethane	mg/kg (ppm) mg/kg (ppm)	1 1	85 159 vo	22-139 38-114
Chloroethane	mg/kg (ppm)	1	110	9-163
Trichlorofluoromethane	mg/kg (ppm)	1	108	10-196
Acetone	mg/kg (ppm)	5	193 vo	52-141
1,1-Dichloroethene	mg/kg (ppm)	1	101	47-128
Hexane	mg/kg (ppm)	1	106	43-142
Methylene chloride	mg/kg (ppm)	1	111	10-184
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	108	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	1 1	104	67-129
1,1-Dichloroethane 2,2-Dichloropropane	mg/kg (ppm) mg/kg (ppm)	1	110 121	68-115 52-170
cis-1.2-Dichloroethene	mg/kg (ppm)	1	109	72-127
Chloroform	mg/kg (ppm)	1	114	66-120
2-Butanone (MEK)	mg/kg (ppm)	5	109	30-197
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	113	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	1	107	62-131
1,1-Dichloropropene	mg/kg (ppm)	1	113	69-128
Carbon tetrachloride	mg/kg (ppm)	1	114	60-139
Benzene	mg/kg (ppm)	1 1	113	71-118
Trichloroethene 1,2-Dichloropropane	mg/kg (ppm) mg/kg (ppm)	1	111 119	63-121 72-127
Bromodichloromethane	mg/kg (ppm)	1	109	57-126
Dibromomethane	mg/kg (ppm)	1	116	62-123
4-Methyl-2-pentanone	mg/kg (ppm)	5	109	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	1	113	67-122
Toluene	mg/kg (ppm)	1	93	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	1	91	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	1	94	64-115
2-Hexanone 1,3-Dichloropropane	mg/kg (ppm)	5 1	82 92	33-152 72-130
Tetrachloroethene	mg/kg (ppm) mg/kg (ppm)	1	96 96	72-130
Dibromochloromethane	mg/kg (ppm)	1	100	55-121
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	94	74-132
Chlorobenzene	mg/kg (ppm)	1	95	76-111
Ethylbenzene	mg/kg (ppm)	1	93	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	1	91	64-121
m,p-Xylene	mg/kg (ppm)	2	93	78-122
o-Xylene	mg/kg (ppm)	1 1	94 90	77-124
Styrene Isopropylbenzene	mg/kg (ppm) mg/kg (ppm)	1	90 88	74-126 76-127
Bromoform	mg/kg (ppm)	1	103	56-132
n-Propylbenzene	mg/kg (ppm)	1	93	74-124
Bromobenzene	mg/kg (ppm)	1	94	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	1	94	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	1	92	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	1	94	61-137
2-Chlorotoluene	mg/kg (ppm)	1 1	93 91	74-121
4-Chlorotoluene tert-Butylbenzene	mg/kg (ppm) mg/kg (ppm)	1	93	75-122 73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	1	94	76-125
sec-Butylbenzene	mg/kg (ppm)	1	94	71-130
p-Isopropyltoluene	mg/kg (ppm)	1	93	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	1	93	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	1	91	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	1	91	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	1	86	58-138
1,2,4-Trichlorobenzene Hexachlorobutadiene	mg/kg (ppm)	1 1	86 89	64-135 50-153
Naphthalene	mg/kg (ppm) mg/kg (ppm)	1	89 79	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	1	81	63-138
	vrr/	-		

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. 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.
- ${\rm d}$ 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 lowest calibration standard. 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.
- 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.

211300

Report To Lynn Green

Address 40 SE 24th Ave Company EVREN-NW

Phone 503-452-5561

City, State, ZIP Portland, Oregon 97214

Email lynng@evren-nw.com

PROJECT NAME 351-22009-05

SAMPLERS (signature)

SAMPLE CHAIN OF CUSTODY

REMARKS

Project Specific RLs - Yes / No

11119/22

MI/VS-CI/N2 Page#_

Standard Turnaround RUSH TURNAROUND TIME

Rush charges authorized by:

PO#

Dispose after 30 days SAMPLE DISPOSAL

INVOICE TO

Archive Samples

		•						A.I	NAL	SES	ANALYSES LEQUESTED	
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-Dx	EPA 8021	EPA 8260	EPA 8270	EPA 8082	11123 44	Notes
				•	1		ВТ					(x) pert while
5-h WWW/1083	01 A-E	01 A-E 11-18-72	9.40	Surl	5			\angle				34
EBS1/9-10	02	11-18-22 10:40		50:1	1					>		
5.8-3mn5-3.5	03	11-18-2 13:15	13:15	GW	1		-			×		Hold andyrane
8803/2-25	04 A-E	04 A-E 11-18-22 14:15	14:15	Sorl	5			X		×	,	•
6803/45-5.5	90	11-18-22 14:35	1	100	7					~		
EB03/6.5-7.5	06 A-E	08.11 22.11 3-4 20		1:05	5			X		~/		
RINSATE-01	40	11-18-22 15:00	15:00	Unites	-			<u> </u>	<u> </u>			
EB01-2	O¥	11/18/22	12:00 Snj)	Soj]	_							recidiation

Seattle, WA 98119 Ph. (206) 285-8282 3012 16th Avenue \ Friedman & Bruyc

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
ya, Inc.	Relinquished by: Jadu MM)	Jordan Moirs	ENW.	11-18-22 28:00	18:00
West	Received by	JAMES BRUYS	FFB	11/19 1600	1000
9-2029	Relingdished by:	,	•		
82	Received by:				

Samples received at 4 °C

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

December 15, 2022

Lynn Green, Project Manager Evren Northwest, Inc. PO Box 14488 Portland, OR 97293

Dear Mr Green:

Included are the results from the testing of material submitted on November 29, 2022 from the 351-22009-05, F&BI 211400 project. There are 47 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: Neil Woller, Paul Trone, Evan Bruggeman

ENW1215R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 29, 2022 by Friedman & Bruya, Inc. from the Evren Northwest 351-22009-05, F&BI 211400 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	Evren Northwest
211400 -01	EB04/0.5-6.5
211400 -02	EB04-7
211400 -03	EB04-9
211400 -04	EB05/1-4
211400 -05	EB05-4.5
211400 -06	EB05-6.5
211400 -07	EB05-9
211400 -08	EB06/1.5-6.5
211400 -09	EB06-7
211400 -10	EB06-9
211400 -11	EB07/0.5-7
211400 -12	EB07-7.5
211400 -13	EB07-9.5
211400 -14	FD01
211400 -15	RINSATE 02

Samples EB04-7, EB05/1-4, EB06-7, and EB07-7.5 were sent to Fremont Analytical for herbicide analysis. The report is enclosed.

The 8260D calibration standard failed the acceptance criteria for 1,2,3-trichlorobenzene in the method blank. The data were flagged accordingly.

Several 8260D compounds exceeded the acceptance criteria in the matrix spike samples and laboratory control sample. The compounds were not detected, therefore the data were acceptable.

The 8081B calibration standard failed the acceptance criteria for endrin aldehyde. The data were flagged accordingly.

All other quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

Date Extracted: 11/30/22 Date Analyzed: 12/01/22

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
RINSATE 02 211400-15	<100	97
Method Blank 02-2732 MB	<100	113

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

Date Extracted: 11/30/22

Date Analyzed: 11/30/22 and 12/01/22

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (<u>% Recovery</u>) (Limit 58-139)
EB04-7 211400-02	<5	116
EB05-4.5 211400-05	<5	111
EB06-7 211400-09	<5	115
EB07-7.5 211400-12	<5	112
Method Blank 02-2731 MB	<5	88

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

Date Extracted: 11/30/22 Date Analyzed: 11/30/22

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND RESIDUAL RANGE USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{\text{(C}_{10}\text{-C}_{25})}$	$rac{ ext{Residual Range}}{ ext{(C}_{25} ext{-C}_{36})}$	Surrogate (% Recovery) (Limit 50-150)
EB04-7 211400-02	<50	<250	105
EB05-4.5 211400-05	<50	<250	104
EB06-7 211400-09	<50	<250	105
EB07-7.5 211400-12	<50	<250	105
Method Blank 02-2887 MB	<50	<250	106

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

Date Extracted: 11/30/22 Date Analyzed: 11/30/22

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL10 AND RESIDUAL RANGE USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	$rac{ ext{Diesel Range}}{ ext{(C}_{10} ext{-C}_{25} ext{)}}$	Residual Range (C ₂₅ -C ₃₆)	Surrogate (% Recovery) (Limit 41-152)
RINSATE 02 211400-15 1/0.4	<50	<250	114
Method Blank	<50	<250	114

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

 Date Extracted:
 11/30/22
 Lab ID:
 211400-01

 Date Analyzed:
 12/02/22
 Data File:
 211400-01.091

 Matrix:
 Soil
 Instrument:
 ICPMS2

<1

Units: mg/kg (ppm) Dry Weight Operator: SP

ConcentrationAnalyte: mg/kg (ppm) 1.76 Antimony Arsenic 5.03 Beryllium <1 Cadmium 0.548Lead 56.7Mercury < 0.5 Selenium <1 Silver <1

Thallium

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB04/0.5-6.5 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Chromium
 16.0

 Copper
 22.8

 Nickel
 11.6

 Zinc
 106

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB04-7 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Arsenic
 1.34

 Chromium
 11.0

 Lead
 6.11

 Mercury
 <0.5</td>

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB05/1-4 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

Antimony 1.21 Arsenic 6.47Beryllium <1 Cadmium 0.590Lead 143 Mercury < 0.5 Selenium <1 Silver <1 Thallium <1

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB05/1-4 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Chromium
 18.7

 Copper
 38.8

 Nickel
 14.6

 Zinc
 160

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB05-4.5 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

 Date Extracted:
 11/30/22
 Lab ID:
 211400-05

 Date Analyzed:
 12/02/22
 Data File:
 211400-05.094

 Matrix:
 Soil
 Instrument:
 ICPMS2

Units: mg/kg (ppm) Dry Weight Operator: SP

Concentration mg/kg (ppm)

Arsenic 6.10 Lead 61.2 Mercury <0.5

Analyte:

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB05-4.5 Client: **Evren Northwest**

Date Received: 11/29/22Project: 351-22009-05, F&BI 211400

11/30/22 Lab ID: Date Extracted: 211400-05 x2Date Analyzed: 12/02/22 Data File: 211400-05 x2.121

ICPMS2 Matrix: Soil Instrument: Units: SP

mg/kg (ppm) Dry Weight Operator:

ConcentrationAnalyte: mg/kg (ppm)

Chromium 52.5

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB06/1.5-6.5 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

Antimony <1 Arsenic 3.23 Beryllium <1 Cadmium 0.335Lead 19.9 Mercury < 0.5 Selenium <1 Silver <1 Thallium <1

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB06/1.5-6.5 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

 Date Extracted:
 11/30/22
 Lab ID:
 211400-08 x2

 Date Analyzed:
 12/02/22
 Data File:
 211400-08 x2.134

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Chromium
 47.2

 Copper
 33.0

 Nickel
 17.2

 Zinc
 294

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB06-7 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

 Date Extracted:
 11/30/22
 Lab ID:
 211400-09

 Date Analyzed:
 12/02/22
 Data File:
 211400-09.087

 Matrix:
 Soil
 Instrument:
 ICPMS2

Units: mg/kg (ppm) Dry Weight Operator: SP

Concentration

Analyte: mg/kg (ppm)

 Arsenic
 3.32

 Lead
 6.48

 Mercury
 <0.5</td>

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB06-7 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Concentration

Analyte: mg/kg (ppm)

Chromium 17.9

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB07/0.5-7 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

Antimony 1 14

Antimony 1.14 Arsenic 6.84 Beryllium <1 Cadmium 0.468Lead 24.0Mercury < 0.5 Selenium <1 Silver <1 Thallium <1

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB07/0.5-7 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Chromium
 19.0

 Copper
 35.1

 Nickel
 13.9

 Zinc
 94.4

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB07-7.5 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Units: mg/kg (ppm) Dry Weight Operator: SP

Concentration

Analyte: mg/kg (ppm)

 Arsenic
 1.83

 Lead
 10.2

 Mercury
 <0.5</td>

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: EB07-7.5 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Concentration

Analyte: mg/kg (ppm)

Chromium 12.1

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: FD01 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Units: mg/kg (ppm) Dry Weight Operator: SP

 $\begin{array}{cc} & & Concentration \\ Analyte: & & mg/kg \ (ppm) \end{array}$

Antimony 1.04 Arsenic 6.48Beryllium <1 Cadmium 0.669Lead 137Mercury < 0.5 Selenium <1 Silver <1 Thallium <1

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID: FD01 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Matrix: Soil Instrument: ICPMS2 Units: mg/kg (ppm) Dry Weight Operator: SP

Analyte: Concentration mg/kg (ppm)

 Chromium
 17.2

 Copper
 35.5

 Nickel
 15.6

 Zinc
 124

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest

Date Received: NA 351-22009-05, F&BI 211400

Project: Lab ID: Date Extracted: 11/30/22 I2-851 mbDate Analyzed: 11/30/22 Data File: I2-851 mb.056 Matrix: Soil Instrument: ICPMS2

mg/kg (ppm) Dry Weight Units: Operator: SP

	Concentration
Analyte:	mg/kg (ppm)

Antimony	<1
Arsenic	<1
Beryllium	<1
Cadmium	< 0.2
Chromium	<1
Copper	<5
Lead	<1
Mercury	< 0.5
Nickel	<1
Selenium	<1
Silver	<1
Thallium	<1
Zinc	<5

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	RINSATE 02	Client:	Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Lab ID: Date Extracted: 12/05/22 211400-15 Date Analyzed: 12/06/22 Data File: 211400-15.446 Matrix: Instrument: ICPMS2 Water Units: ug/L (ppb) Operator: SP

1.51

<1

5.47

Analyte:	Concentration ug/L (ppb)
Antimony	<1
Arsenic	<1
Beryllium	<1
Cadmium	<1
Chromium	3.04
Copper	<5
Lead	<1
Mercury	<1
Nickel	5.28
Selenium	<1

Silver

Zinc

Thallium

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Evren Northwest

Date Received: NA Project: 351-22009-05, F&BI 211400

Lab ID: Date Extracted: $I2\text{-}865~\mathrm{mb}$ 12/05/22 Date Analyzed: 12/05/22 Data File: I2-865 mb.232 Matrix: Water Instrument: ICPMS2 Units: ug/L (ppb) Operator: SP

	Concentration
Analyte:	ug/L (ppb)

Antimony	<1
Arsenic	<1
Beryllium	<1
Cadmium	<1
Chromium	<1
Copper	<5
Lead	<1
Mercury	<1
Nickel	<1
Selenium	<1
Silver	<1
Thallium	<1
Zinc	<5

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID: EB05-4.5 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

 Date Extracted:
 12/08/22
 Lab ID:
 211400-05 x0.1

 Date Analyzed:
 12/09/22
 Data File:
 211400-05 x0.1.049

Matrix: Soil/Solid Instrument: ICPMS2 Units: mg/L (ppm) Operator: SP

Concentration

Analyte: mg/L (ppm) TCLP Limit

Lead <0.1 5.0

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID: FD01 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Date Extracted: 12/08/22 Lab ID: 211400-14 x0.1 Date Analyzed: 12/09/22 Data File: 211400-14 x0.1.050

Matrix: Soil/Solid Instrument: ICPMS2 Units: mg/L (ppm) Operator: SP

Concentration

Analyte: mg/L (ppm) TCLP Limit

Lead <0.1 5.0

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020B and 1311

Client ID: Method Blank Client: Evren Northwest

Date Received: NA Project: 351-22009-05, F&BI 211400

Matrix: Soil/Solid Instrument: ICPMS2 Units: mg/L (ppm) Operator: SP

Concentration

Analyte: mg/L (ppm) TCLP Limit

Lead <0.1 5.0

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID: EB06/1.5-6.5 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	90	109
Toluene-d8	98	89	112
4-Bromofluorobenzene	103	84	115

	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	< 0.5	1,3-Dichloropropane	< 0.05
Chloromethane	< 0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	< 0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	< 0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	< 0.05
Acetone	<5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	< 0.1
Hexane	< 0.25	o-Xylene	< 0.05
Methylene chloride	< 0.5	Styrene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Isopropylbenzene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Bromoform	< 0.05
1,1-Dichloroethane	< 0.05	n-Propylbenzene	< 0.05
2,2-Dichloropropane	< 0.05	Bromobenzene	< 0.05
cis-1,2-Dichloroethene	< 0.05	1,3,5-Trimethylbenzene	< 0.05
Chloroform	< 0.05	1,1,2,2-Tetrachloroethane	< 0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	2-Chlorotoluene	< 0.05
1,1,1-Trichloroethane	< 0.05	4-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	tert-Butylbenzene	< 0.05
Carbon tetrachloride	< 0.05	1,2,4-Trimethylbenzene	0.069
Benzene	< 0.03	sec-Butylbenzene	< 0.05
Trichloroethene	< 0.02	p-Isopropyltoluene	< 0.05
1,2-Dichloropropane	< 0.05	1,3-Dichlorobenzene	< 0.05
Bromodichloromethane	< 0.05	1,4-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,2-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	< 0.5
cis-1,3-Dichloropropene	< 0.05	1,2,4-Trichlorobenzene	< 0.25
Toluene	< 0.05	Hexachlorobutadiene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Naphthalene	0.80
1,1,2-Trichloroethane	< 0.05	1,2,3-Trichlorobenzene	< 0.25
2-Hexanone	< 0.5		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID: Method Blank Client: Evren Northwest

Date Received: Not Applicable Project: 351-22009-05, F&BI 211400

12/01/22 Lab ID: Date Extracted: 02-2829 mbDate Analyzed: 12/01/22 Data File: 120119.DMatrix: Soil Instrument: GCMS4 Units: mg/kg (ppm) Dry Weight Operator: lm

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	95	90	109
Toluene-d8	98	89	112
4-Bromofluorobenzene	98	84	115

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	< 0.5	1,3-Dichloropropane	< 0.05
Chloromethane	< 0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	< 0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	< 0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	< 0.05
Acetone	<5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	< 0.1
Hexane	< 0.25	o-Xylene	< 0.05
Methylene chloride	< 0.5	Styrene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Isopropylbenzene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Bromoform	< 0.05
1,1-Dichloroethane	< 0.05	n-Propylbenzene	< 0.05
2,2-Dichloropropane	< 0.05	Bromobenzene	< 0.05
cis-1,2-Dichloroethene	< 0.05	1,3,5-Trimethylbenzene	< 0.05
Chloroform	< 0.05	1,1,2,2-Tetrachloroethane	< 0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	2-Chlorotoluene	< 0.05
1,1,1-Trichloroethane	< 0.05	4-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	tert-Butylbenzene	< 0.05
Carbon tetrachloride	< 0.05	1,2,4-Trimethylbenzene	< 0.05
Benzene	< 0.03	sec-Butylbenzene	< 0.05
Trichloroethene	< 0.02	p-Isopropyltoluene	< 0.05
1,2-Dichloropropane	< 0.05	1,3-Dichlorobenzene	< 0.05
Bromodichloromethane	< 0.05	1,4-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,2-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	< 0.5
cis-1,3-Dichloropropene	< 0.05	1,2,4-Trichlorobenzene	< 0.25
Toluene	< 0.05	Hexachlorobutadiene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Naphthalene	< 0.05
1,1,2-Trichloroethane	< 0.05	1,2,3-Trichlorobenzene	<0.25 ca
2-Hexanone	< 0.5		

ENVIRONMENTAL CHEMISTS

Analysis For Organochlorine Pesticides By EPA Method 8081B

Client Sample ID: EB04-7 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Date Extracted: 12/05/22 Lab ID: 211400-02 1/30 Date Analyzed: 12/06/22 Data File: 120612.DMatrix: Soil Instrument: GC7Units: mg/kg (ppm) Dry Weight MG Operator:

DBC 119 Concentration Compounds: mg/kg (ppm) alpha-BHC < 0.01 gamma-BHC (Lindane) < 0.01 beta-BHC < 0.01 delta-BHC < 0.01 Heptachlor < 0.01 Aldrin < 0.01 Heptachlor Epoxide < 0.01 trans-Chlordane < 0.01 cis-Chlordane < 0.01 4,4'-DDE < 0.01 Endosulfan I < 0.01 Dieldrin < 0.01 Endrin < 0.01 4,4'-DDD < 0.01 Endosulfan II < 0.01 4,4'-DDT < 0.01 Endrin Aldehyde <0.01 ca Methoxychlor < 0.01 Endosulfan Sulfate < 0.01 **Endrin Ketone** < 0.01 Toxaphene <1

ENVIRONMENTAL CHEMISTS

Analysis For Organochlorine Pesticides By EPA Method 8081B

Client Sample ID: EB05-4.5 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Date Extracted: 12/05/22 Lab ID: 211400-05 1/30 Date Analyzed: 12/06/22 Data File: 120613.DMatrix: Soil Instrument: GC7Units: mg/kg (ppm) Dry Weight MG Operator:

Lower Upper

 Surrogates:
 % Recovery:
 Limit:
 Limit:

 TCMX
 122 vo
 41
 106

 DBC
 113
 32
 150

Concentration Compounds: mg/kg (ppm) alpha-BHC < 0.01 gamma-BHC (Lindane) < 0.01 beta-BHC < 0.01 delta-BHC < 0.01 Heptachlor < 0.01 Aldrin < 0.01 Heptachlor Epoxide < 0.01 trans-Chlordane < 0.01 cis-Chlordane < 0.01 4,4'-DDE < 0.01 Endosulfan I < 0.01 Dieldrin < 0.01 Endrin < 0.01 4,4'-DDD < 0.01 Endosulfan II < 0.01 4,4'-DDT < 0.01 Endrin Aldehyde <0.01 ca Methoxychlor < 0.01 Endosulfan Sulfate < 0.01 **Endrin Ketone** < 0.01 Toxaphene <1

ENVIRONMENTAL CHEMISTS

Analysis For Organochlorine Pesticides By EPA Method 8081B

Client Sample ID: EB06-7 Client: **Evren Northwest**

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Date Extracted: 12/05/22 Lab ID: 211400-09 1/30 Date Analyzed: 12/06/22 Data File: 120614.DMatrix: Soil Instrument: GC7Units: mg/kg (ppm) Dry Weight MG Operator:

Upper Lower $\begin{array}{c} Surrogates:\\ TCMX \end{array}$ % Recovery: Limit: Limit: 106 101 41

DBC 107 $\overline{32}$ 150 Concentration

Compounds: mg/kg (ppm) alpha-BHC < 0.01 gamma-BHC (Lindane) < 0.01 beta-BHC < 0.01 delta-BHC < 0.01 Heptachlor < 0.01 Aldrin < 0.01 Heptachlor Epoxide < 0.01 trans-Chlordane < 0.01 cis-Chlordane < 0.01 4,4'-DDE < 0.01 Endosulfan I < 0.01 Dieldrin < 0.01 Endrin < 0.01 4,4'-DDD < 0.01 Endosulfan II < 0.01 4,4'-DDT < 0.01 Endrin Aldehyde <0.01 ca Methoxychlor < 0.01 Endosulfan Sulfate < 0.01 **Endrin Ketone** < 0.01 Toxaphene <1

ENVIRONMENTAL CHEMISTS

Analysis For Organochlorine Pesticides By EPA Method 8081B

Client Sample ID: EB07-7.5 Client: Evren Northwest

Date Received: 11/29/22 Project: 351-22009-05, F&BI 211400

Date Extracted: 12/05/22 Lab ID: 211400-12 1/30 Date Analyzed: 12/06/22 Data File: 120615.DMatrix: Soil Instrument: GC7Units: mg/kg (ppm) Dry Weight MG Operator:

Lower Upper

 Surrogates:
 % Recovery:
 Limit:
 Limit:

 TCMX
 103
 41
 106

 DBC
 110
 32
 150

Concentration Compounds: mg/kg (ppm) alpha-BHC < 0.01 gamma-BHC (Lindane) < 0.01 beta-BHC < 0.01 delta-BHC < 0.01 Heptachlor < 0.01 Aldrin < 0.01 Heptachlor Epoxide < 0.01 trans-Chlordane < 0.01 cis-Chlordane < 0.01 4,4'-DDE < 0.01 Endosulfan I < 0.01 Dieldrin < 0.01 Endrin < 0.01 4,4'-DDD < 0.01 Endosulfan II < 0.01 4,4'-DDT < 0.01 Endrin Aldehyde <0.01 ca Methoxychlor < 0.01 Endosulfan Sulfate < 0.01 **Endrin Ketone** < 0.01 Toxaphene <1

ENVIRONMENTAL CHEMISTS

Analysis For Organochlorine Pesticides By EPA Method 8081B

Client Sample ID: Method Blank Client: Evren Northwest

Date Received: Not Applicable Project: 351-22009-05, F&BI 211400

 Date Extracted:
 12/05/22
 Lab ID:
 02-2899 mb 1/30

 Date Analyzed:
 12/06/22
 Data File:
 120609.D

 Matrix:
 Soil
 Instrument:
 GC7

Units: mg/kg (ppm) Dry Weight Operator: MG
Lower

Concentration Compounds: mg/kg (ppm) alpha-BHC < 0.01 gamma-BHC (Lindane) < 0.01 beta-BHC < 0.01 delta-BHC < 0.01 Heptachlor < 0.01 Aldrin < 0.01 Heptachlor Epoxide < 0.01 trans-Chlordane < 0.01 cis-Chlordane < 0.01 4,4'-DDE < 0.01 Endosulfan I < 0.01 Dieldrin < 0.01 Endrin < 0.01 4,4'-DDD < 0.01 Endosulfan II < 0.01 4,4'-DDT < 0.01 Endrin Aldehyde <0.01 ca Methoxychlor < 0.01 Endosulfan Sulfate < 0.01 **Endrin Ketone** < 0.01 Toxaphene <1

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 211328-01 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

			Percent		
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	_
Gasoline	ug/L (ppb)	1,000	110	70-130	_

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Gasoline	mg/kg (ppm)	20	85	90	61-153	6

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 211405-01 (Matrix Spike)

			(Wet wt)	Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5.000	4.800	75 b	60 b	70-130	22 h

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel Extended	mg/kg (ppm)	5,000	83	70-130

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Diesel Extended	ug/L (ppb)	2,500	76	73	70-130	4

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 211357-21 x5 (Matrix Spike)

-			Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Antimony	mg/kg (ppm)	20	<5	99	107	75-125	8
Arsenic	mg/kg (ppm)	10	8.51	67 b	96	75 - 125	36 b
Beryllium	mg/kg (ppm)	5	<5	99	108	75 - 125	9
Cadmium	mg/kg (ppm)	10	<5	97	105	75 - 125	8
Chromium	mg/kg (ppm)	50	15.8	89	101	75 - 125	13
Copper	mg/kg (ppm)	50	<25	87	97	75 - 125	11
Lead	mg/kg (ppm)	50	26.3	75	92	75 - 125	20
Mercury	mg/kg (ppm	5	<5	116	101	75 - 125	14
Nickel	mg/kg (ppm)	25	17.7	82	95	75 - 125	15
Selenium	mg/kg (ppm)	5	<5	92	92	75 - 125	0
Silver	mg/kg (ppm)	10	<5	93	97	75 - 125	4
Thallium	mg/kg (ppm)	5	<5	97	101	75 - 125	4
Zinc	mg/kg (ppm)	50	65.6	66 b	102	75 - 125	43 b

	Percent	
Spike	Recovery	Acceptance
Level	LCS	Criteria
20	108	80-120
10	96	80-120
5	105	80-120
10	103	80-120
50	104	80-120
50	105	80-120
50	100	80-120
5	104	80-120
25	110	80-120
5	100	80-120
10	100	80-120
5	103	80-120
50	107	80-120
	Level 20 10 5 10 50 50 50 5 25 5 10 5	Spike Level Recovery LCS 20 108 10 96 5 105 10 103 50 104 50 105 50 100 5 104 25 110 5 100 10 100 5 103

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 211400-15 (Matrix Spike)

				Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Antimony	ug/L (ppb)	20	<1	98	97	75-125	1
Arsenic	ug/L (ppb)	10	<1	97	96	75 - 125	1
Beryllium	ug/L (ppb)	5	<1	97	95	75 - 125	2
Cadmium	ug/L (ppb)	5	<1	95	94	75 - 125	1
Chromium	ug/L (ppb)	20	3.04	100	96	75 - 125	4
Copper	ug/L (ppb)	20	<5	91	92	75 - 125	1
Lead	ug/L (ppb)	10	<1	97	98	75 - 125	1
Mercury	ug/L (ppb)	5	<1	95	97	75 - 125	2
Nickel	ug/L (ppb)	20	5.28	92	88	75 - 125	4
Selenium	ug/L (ppb)	5	<1	101	101	75 - 125	0
Silver	ug/L (ppb)	5	1.51	72	69 b	75 - 125	4
Thallium	ug/L (ppb)	5	<1	94	96	75 - 125	2
Zinc	ug/L (ppb)	50	5.47	95	95	75 - 125	0

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Antimony	ug/L (ppb)	20	101	80-120
Arsenic	ug/L (ppb)	10	93	80-120
Beryllium	ug/L (ppb)	5	98	80-120
Cadmium	ug/L (ppb)	5	99	80-120
Chromium	ug/L (ppb)	20	99	80-120
Copper	ug/L (ppb)	20	112	80-120
Lead	ug/L (ppb)	10	95	80-120
Mercury	ug/L (ppb)	5	96	80-120
Nickel	ug/L (ppb)	20	102	80-120
Selenium	ug/L (ppb)	5	97	80-120
Silver	ug/L (ppb)	5	96	80-120
Thallium	ug/L (ppb)	5	94	80-120
Zinc	ug/L (ppb)	50	103	80-120

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL/SOLID SAMPLES FOR TCLP METALS USING EPA METHODS 6020B AND 1311

Laboratory Code: 211084-01 (Matrix Spike)

				Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Lead	mg/L (ppm)	1.0	<1	85	85	75-125	0

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Lead	mg/L (ppm)	1.0	86	80-120

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 211342-02 (Matrix Spike)

, and the second	` '		Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	1	< 0.5	15	20	10-142	29 vo
Chloromethane	mg/kg (ppm)	1	< 0.5	44	49	10-126	11
Vinyl chloride	mg/kg (ppm)	1	< 0.05	44	50	10-138	13
Bromomethane	mg/kg (ppm)	1	<0.5	87	87	10-163	0
Chloroethane	mg/kg (ppm)	1	<0.5	63	67	10-176	6
Trichlorofluoromethane	mg/kg (ppm)	1 5	<0.5 <5	49 261 vo	55 261 vo	10-176 10-163	$\frac{12}{0}$
Acetone 1.1-Dichloroethene	mg/kg (ppm) mg/kg (ppm)	1	< 0.05	261 V0 57	62	10-160	8
Hexane	mg/kg (ppm)	1	< 0.25	43	58	10-137	30 vo
Methylene chloride	mg/kg (ppm)	1	< 0.5	79	82	10-156	4
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	< 0.05	81	85	21-145	5
trans-1,2-Dichloroethene	mg/kg (ppm)	1	< 0.05	65	71	14-137	9
1,1-Dichloroethane	mg/kg (ppm)	1	< 0.05	75	80	19-140	6
2,2-Dichloropropane	mg/kg (ppm)	1	< 0.05	80	89	10-158	11
cis-1,2-Dichloroethene	mg/kg (ppm)	1	< 0.05	76	81	25-135	6
Chloroform	mg/kg (ppm)	1	< 0.05	79	83	21-145	5
2-Butanone (MEK)	mg/kg (ppm)	5	<1	95	99	19-147	4
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	< 0.05	81	85	12-160	5
1,1,1-Trichloroethane	mg/kg (ppm)	1	< 0.05	66	71	10-156	7
1,1-Dichloropropene	mg/kg (ppm)	1	< 0.05	65	71	17-140	9
Carbon tetrachloride	mg/kg (ppm)	1	< 0.05	63	68	9-164	8
Benzene	mg/kg (ppm)	1	0.045	82	88	29-129	7
Trichloroethene	mg/kg (ppm)	1	< 0.02	65	72	21-139	10
1,2-Dichloropropane Bromodichloromethane	mg/kg (ppm)	1 1	<0.05 <0.05	85 78	92 82	30-135 23-155	8 5
Dibromomethane	mg/kg (ppm) mg/kg (ppm)	1	< 0.05	80	86	23-135	5 7
4-Methyl-2-pentanone	mg/kg (ppm)	5	<1	86	88	24-155	2
cis-1,3-Dichloropropene	mg/kg (ppm)	1	< 0.05	78	83	28-144	6
Toluene	mg/kg (ppm)	1	0.74	221 b	209 b	35-130	6 b
trans-1,3-Dichloropropene	mg/kg (ppm)	1	< 0.05	80	83	26-149	4
1,1,2-Trichloroethane	mg/kg (ppm)	1	< 0.05	140	155	10-205	10
2-Hexanone	mg/kg (ppm)	5	< 0.5	85	86	15-166	1
1,3-Dichloropropane	mg/kg (ppm)	1	< 0.05	79	82	31-137	4
Tetrachloroethene	mg/kg (ppm)	1	< 0.025	54	63	20-133	15
Dibromochloromethane	mg/kg (ppm)	1	< 0.05	83	85	28-150	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	< 0.05	76	81	28-142	6
Chlorobenzene	mg/kg (ppm)	1	< 0.05	72	78	32-129	8
Ethylbenzene	mg/kg (ppm)	1	0.81	188 b	181 b	32-137	4 b
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	$\frac{1}{2}$	< 0.05	71	76	31-143	7
m,p-Xylene	mg/kg (ppm)		4.2	298 b	272 b	34-136	9 b
o-Xylene Styrene	mg/kg (ppm) mg/kg (ppm)	1 1	3.1 0.086	293 b 76	260 b 79	33-134 35-137	12 b 4
Isopropylbenzene	mg/kg (ppm)	1	0.75	118 b	120 b	31-142	2 b
Bromoform	mg/kg (ppm)	1	< 0.05	85	85	21-156	0
n-Propylbenzene	mg/kg (ppm)	1	1.3	246 b	231 b	23-146	6 b
Bromobenzene	mg/kg (ppm)	ī	< 0.05	65	69	34-130	6
1,3,5-Trimethylbenzene	mg/kg (ppm)	1	5.3	302 b	275 b	18-149	9 b
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	1	< 0.05	172 vo	192 vo	28-140	11
1,2,3-Trichloropropane	mg/kg (ppm)	1	< 0.05	80	80	25-144	0
2-Chlorotoluene	mg/kg (ppm)	1	< 0.05	268 vo	258 vo	31-134	4
4-Chlorotoluene	mg/kg (ppm)	1	< 0.05	132	135	31-136	2
tert-Butylbenzene	mg/kg (ppm)	1	< 0.05	58	68	30-137	16
1,2,4-Trimethylbenzene	mg/kg (ppm)	1	7.9	1355 b	1223 b	10-182	10 b
sec-Butylbenzene	mg/kg (ppm)	1	1.1	132 b	138 b	23-145	4 b
p-Isopropyltoluene	mg/kg (ppm)	1	0.41	97 b	109 b	21-149	12 b
1,3-Dichlorobenzene	mg/kg (ppm)	1	< 0.05	61	66	30-131	8
1,4-Dichlorobenzene	mg/kg (ppm)	1 1	<0.05 <0.05	62 67	65 72	29-129 31-132	5 7
1,2-Dichlorobenzene 1,2-Dibromo-3-chloropropane	mg/kg (ppm) mg/kg (ppm)	1	< 0.05	126	123	31-132 11-161	2
1,2.4-Trichlorobenzene	mg/kg (ppm)	1	< 0.25	57	63	22-142	10
Hexachlorobutadiene	mg/kg (ppm)	1	< 0.25	70	85	10-142	19
Naphthalene	mg/kg (ppm)	1	0.43	156 b	147 b	14-157	6 b
1,2,3-Trichlorobenzene	mg/kg (ppm)	1	< 0.25	47	50	20-144	6
, ,-		-					~

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Dichlorodifluoromethane	mg/kg (ppm)	1	43	10-146
Chloromethane	mg/kg (ppm)	1	60	27-133
Vinyl chloride	mg/kg (ppm)	1	69	22-139
Bromomethane	mg/kg (ppm)	1	86 82	38-114
Chloroethane Trichlorofluoromethane	mg/kg (ppm)	1 1	82 83	9-163 10-196
Acetone	mg/kg (ppm) mg/kg (ppm)	5	186 vo	52-141
1.1-Dichloroethene	mg/kg (ppm)	1	79	47-128
Hexane	mg/kg (ppm)	1	89	43-142
Methylene chloride	mg/kg (ppm)	1	95	10-184
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	90	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	1	85	67-129
1,1-Dichloroethane	mg/kg (ppm)	1	90	68-115
2,2-Dichloropropane	mg/kg (ppm)	1	104	52-170
cis-1,2-Dichloroethene Chloroform	mg/kg (ppm) mg/kg (ppm)	1 1	88 91	72-127 66-120
2-Butanone (MEK)	mg/kg (ppm)	5	94	30-120
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	93	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	1	87	62-131
1,1-Dichloropropene	mg/kg (ppm)	1	90	69-128
Carbon tetrachloride	mg/kg (ppm)	1	89	60-139
Benzene	mg/kg (ppm)	1	89	71-118
Trichloroethene	mg/kg (ppm)	1	89	63-121
1,2-Dichloropropane	mg/kg (ppm)	1 1	93	72-127
Bromodichloromethane Dibromomethane	mg/kg (ppm) mg/kg (ppm)	1	85 93	57-126 62-123
4-Methyl-2-pentanone	mg/kg (ppm)	5	95 83	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	1	88	67-122
Toluene	mg/kg (ppm)	1	92	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	1	89	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	1	92	64-115
2-Hexanone	mg/kg (ppm)	5	83	33-152
1,3-Dichloropropane	mg/kg (ppm)	1	91	72-130
Tetrachloroethene Dibromochloromethane	mg/kg (ppm) mg/kg (ppm)	1 1	93 96	72-114 55-121
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	90	74-132
Chlorobenzene	mg/kg (ppm)	1	92	76-111
Ethylbenzene	mg/kg (ppm)	1	93	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	1	92	64-121
m,p-Xylene	mg/kg (ppm)	2	93	78-122
o-Xylene	mg/kg (ppm)	1	93	77-124
Styrene	mg/kg (ppm)	1	89	74-126
Isopropylbenzene Bromoform	mg/kg (ppm)	1 1	90 98	76-127 56-132
n-Propylbenzene	mg/kg (ppm) mg/kg (ppm)	1	98 92	74-124
Bromobenzene	mg/kg (ppm)	1	90	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	1	93	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	1	88	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	1	90	61-137
2-Chlorotoluene	mg/kg (ppm)	1	93	74-121
4-Chlorotoluene	mg/kg (ppm)	1	91	75-122
tert-Butylbenzene	mg/kg (ppm)	1	92	73-130
1,2,4-Trimethylbenzene sec-Butylbenzene	mg/kg (ppm)	1 1	93 93	76-125 71-130
p-Isopropyltoluene	mg/kg (ppm) mg/kg (ppm)	1	93 94	71-130 70-132
1,3-Dichlorobenzene	mg/kg (ppm)	1	93	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	1	89	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	1	93	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	1	85	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	1	90	64-135
Hexachlorobutadiene	mg/kg (ppm)	1	96	50-153
Naphthalene	mg/kg (ppm)	1 1	77 80	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	1	00	63-138

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR ORGANOCHLORINE PESTICIDES BY EPA METHOD 8081B

Laboratory Code: 211400-02 (Matrix Spike)

				Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
alpha-BHC	mg/kg (ppm)	0.1	< 0.01	78	84	45-111	7
gamma-BHC (Lindane)	mg/kg (ppm)	0.1	< 0.01	79	84	50 - 117	6
beta-BHC	mg/kg (ppm)	0.1	< 0.01	85	89	49-109	5
delta-BHC	mg/kg (ppm)	0.1	< 0.01	82	87	39-114	6
Heptachlor	mg/kg (ppm)	0.1	< 0.01	85	89	40-131	5
Aldrin	mg/kg (ppm)	0.1	< 0.01	91	103	44-121	12
Heptachlor Epoxide	mg/kg (ppm)	0.1	< 0.01	93	97	46 - 122	4
trans-Chlordane	mg/kg (ppm)	0.1	< 0.01	1270 ip	1087 ip	41-129	16
cis-Chlordane	mg/kg (ppm)	0.1	< 0.01	84	89	44-120	6
4,4'-DDE	mg/kg (ppm)	0.1	< 0.01	84	91	41-118	8
Endosulfan I	mg/kg (ppm)	0.1	< 0.01	85	92	45-124	8
Dieldrin	mg/kg (ppm)	0.1	< 0.01	90	100	45-130	11
Endrin	mg/kg (ppm)	0.1	< 0.01	87	96	50-140	10
4,4'-DDD	mg/kg (ppm)	0.1	< 0.01	85	90	26 - 155	6
Endosulfan II	mg/kg (ppm)	0.1	< 0.01	83	89	40 - 135	7
4,4'-DDT	mg/kg (ppm)	0.1	< 0.01	82	86	39-123	5
Endrin Aldehyde	mg/kg (ppm)	0.1	< 0.01	68	72	35 - 139	6
Methoxychlor	mg/kg (ppm)	0.1	< 0.01	82	90	28-162	9
Endosulfan Sulfate	mg/kg (ppm)	0.1	< 0.01	81	87	40-141	7
Endrin Ketone	mg/kg (ppm)	0.1	< 0.05	84	90	41-147	7
Toxaphene	mg/kg (ppm)	4	< 0.1	122	116	36-133	5

ENVIRONMENTAL CHEMISTS

Date of Report: 12/15/22 Date Received: 11/29/22

Project: 351-22009-05, F&BI 211400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR ORGANOCHLORINE PESTICIDES BY EPA METHOD 8081B

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
alpha-BHC	mg/kg (ppm)	0.1	99	58-117
gamma-BHC (Lindane)	mg/kg (ppm)	0.1	99	60-121
beta-BHC	mg/kg (ppm)	0.1	101	66-120
delta-BHC	mg/kg (ppm)	0.1	100	67 - 124
Heptachlor	mg/kg (ppm)	0.1	101	58-131
Aldrin	mg/kg (ppm)	0.1	102	63-124
Heptachlor Epoxide	mg/kg (ppm)	0.1	100	67-123
trans-Chlordane	mg/kg (ppm)	0.1	99	60-123
cis-Chlordane	mg/kg (ppm)	0.1	104	70-130
4,4'-DDE	mg/kg (ppm)	0.1	104	70-130
Endosulfan I	mg/kg (ppm)	0.1	104	62-124
Dieldrin	mg/kg (ppm)	0.1	106	70-130
Endrin	mg/kg (ppm)	0.1	109	56 - 147
4,4'-DDD	mg/kg (ppm)	0.1	105	54 - 137
Endosulfan II	mg/kg (ppm)	0.1	104	42-140
4,4'-DDT	mg/kg (ppm)	0.1	110	25-169
Endrin Aldehyde	mg/kg (ppm)	0.1	66	21 - 135
Methoxychlor	mg/kg (ppm)	0.1	110	44-160
Endosulfan Sulfate	mg/kg (ppm)	0.1	103	39-148
Endrin Ketone	mg/kg (ppm)	0.1	107	46-134
Toxaphene	mg/kg (ppm)	4	111	56 - 145

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. 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 lowest calibration standard. 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.
- 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.

Phone 503-452-5561 City, State, ZIP Porland. Oregon 97214 Address 40 SE 24th Ave Company EVREN-NW Email lynng@evren-nw.com SAMPLE CHAIN OF CUSTODY SAMPLERS (signature) Project Specific RLs - Yes / No REMARKS*Conjunctations Penticides PROJECT NAME 351-22014-05 INVOICE TO PO# Rush charges authorized by: Standard Turnaround-SAMPLE DISPOSAL
Dispose after 30 days
Archive Samples vw1/M1/C2/M3 TURNAROUND TIME

			<u>.</u>											Relinquished by:	Seattle, WA 98119-2029
11-29-22 11:52	1-1		3	FB		7.	RUDNA	DIL	X	TD	11V	,	W	Received by://	3012 I 6 th Avenue West
11-18 22 18:00	-17	int	Northwest	Eiren 6	Co			10	hir	Jewken Marsta	Je~1	ار	Mr. Me-	Relinquished by:	Friedman & Bruya, Inc.
DATE TIME	מ	1X	COMPANY	CC			E	PRINT NAME	IN IN	PR			SIGNATURE	S	
1	Heid									12	5011	\$1.20	22-32-17	10	b-3083
		X		X		-		X	>	۲	50:1	11:12	12-32-14	09	4-3083
			X							57	7:25	11:10	72.32-57	08 A-E	EBOC/15-65
	lible!									1->	5631	9:16	37.6 22.32-17	07	£805-93
	No.	-					ļ			+-	1:05	270	07.6 22.32-TJ	06	2.3-7.083
	•	X		X	·			X	R	1-	50.1	41.6	七116元元	05	CB C5-45
			X	-		-	<u> </u>			1-	1:05	4.05	11-28-12 9:05	Óн	EBC5/4-4
2	Heid		-			-				1	Seil	10:04	ho: of 22. 32-50	03	b-4083
		X		\boxtimes			ļ	X	X	}	26:	10:01	拉-76-72	02	4-4083
	-	-	X	-						1	1:00	00:05	21.32-55	01	8304/05-65
Notes re	TCLP PL •	Arsente, Chrombu land Mercury	PP 13	OCP, *	PCBs EPA 8082	VOCs EPA 8260 PAHs EPA 8270	BTEX EPA 8021	NWTPH-Gx	NWTPH-Dx	# of Jars	Sample Type	Time Sampled	Date Sampled	Lab ID	Sample ID
	-	') ')	NALYSES REQUESTED	S REG	TXXI	⊣ ≫ I									

Ph. (206) 285-8282

Received by:

Samples received at &

7.9-1-083 REMEATE 02 F007 5.t - +88 Address 40 SE 24th Ave 211400 211400 Phone 503-452-5561 City, State, ZIP Portland, Oregon 97214 Company EVREN-NW t-5.0/ tags Ph. (206) 285-8282 Seattle, WA 98119-2029 3012 I 6th Avenue West Friedman & Bruya, Inc. Sample ID Email lynng@evren-nw.com Relinquished by Received by: Received by: Relinquished by: 2 7 15 A-D 五 Lab ID SIGNATURE 11-26 22 11-28-22 10 40 近-28 22 10:36 11-22-22 12-22-17 Sampled Date 25:4-10:32 SAMPLE CHAIN OF CUSTODY 2:25 Time Sampled REMARKSKoguno dilatine Kartholdes ***Kolilatinaka | Harbise ides SAMPLERS (signature) Project Specific RLs - Yes / No PROJECT NAME 351-22009-05 1:05 50: (50: (Sample Type Soil 122 Scilan Jars PRINT NAME rolling. Men! S NWTPH-Dx NWTPH-Gx BTEX EPA 8021 ANALYSES REQUESTED PAHs EPA 8270 INVOICE TO PCBs EPA 8082 OCP; Circu Northwest PO# Samples received at &... CH **
PP13 Metals
Arsunte, Chromium,
lend COMPANY Rush charges authorized by: vw1/M1/c2/N3 Archive Samples Dispose after 30 days Standard Turnaround Page # Z of Z SAMPLE DISPOSAL Mercury TCLPP6 11/29/12 11:52 15-28-22 Jose Joseph DATE Notes 18:00 TIME



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya Michael Erdahl 3012 16th Ave. W. Seattle, WA 98119

RE: 211400

Work Order Number: 2211615

December 13, 2022

Attention Michael Erdahl:

Fremont Analytical, Inc. received 4 sample(s) on 11/30/2022 for the analyses presented in the following report.

Herbicides by EPA Method 8151A (GC/MS) Sample Moisture (Percent Moisture)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Date: 12/13/2022



CLIENT: Friedman & Bruya Work Order Sample Summary

Project: 211400 **Work Order:** 2211615

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2211615-001	EB04-7	11/28/2022 10:01 AM	11/30/2022 2:11 PM
2211615-002	EB05-4.5	11/28/2022 9:17 AM	11/30/2022 2:11 PM
2211615-003	EB06-7	11/28/2022 11:12 AM	11/30/2022 2:11 PM
2211615-004	EB07-7.5	11/28/2022 10:36 AM	11/30/2022 2:11 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned



Case Narrative

WO#: **2211615**Date: **12/13/2022**

CLIENT: Friedman & Bruya

Project: 211400

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Original



Qualifiers & Acronyms

WO#: **2211615**

Date Reported: 12/13/2022

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery

CCB - Continued Calibration Blank

CCV - Continued Calibration Verification

DF - Dilution Factor

DUP - Sample Duplicate

HEM - Hexane Extractable Material

ICV - Initial Calibration Verification

LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate

MCL - Maximum Contaminant Level

MB or MBLANK - Method Blank

MDL - Method Detection Limit

MS/MSD - Matrix Spike / Matrix Spike Duplicate

PDS - Post Digestion Spike

Ref Val - Reference Value

REP - Sample Replicate

RL - Reporting Limit

RPD - Relative Percent Difference

SD - Serial Dilution

SGT - Silica Gel Treatment

SPK - Spike

Surr - Surrogate



Work Order: **2211615**Date Reported: **12/13/2022**

Client: Friedman & Bruya Collection Date: 11/28/2022 10:01:00 AM

Project: 211400

Lab ID: 2211615-001 **Matrix:** Soil

Client Sample ID: EB04-7

Analyses	Result RL		Qual	Units	DF	Date Analyzed
Herbicides by EPA Method 8151			Batch	n ID: 3	88760 Analyst: SG	
Dicamba	ND	34.5		μg/Kg-dry	1	12/9/2022 11:29:44 AM
2,4-D	ND	34.5		μg/Kg-dry	1	12/9/2022 11:29:44 AM
2,4-DP	ND	34.5		μg/Kg-dry	1	12/9/2022 11:29:44 AM
2,4,5-TP (Silvex)	ND	34.5		μg/Kg-dry	1	12/9/2022 11:29:44 AM
2,4,5-T	ND	34.5		μg/Kg-dry	1	12/9/2022 11:29:44 AM
Dinoseb	ND	57.4		μg/Kg-dry	1	12/9/2022 11:29:44 AM
Dalapon	ND	230	Q	μg/Kg-dry	1	12/9/2022 11:29:44 AM
2,4-DB	ND	34.5		μg/Kg-dry	1	12/9/2022 11:29:44 AM
MCPP	ND	57.4		μg/Kg-dry	1	12/9/2022 11:29:44 AM
MCPA	ND	57.4		μg/Kg-dry	1	12/9/2022 11:29:44 AM
Picloram	ND	57.4		μg/Kg-dry	1	12/9/2022 11:29:44 AM
Bentazon	ND	34.5		μg/Kg-dry	1	12/9/2022 11:29:44 AM
Chloramben	ND	34.5		μg/Kg-dry	1	12/9/2022 11:29:44 AM
Acifluorfen	ND	57.4		μg/Kg-dry	1	12/9/2022 11:29:44 AM
3,5-Dichlorobenzoic acid	ND	34.5		μg/Kg-dry	1	12/9/2022 11:29:44 AM
4-Nitrophenol	ND	34.5		μg/Kg-dry	1	12/9/2022 11:29:44 AM
Dacthal (DCPA)	ND	57.4		μg/Kg-dry	1	12/9/2022 11:29:44 AM
Surr: 2,4-Dichlorophenylacetic acid	76.9	5.89 - 160		%Rec	1	12/9/2022 11:29:44 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet acceptance criteria

Percent Moisture 19.3 0.500 wt% 1 12/5/2022 11:10:52 AM

Batch ID: R80248



Work Order: **2211615**Date Reported: **12/13/2022**

Client: Friedman & Bruya Collection Date: 11/28/2022 9:17:00 AM

Project: 211400

Lab ID: 2211615-002 **Matrix:** Soil

Client Sample ID: EB05-4.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Herbicides by EPA Method 8151	A (GC/MS)			Batch	n ID:	38760 Analyst: SG
Dicamba	ND	36.5		μg/Kg-dry	1	12/9/2022 11:50:21 AM
2,4-D	ND	36.5		μg/Kg-dry	1	12/9/2022 11:50:21 AM
2,4-DP	ND	36.5		μg/Kg-dry	1	12/9/2022 11:50:21 AM
2,4,5-TP (Silvex)	ND	36.5		μg/Kg-dry	1	12/9/2022 11:50:21 AM
2,4,5-T	ND	36.5		μg/Kg-dry	1	12/9/2022 11:50:21 AM
Dinoseb	ND	60.8		μg/Kg-dry	1	12/9/2022 11:50:21 AM
Dalapon	ND	243	Q	μg/Kg-dry	1	12/9/2022 11:50:21 AM
2,4-DB	ND	36.5		μg/Kg-dry	1	12/9/2022 11:50:21 AM
MCPP	ND	60.8		μg/Kg-dry	1	12/9/2022 11:50:21 AM
MCPA	ND	60.8		μg/Kg-dry	1	12/9/2022 11:50:21 AM
Picloram	ND	60.8		μg/Kg-dry	1	12/9/2022 11:50:21 AM
Bentazon	ND	36.5		μg/Kg-dry	1	12/9/2022 11:50:21 AM
Chloramben	ND	36.5		μg/Kg-dry	1	12/9/2022 11:50:21 AM
Acifluorfen	ND	60.8		μg/Kg-dry	1	12/9/2022 11:50:21 AM
3,5-Dichlorobenzoic acid	ND	36.5		μg/Kg-dry	1	12/9/2022 11:50:21 AM
4-Nitrophenol	ND	36.5		μg/Kg-dry	1	12/9/2022 11:50:21 AM
Dacthal (DCPA)	ND	60.8		μg/Kg-dry	1	12/9/2022 11:50:21 AM
Surr: 2,4-Dichlorophenylacetic acid	66.5	5.89 - 160		%Rec	1	12/9/2022 11:50:21 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet acceptance criteria

Percent Moisture 17.8 0.500 wt% 1 12/5/2022 11:10:52 AM

Batch ID: R80248

Original



Work Order: **2211615**Date Reported: **12/13/2022**

Client: Friedman & Bruya Collection Date: 11/28/2022 11:12:00 AM

Project: 211400

Lab ID: 2211615-003 **Matrix:** Soil

Client Sample ID: EB06-7

Analyses	Result RL		Qual	Units DF		Date Analyzed
Herbicides by EPA Method 8151			Batch	n ID: 3	38760 Analyst: SG	
Dicamba	ND	32.5		μg/Kg-dry	1	12/9/2022 12:10:57 PM
2,4-D	ND	32.5		μg/Kg-dry	1	12/9/2022 12:10:57 PM
2,4-DP	ND	32.5		μg/Kg-dry	1	12/9/2022 12:10:57 PM
2,4,5-TP (Silvex)	ND	32.5		μg/Kg-dry	1	12/9/2022 12:10:57 PM
2,4,5-T	ND	32.5		μg/Kg-dry	1	12/9/2022 12:10:57 PM
Dinoseb	ND	54.2		μg/Kg-dry	1	12/9/2022 12:10:57 PM
Dalapon	ND	217	Q	μg/Kg-dry	1	12/9/2022 12:10:57 PM
2,4-DB	ND	32.5		μg/Kg-dry	1	12/9/2022 12:10:57 PM
MCPP	ND	54.2		μg/Kg-dry	1	12/9/2022 12:10:57 PM
MCPA	ND	54.2		μg/Kg-dry	1	12/9/2022 12:10:57 PM
Picloram	ND	54.2		μg/Kg-dry	1	12/9/2022 12:10:57 PM
Bentazon	ND	32.5		μg/Kg-dry	1	12/9/2022 12:10:57 PM
Chloramben	ND	32.5		μg/Kg-dry	1	12/9/2022 12:10:57 PM
Acifluorfen	ND	54.2		μg/Kg-dry	1	12/9/2022 12:10:57 PM
3,5-Dichlorobenzoic acid	ND	32.5		μg/Kg-dry	1	12/9/2022 12:10:57 PM
4-Nitrophenol	ND	32.5		μg/Kg-dry	1	12/9/2022 12:10:57 PM
Dacthal (DCPA)	ND	54.2		μg/Kg-dry	1	12/9/2022 12:10:57 PM
Surr: 2,4-Dichlorophenylacetic acid	74.8	5.89 - 160		%Rec	1	12/9/2022 12:10:57 PM

NOTES:

Sample Moisture (Percent Moisture)

Percent Moisture 17.1 0.500 wt% 1 12/5/2022 11:10:52 AM

Batch ID: R80248

Original

Q - Indicates an analyte with a continuing calibration that does not meet acceptance criteria



Work Order: **2211615**Date Reported: **12/13/2022**

Client: Friedman & Bruya Collection Date: 11/28/2022 10:36:00 AM

Project: 211400

Lab ID: 2211615-004 **Matrix:** Soil

Client Sample ID: EB07-7.5

Analyses	Result RL		Qual	Units	DF	Date Analyzed
Herbicides by EPA Method 8151A (GC/MS)				Batch	n ID:	38760 Analyst: SG
Dicamba	ND	37.2		μg/Kg-dry	1	12/9/2022 12:31:38 PM
2,4-D	ND	37.2		μg/Kg-dry	1	12/9/2022 12:31:38 PM
2,4-DP	ND	37.2		μg/Kg-dry	1	12/9/2022 12:31:38 PM
2,4,5-TP (Silvex)	ND	37.2		μg/Kg-dry	1	12/9/2022 12:31:38 PM
2,4,5-T	ND	37.2		μg/Kg-dry	1	12/9/2022 12:31:38 PM
Dinoseb	ND	62.1		μg/Kg-dry	1	12/9/2022 12:31:38 PM
Dalapon	ND	248	Q	μg/Kg-dry	1	12/9/2022 12:31:38 PM
2,4-DB	ND	37.2		μg/Kg-dry	1	12/9/2022 12:31:38 PM
MCPP	ND	62.1		μg/Kg-dry	1	12/9/2022 12:31:38 PM
MCPA	ND	62.1		μg/Kg-dry	1	12/9/2022 12:31:38 PM
Picloram	ND	62.1		μg/Kg-dry	1	12/9/2022 12:31:38 PM
Bentazon	ND	37.2		μg/Kg-dry	1	12/9/2022 12:31:38 PM
Chloramben	ND	37.2		μg/Kg-dry	1	12/9/2022 12:31:38 PM
Acifluorfen	ND	62.1		μg/Kg-dry	1	12/9/2022 12:31:38 PM
3,5-Dichlorobenzoic acid	ND	37.2		μg/Kg-dry	1	12/9/2022 12:31:38 PM
4-Nitrophenol	ND	37.2		μg/Kg-dry	1	12/9/2022 12:31:38 PM
Dacthal (DCPA)	ND	62.1		μg/Kg-dry	1	12/9/2022 12:31:38 PM
Surr: 2,4-Dichlorophenylacetic acid	73.2	5.89 - 160		%Rec	1	12/9/2022 12:31:38 PM

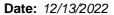
NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet acceptance criteria

Percent Moisture 21.0 0.500 wt% 1 12/5/2022 11:10:52 AM

Batch ID: R80248

Original





Work Order: 2211615

QC SUMMARY REPORT

CLIENT: Friedman & Bruya

Herbicides by EPA Method 8151A (GC/MS)

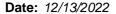
Project:	211400

Sample ID: MB-38760	SampType: MBLK			Units: µg/Kg		Prep Da	te: 12/7/2	RunNo: 80418			
Client ID: MBLKS	Batch ID: 38760					Analysis Da	te: 12/9/2	.022	SeqNo: 16 6		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dicamba	ND	30.0									
2,4-D	ND	30.0									
2,4-DP	ND	30.0									
2,4,5-TP (Silvex)	ND	30.0									
2,4,5-T	ND	30.0									
Dinoseb	ND	50.0									
Dalapon	ND	200									Q
2,4-DB	ND	30.0									
MCPP	ND	50.0									
MCPA	ND	50.0									
Picloram	ND	50.0									
Bentazon	ND	30.0									
Chloramben	ND	30.0									
Acifluorfen	ND	50.0									
3,5-Dichlorobenzoic acid	ND	30.0									
4-Nitrophenol	ND	30.0									
Dacthal (DCPA)	ND	50.0									
Surr: 2,4-Dichlorophenylacetic acid	917		1,000		91.7	5.89	160)			
NOTES:											

Q - Indicates an analyte with a continuing calibration that does not meet acceptance criteria

Sample ID: LCS-38760	SampType: LCS			Units: µg/Kg			te: 12/7/20		RunNo: 80 4		
Client ID: LCSS	Batch ID: 38760					Analysis Da	te: 12/9/2 0)22	SeqNo: 166	61719	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dicamba	183	30.0	200.0	0	91.4	52	157				
2,4-D	200	30.0	200.0	0	99.9	54.7	176				
2,4-DP	185	30.0	200.0	0	92.4	55.1	160				
2,4,5-TP (Silvex)	195	30.0	200.0	0	97.5	56.8	169				
2,4,5-T	202	30.0	200.0	0	101	54	175				
Dinoseb	155	50.0	200.0	0	77.5	5	110				
Dalapon	917	200	1,000	0	91.7	39.5	170				

Original Page 9 of 13





Work Order: 2211615

CLIENT: Friedman & Bruya

Project: 211400

MCPA

Picloram

Bentazon

Chloramben

3,5-Dichlorobenzoic acid

Acifluorfen

771

162

183

123

9.39

148

53.5

53.5

32.1

32.1

53.5

32.1

1,070

214.1

214.1

214.1

214.1

214.1

QC SUMMARY REPORT

Herbicides by EPA Method 8151A (GC/MS)

Project: 211400											• • • • • • • • • • • • • • • • • • • •	
Sample ID: LCS-38760	SampType	e: LCS			Units: µg/Kg		Prep Da	te: 12/7/2 0)22	RunNo: 804	418	
Client ID: LCSS	Batch ID:	38760					Analysis Da	te: 12/9/2 0)22	SeqNo: 160	61719	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4-DB		215	30.0	200.0	0	107	44.1	184				
MCPP		919	50.0	1,000	0	91.9	46.2	159				
MCPA		935	50.0	1,000	0	93.5	42.5	169				
Picloram		291	50.0	200.0	0	146	70.5	196				
Bentazon		221	30.0	200.0	0	110	60	165				
Chloramben		116	30.0	200.0	0	57.9	8.12	127				
Acifluorfen		187	50.0	200.0	0	93.3	5	127				
3,5-Dichlorobenzoic acid		176	30.0	200.0	0	87.9	47.2	152				
4-Nitrophenol		212	30.0	200.0	0	106	47.9	155				
Dacthal (DCPA)		237	50.0	200.0	0	118	64.7	178				
Surr: 2,4-Dichlorophenylacetic acid	t	977		1,000		97.7	5.89	160				
Sample ID: 2211617-002AMS	SampType	e: MS			Units: µg/Kg	-dry	Prep Da	te: 12/7/2 0)22	RunNo: 804	418	
Client ID: BATCH	Batch ID:	38760					Analysis Date: 12/9/2022			SeqNo: 160		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dicamba		151	32.1	214.1	0	70.7	5	127				
2,4-D		161	32.1	214.1	0	75.2	5.62	147				
2,4-DP		153	32.1	214.1	0	71.5	8.5	138				
2,4,5-TP (Silvex)		165	32.1	214.1	0	76.9	11.6	141				
2,4,5-T		157	32.1	214.1	0	73.1	7.25	138				
Dinoseb		20.2	53.5	214.1	0	9.45	11.5	123				S
Dalapon		758	214	1,070	0	70.8	5	139				
2,4-DB		173	32.1	214.1	0	80.9	28.3	146				
MCPP		767	53.5	1,070	0	71.6	16.7	128				

Original Page 10 of 13

0

0

0

0

0

0

72.1

75.6

85.6

57.2

4.38

69.4

16.1

26.1

3.83

9.63

5

5

126

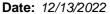
148

123

110

137

114





Work Order: 2211615

QC SUMMARY REPORT

CLIENT: Friedman & Bruya

Herbicides by EPA Method 8151A (GC/MS)

Project: 211400

Sample ID: 2211617-002AMS	SampType: MS			Units: µg/K	g-dry	Prep Da	te: 12/7/2 0)22	RunNo: 804	118	
Client ID: BATCH	Batch ID: 38760					Analysis Da	te: 12/9/2 0)22	SeqNo: 166	61727	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Nitrophenol	140	32.1	214.1	0	65.5	21.3	124				
Dacthal (DCPA)	176	53.5	214.1	0	82.1	5	139				
Surr: 2,4-Dichlorophenylacetic acid	821		1,070		76.7	5.89	160				

NOTES:

S - Outlying spike recovery observed for Dinoseb. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: 2211617-002AMSD	SampType:	MSD			Units: µg/	Kg-dry	Prep Da	te: 12/7/2 0)22	RunNo: 804	118	
Client ID: BATCH	Batch ID:	38760					Analysis Da	te: 12/9/2 0)22	SeqNo: 166	61728	
Analyte	Re	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dicamba		140	32.1	214.1	0	65.4	5	127	151.3	7.80	30	
2,4-D		142	32.1	214.1	0	66.5	5.62	147	160.9	12.2	30	
2,4-DP		140	32.1	214.1	0	65.4	8.5	138	153.1	8.93	30	
2,4,5-TP (Silvex)		149	32.1	214.1	0	69.4	11.6	141	164.7	10.3	30	
2,4,5-T		139	32.1	214.1	0	64.9	7.25	138	156.6	12.0	30	
Dinoseb		5.47	53.5	214.1	0	2.55	11.5	123	20.23	115	30	S
Dalapon		690	214	1,070	0	64.5	5	139	758.2	9.41	30	
2,4-DB		161	32.1	214.1	0	75.1	28.3	146	173.1	7.34	30	
MCPP		711	53.5	1,070	0	66.4	16.7	128	766.8	7.54	30	
MCPA		706	53.5	1,070	0	65.9	16.1	126	771.3	8.86	30	
Picloram		130	53.5	214.1	0	60.9	5	148	161.9	21.5	30	
Bentazon		165	32.1	214.1	0	77.1	26.1	123	183.3	10.5	30	
Chloramben	;	88.6	32.1	214.1	0	41.4	5	110	122.5	32.2	30	R
Acifluorfen		1.31	53.5	214.1	0	0.610	3.83	137	9.385	151	30	S
3,5-Dichlorobenzoic acid		138	32.1	214.1	0	64.3	9.63	114	148.5	7.57	30	
4-Nitrophenol		77.0	32.1	214.1	0	35.9	21.3	124	140.3	58.3	30	R
Dacthal (DCPA)		157	53.5	214.1	0	73.5	5	139	175.8	11.1	30	
Surr: 2,4-Dichlorophenylacetic ac	id	789		1,070		73.7	5.89	160		0		

NOTES:

S - Outlying spike recovery observed for Dinoseb. A duplicate analysis was performed with similar results indicating a possible matrix effect.

S - Outlying spike recovery observed for Acifluorfen. A duplicate analysis was performed and recovered within range.

R - High RPD observed.

Original Page 11 of 13



Sample Log-In Check List

CI	ient Name:	FB		Work Order No	umber: 2211615	5	
Lo	ogged by:	Elisabeth Samoray		Date Received	d: 11/30/20)22 2:11:00 PM	
Cha	in of Custo	odv					
		ustody complete?		Yes 🗹	No \square	Not Present	
		sample delivered?		<u>Courier</u>			
100	. In						
Log					\Box		
3.	Coolers are p	resent?		Yes 🗸	No 🗀	NA 🗆	
4.	Shipping con	ainer/cooler in good condition?		Yes 🗸	No 🗌		
5.		s present on shipping container/cooler? Iments for Custody Seals not intact)		Yes	No 🗌	Not Present 🗹	
6.	Was an atten	npt made to cool the samples?		Yes 🗹	No 🗌	NA 🗆	
7.	Were all item	s received at a temperature of >2°C to 6°	°C *	Yes 🗹	No 🗆	NA 🗆	
8.	Sample(s) in	proper container(s)?		Yes 🗸	No 🗆		
9.	Sufficient san	nple volume for indicated test(s)?		Yes 🗹	No \square		
10.	Are samples	properly preserved?		Yes 🗹	No \square		
11.	Was preserva	ative added to bottles?		Yes	No 🗸	NA 🗆	
12.	Is there head	space in the VOA vials?		Yes	No 🗆	NA 🗸	
		es containers arrive in good condition(unb	roken)?	Yes 🗹	No \square		
14.	Does paperw	ork match bottle labels?		Yes 🗸	No 🗆		
15.	Are matrices	correctly identified on Chain of Custody?		Yes 🗸	No 🗌		
16.	Is it clear wha	at analyses were requested?		Yes 🗸	No 🗌		
17.	Were all hold	ing times able to be met?		Yes 🗸	No 🗌		
Sne	cial Handli	ing (if applicable)					
-		ntified of all discrepancies with this order?		Yes	No 🗆	NA 🗹	
	Person	Notified:	Date:				
	By Who		Via:	•	Phone Fax	In Person	
	Regardi						
	_	structions:					
19.	Additional rer	narks:					
	Information						
		Item # Temp °C					

2.6

Sample 1

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michae	Michael Erdahl		SUB	SUBCONTRACTER PROJECT NAME/NO	RACTI	71	Lmost	1		PO#		रू ।	star (Page # of TURNAROUND TIME idard TAT	f /
Address 3012 16	3012 16th Ave W			7	211400	O			0.28	8		Ru	ush charges	Rush charges authorized by:	by:
ate, ZIP_	Seattle, WA 98119		REA	REMARKS									SAMI Dispose aft	SAMPLE DISPOSAL Dispose after 30 days	3AL
28	merdahl@fri	edmanandbruy	a.com	Ple	Please Email Results	nail R	esults						Return samples Will call with in	Return samples Will call with instructions	ons
							A	ANALYSES		REQUESTED	ESTI	D			
Sample ID Lab	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins/Furans	EPH	VPH	8151 Hedicides						Notes	tes
FB04-7	11/28/27	1001	50,1	-				×		-	-	-			
ER05-4,5		7100		-				×	111						
EB06-7		1112		-				x			_	\vdash			
EB07-7.5	4	1036	4	-				×	_	_	_	_	\vdash		
							\perp	\perp	-	\perp	+	\bot	+		
												\vdash			
									-						
						\perp	_	_		-	_	-	-		
										\sqcup	\parallel	\sqcup			
									17.						
Friedman & Bruya, Inc. 3012 16th Avenue West	Relingerished by:	SIGNATURE		Mich	PRIN Michael Erdahl	PRINT dahl	NAME		1	Frie	COMPANY Friedman & Bruya	COMPANY nan & Bruy	у	DATE N/30/1L	TIME
Seattle, WA 98119-2029 Ph. (206) 285-8282	Received by:	Dy:			att	treni	8	10/1	tes	-	FAI			14/38/77	14:
Fax (206) 283-5044	Received by:														

Summary: DATA VALID? □YES

Analytical Laboratory Data Validation Check Sheet

Project Name: Eastside Plating Plants 1-3 - 8400 SE 26th Place-Portland

Project Number:	351-22009-05						
Date of Review:_	12/15/2022	Lab. Name: F&BI	Lab Batch II) #: <u>2114</u>	00_		
Chain of Custody							
	sted analyses report	ted?		⊠yes	□no		
	uested methods us			⊠yes	□no		
3.) Trip blank sub				□yes	⊠no		
4.) Field blank su				□yes	⊠no		
<u>Timing</u>							
5.) Samples extra	acted within holding	g times?		\boxtimes yes	□no		
If not, ar	re all discrepancies	footnoted?		□yes	□no	\boxtimes NA	
6.) Analysis perfo	rmed within holdin	g times?		\boxtimes yes	□no		
If not, ar	re all discrepancies	footnoted?		□yes	□no	\boxtimes NA	
Quality Assurance	<u> </u>						
		reported? (MRLs vs MDLs/PQL	.s)	⊠yes	□no		
	ed values above eit			\boxtimes yes	□no		
•		& PQL tagged as trace?		□yes	□no	\boxtimes NA	
	=	other reason besides high analy	te conc.?	□yes	⊠no		
10b.) If so, are th				□yes	□no	\boxtimes NA	
11.) Lab method	blank completed?			\boxtimes yes	□no		
	r Trip Blank(s) repo			□yes	⊠no		
If yes, indicate bla	ank type, chemical(s) and concentration(s):					_
		ere one method blank for each a	analyte?	⊠yes	□no	□NA	
	re all discrepancies			□yes	□no		
•		blank for each day of analysis?		\boxtimes yes	□no	□NA	
	re all discrepancies			□yes	□no		
•		d blank for each extraction batc	h?	\boxtimes yes	□no	□NA	
If not, ar	re all discrepancies	footnoted?		□yes	□no		
<u>Accuracy</u>							
16.) Is there a su	rrogate spike recov	ery for all VOC & SVOC samples	?	\boxtimes yes	□no	\square NA	
Do all su	rrogate spike recov	reries meet accepted criteria?		□yes	⊠no		
If not, ar	re all discrepancies	footnoted?		\boxtimes yes	□no	\Box NA	
The value reporte method blank. (v		side the established control limit	ts in samples EB04-	7, EB05-4	1.5, and	method 8	081B
17.) Is there a sp	ike recovery for all	Laboratory Control Samples?		⊠yes	□no	\Box NA	
•	•	eries meet accepted criteria?		□yes	⊠no		
	re all discrepancies	· · · · · · · · · · · · · · · · · · ·		⊠yes	□no	□NA	
	•	utside the established control lir	mits established for	•			
	CSD RPDs within ac			⊠yes	□no	□NA	
	re all discrepancies	•		□yes	□no	⊠NA	
<u>Precision</u>							
19.) Are all matri	x spike/matrix spike	e duplicate recoveries within					
acceptable	limits?			□yes	⊠no	\square NA	
If not are a	Il discrenancies foot	tnoted?		NAC	□no	ΠNA	

Several analytes were spiked at a level that was less than five times that primatrix spike recoveries may not be meaningful (b). The reported recovery of trans-chlordane fell outside of control limits due. The values reported for acetone, 1,1,2,2-tetrachloroethane, and 2-chlorote established for these analytes (vo). 20.) Are all matrix spike/matrix spike duplicate RPDs within	to sample matr	rix effec	cts (ip).	
acceptable limits?		□yes	⊠no	\square NA
If not, are all discrepancies footnoted?		⊠yes	□no	□NA
Several analytes were spiked at a level that was less than five times that primatrix spike recoveries may not be meaningful (b). The reported values for dichlorodifluoromethane and hexane fell outside translytes (vo).				
21.) Do all RPD calculations for Field Duplicates meet accepted criteria?		⊠yes	□no	\square NA
Comments: The calibration results for 1,2,3-trichlorobenzene and endrin aldehyde wer the values reported are estimates (ca). Gasoline was not detected in one or more of the duplicate analyses; There (nm).				
Initial Review By: <u>LP</u> Final	al Review By:			

Summary: DATA VALID?

⊠YES

Analytical Laboratory Data Validation Check Sheet

Project Name: Eastside Plating Plants 1-3 - 8400 SE 26th Place-Portland

Project Number: <u>351-22009-05</u>

Date of Review: 12/15/2022 Lab. Name: Fremont Lab Batch ID #: 2211615-211400

<u>Chain of Custody</u>			
1.) Are all requested analyses reported?	⊠yes	□no	
2.) Were the requested methods used?	⊠yes	□no	
3.) Trip blank submitted?	□yes	⊠no	
4.) Field blank submitted?	□yes	⊠no	
Timing			
5.) Samples extracted within holding times?	\boxtimes yes	□no	
If not, are all discrepancies footnoted?	□yes	□no	\boxtimes NA
6.) Analysis performed within holding times?	⊠yes	□no	
If not, are all discrepancies footnoted?	□yes	□no	\boxtimes NA
Quality Assurance/Quality Control			
7.) Are the required reporting limits reported? (MRLs vs MDLs/PQLs)	⊠yes	□no	
8.) Are all reported values above either MRL or MDL?	⊠yes	□no	
9.) Are all values between the MDL & PQL tagged as trace?	□yes	□no	\boxtimes NA
10a.) Are reporting limits raised for other reason besides high analyte conc.?	□yes	⊠no	
10b.) If so, are they footnoted?	□yes	□no	⊠NA
11.) Lab method blank completed?	⊠yes	□no	
12.) Lab, Field, or Trip Blank(s) report detections?	□yes	⊠no	
If yes, indicate blank type, chemical(s) and concentration(s):			
13.) For inorganics and metals, is there one method blank for each analyte?	□yes	□no	⊠NA
If not, are all discrepancies footnoted?	□yes	□no	
14.) For VOCs, is there one method blank for each day of analysis?	□yes	□no	\boxtimes NA
If not, are all discrepancies footnoted?	□yes	□no	
15.) For SVOC's, is there one method blank for each extraction batch?	⊠yes	□no	\Box NA
If not, are all discrepancies footnoted?	□yes	□no	
Accuracy			
16.) Is there a surrogate spike recovery for all VOC & SVOC samples?	⊠yes	□no	\square NA
Do all surrogate spike recoveries meet accepted criteria?	⊠yes	□no	
If not, are all discrepancies footnoted?	□yes	□no	\boxtimes NA
17.) Is there a spike recovery for all Laboratory Control Samples?	⊠yes	□no	\Box NA
Do all LCS/LCSD spike recoveries meet accepted criteria?	⊠yes	□no	
If not, are all discrepancies footnoted?	□yes	□no	\boxtimes NA
18.) Are all LCS/LCSD RPDs within acceptable limits?	□yes	□no	\boxtimes NA
If not, are all discrepancies footnoted?	□yes	□no	\boxtimes NA
Precision			
19.) Are all matrix spike/matrix spike duplicate recoveries within			
acceptable limits?	□yes	⊠no	\square NA
If not, are all discrepancies footnoted?	⊠yes	□no	\square NA
Outlying spike recovery observed for dinoseb, so a duplicate analysis was performed	with simila	r results	indicatio

Outlying spike recovery observed for dinoseb, so a duplicate analysis was performed with similar results indication a possible matrix effect (S).

Outlying spike recovery observed for acifluorfen, so a duplicate analysis was performed and recovered within range (S). 20.) Are all matrix spike/matrix spike duplicate RPDs within

Initial Review By: LP	Final Review By:			-					
Comments: Dalapon had an initial or continuing calibration that does not meet established acceptance criteria (Q).									
21.) Do all RPD calculations for Field Duplic	rates meet accepted criteria?	□yes	□no	⊠NA					
possible matrix effect (S). Outlying spike recovery observed for aciflud	orfen, so a duplicate analysis was performed	and reco	vered wi	ithin range (S).					
High relative percent difference was observ Outlying spike recovery observed for dinos	ed in chloramben and 4-nitrophenol (R). eb, so a duplicate analysis was performed wi	th similar	results i	ndication a					
If not, are all discrepancies footnoted		⊠yes	□no	□NA					
acceptable limits?		□yes	⊠no	□NA					