



WORK PLAN FOR SOURCE CONTROL EVALUATION



Diesel Cast West, Inc.

8100 NE 14th Place
Portland, Oregon

Agency Information

ODEQ ESCI Site No. 6453
ODEQ UIC No. UICRA-000000397

Prepared on behalf of:

Diesel Cast West, Inc.

8100 NE 14th Place
Portland, Oregon

Issued on:

December 4, 2025

EVREN NORTHWEST, INC.
Project No. 947-24001-04

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This

Work Plan

for Source Control Evaluation

for:

Diesel Cast West, Inc.

8100 NE 14th Place, Portland, Oregon
(ODEQ ESCI Site No. 6453 / ODEQ UIC No. UICRA-000000397)

Has been prepared on behalf of:

Diesel Cast West, Inc.

8100 NE 14th Place
Portland, Oregon

and its assignees

Issued December 4, 2025 by:



EXP. 2/1/2026

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List of Acronyms and Abbreviations

BES	City of Portland Bureau of Environmental Services
bgs	below ground surface
BMPs	Best Management Practices
Client / DCW	Diesel Cast West, Inc.
COC	chain-of-custody
COIs	Constituents of Interest
DU	decision unit
ENW	EVREN Northwest, Inc.
EPA	US Environmental Protection Agency
ESA	environmental site assessment
F&BI	Friedman & Bruya, Inc.
ISM	incremental sampling methods
ITRC	Interstate Technology & Regulatory Council
MDL	method detection limit
NFA	no further action
ODEQ	Oregon Department of Environmental Quality
PAHs	polycyclic aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
QA/QC	quality assurance/quality control
REC	recognized environmental condition
RPD	Relative Percent Difference
SCE	Source Control Evaluation
SLVs	screening level values
SWMP	storm water management plan
UIC	underground injection control
USGS	United State Geological Survey

1.0 Introduction

1.1 Purpose

This work plan outlines the objectives and work scope for Source Control Evaluation (SCE) for the Diesel Cast West, Inc. (DCW) facility located at 8100 NE 14th Place in Portland, Oregon (subject site, see Figure 1).

This SCE will be performed on behalf of DCW by EVREN Northwest, Inc. (ENW) to identify, evaluate sources of contamination that may reach the Columbia Slough and develop control strategies, if applicable.

1.2 Source Control Objective

The objective of the SCE is to demonstrate that potential sources of storm water pollutant load at the site are controlled, and no additional characterization or source control measures are needed at the site.

1.3 Regulatory Framework

This work plan was prepared in general accordance with Oregon Department of Environmental Quality's (ODEQ's) *Guidance for Evaluating the Stormwater Pathway at Upland Sites* dated January 2009 and updated October 2010. This SCE work plan was prepared at the request of ODEQ.¹

2.0 Background

2.1 Site and Vicinity General Description

DCW's facility is located on a roughly rectangular property at the northeast corner of NE Argyle Drive and NE 14th Place in Portland, Oregon (see Figures 1 and 2). An asphalt-paved parking lot is present in the southwest portion of the site and a concrete driveway and loading dock is present on the west side of the building. Additional concrete surfaces are present on the north side of the main building, where an awning was previously present. The remaining surfaces of the property are primarily gravel.

Exterior material storage is predominantly limited to graveled areas on the north and east sides of the onsite building. The southern paved area is utilized for employee and visitor parking.

2.2 Geographic Setting

The subject site lies at an elevation of approximately 30 to 40 feet above mean sea level². The site and vicinity are generally level with regional topography sloping generally to the north/northwest toward the Columbia Slough (Figure 1).

¹ ODEQ. October 1, 2025. Email to EVREN Northwest regarding SCE Work Plan.

² USGS. 2017, Portland 7.5 Minute Topographic Map, Oregon-Washington: USGS 7.5-Minute Series, scale 1:24,000.

2.3 Geologic Setting

The site is located within the northern part of 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 floor of the Portland Basin is underlain with up to 1,400 feet of semi-consolidated and unconsolidated materials consisting of Holocene sediments in the streambeds and flood plains of the active rivers and tributaries, glacial outburst flood deposits of the late Pleistocene Missoula Floods which have been mapped at up to 400 feet elevation amsl, and Miocene and Pliocene sediments of lacustrine and fluvial origin.

Madin (1990)³ and Beeson and others (1991)⁴ have mapped the geology beneath the subject property as Quaternary Alluvium (Qal) described as river and stream deposits composed of sand, silt, and organic-rich clay with subordinate gravel of mixed lithologies, which is largely confined to Columbia and Willamette River channels and valley bottoms of tributary streams. Locally may include lacustrine, paludal and eolian deposits. The alluvium reaches maximum thickness of 30 to 45 meters (100 to 150 feet) near the subject site.

Directly underlying the Qal is the Troutdale Formation of Tertiary age (Tt), consisting of unconsolidated to cemented pebble to cobble conglomerate with a silt or sand matrix.⁵ Beeson and others (1991)⁴ mapped the base of the Troutdale Formation in the site vicinity at approximately 60 to 75 meters (200 to 250 feet) below ground surface (bgs) and describe the Troutdale Formation as friable to moderately strong conglomerates with minor interbeds of sandstone, siltstone, and claystone.

The Sandy River Mudstone directly underlies the Troutdale Formation and overlies the volcanic rocks of the basin and therefore represents the oldest sediments filling the Portland Basin in the subject area. Considered part of the Troutdale Formation by some, the sediments of the Sandy River Mudstone were largely deposited in slack water environments by the ancestral Columbia River and local streams and sediment derived from Pliocene High Cascade volcanism.^{6,7}

³ Madin, I.P., 1990, Earthquake-Hazard Geology Maps of the Portland Metropolitan Area, Oregon—Text and Map Explanation: State of Oregon, Department of Geology and Mineral Industries Open-File Report 0-90-2, 21 p., 8 pls., scale 1:24,000.

⁴ Beeson, M.H., Tolan, T.L., and Madin, I.P., 1991, Geologic Map of the Portland Quadrangle, Multnomah and Washington Counties, Oregon, and Clark County, Washington: State of Oregon Geological Map Series GMS-75, 1 sheet, scale 1:24,000.

⁵ Trimble, D.E., 1963, *Geology of Portland, Oregon and Adjacent Areas*: U.S. Geological Survey Bulletin 1119, scale 1:62,500.

⁶ Tolan, T.E., 1982, The Stratigraphic Relationships of the Columbia River Basalt Group in the lower Columbia River Gorge of Oregon and Washington: Portland State University Master's Thesis, 169 p.

⁷ Tolan, T.E. and Beeson, M.H., 1984, Exploring the Neogene History of the Columbia River: Discussion and Geologic Field Trip Guide to the Columbia River Gorge, Part I. Discussion in Oregon Geology, v. 46, no. 8, August 1984: Oregon Department of Geology and Mineral Industries, 11 p.

2.4 Ground Water

According to the United State Geological Survey (USGS) Oregon Water Science Center, depth to ground water at the subject site is expected to be approximately 12 feet bgs. The direction of ground water flow in the subject area is generally expected to be north/northwest based on local topography and location near the Columbia Slough.

2.5 Site History

The site has been used for the manufacturing, repair, and refurbishment of components for diesel engines since 1963. Site history has been documented through several previous environmental investigations performed at the subject site by others. The information presented in this section was gleaned from the following reports provided to ENW:

- RPS Group, Incorporated. *Independent Cleanup Pathway Final Report, Diesel Cast West*. May 20, 2021.
- Vieau Associates, a Division of GZA, *Work Plan, Diesel Cast Welding Property*. October 24, 2022.
- GZA GeoEnvironmental, Inc., *Addendum to the Independent Cleanup Pathway Final Report, Diesel Cast West Property*. August 2, 2023

The subject site was undeveloped land prior to at least 1936 before it was utilized agriculturally until 1963. The site was occupied by Northwest Motor Weld from 1963 until DCW began operations in 1996.

A Phase II Environmental Site Assessment (ESA) in 1995 included subsurface soil sampling in the northern portion of the site and did not identify any environmental concern at that time.

In 2020, RPS Group conducted several environmental assessments at the subject site including Phase I and Phase II ESAs. In their Phase I ESA, RPS Group identified the site use as a recognized environmental condition (REC) and further investigations were conducted to assess subsurface soil, reconnaissance ground water, soil vapor, and indoor/ambient air. Additional soil borings and five (5) permanent ground water monitoring wells were subsequently installed as part of additional delineation to further investigate impacts identified in soil and ground water.

In their *Independent Cleanup Pathway Final Report*, RPS concluded that site conditions demonstrated compliance with applicable RBCs and no risk to human health or environment was identified and requested that ODEQ issue a No Further Action (NFA) letter.

After review of the *Independent Cleanup Pathway Final Report*, ODEQ provided responses in a May 20, 2021 letter identifying several deficiencies in the report and requesting additional work to further define the extent and magnitude of impacts to soil and ground water.

Vieau Associates and GZA prepared a *Work Plan* and subsequent *Addendum Report* outlining and documenting additional investigation of subsurface soil and groundwater. GZA's *Addendum to the Independent Cleanup Pathway Final Report* concluded that no new sources of contamination were identified and requested that ODEQ issue a NFA letter.

After review of the *Addendum to the Independent Cleanup Pathway Final Report*, ODEQ provided response in a February 8, 2024 letter requesting a source control evaluation (SCE) and noted that drywells on the property may require registration with the ODEQ's Underground Injection Control (UIC) program.

2.6 Storm Water Conveyance System Layout

Figure 2 presents the storm water system at the property. Components include:

- **Roof Drains.** Storm water from the roof of the site building discharges to one of three locations:
 - To ground surface onsite,
 - To ground surface in NE 14th Place,
 - Underground with inferred discharge to two drywells indicated on historic City permit records. These drywells are being registered with the State Underground Injection Control (UIC) program concurrently with the preparation of this Plan.
- **Trench Drain.** One trench drain is present on the west side of the site building near the loading dock. The drain is mostly under cover but is partially exposed to precipitation. Water that enters the trench drain discharges to the onsite treatment system and, ultimately, to the municipal sanitary sewer system.
- **Loading Dock Drain.** One catch basin is present in the bottom of the loading dock on the west side of the site building. Water entering the loading dock drain discharges to the onsite treatment system and, ultimately, to the municipal sanitary sewer system.
- **Sheet Flow.** Storm water that falls onto the paved parking lot in the southwest corner of the site sheet flows to N Argyle Drive and enters the municipal storm water system.

The storm water treatment system on site, including best management practices (BMPs), is described in detail in the Storm Water Management Plan (SWMP) prepared by ENW at the request of the City of Portland Bureau of Environmental Services (BES).⁸

2.7 Regulatory History (Storm Water Permitting)

2.7.1 Underground Injection Control

In 2024, two drywells receiving roof drainage on site were registered with ODEQ's Underground Injection Control (UIC) database and assigned Facility ID UICRA-000000397.

⁸ ENW, 2024. *Storm Water Management Plan*, Diesel Cast West, Inc., 8100 NE 14th Place, Portland, Oregon. December 17, 2024

3.0 Potential Sources, Pathways, and Contaminants of Interest

3.1 Potential Contaminant Sources

Based on previous investigations and recent communications with ODEQ¹, the sources for potential project site-related contaminants are related to historical diesel engine repair and refurbishment operations onsite, and include:

- Metals,
- polycyclic aromatic hydrocarbons (PAHs), and
- Polychlorinated biphenyls (PCBs).

3.2 Potential Future Pathways

Only one complete pathway for potential sources of contaminants from the subject site to impact Columbia Slough sediments was identified:

- Discharge of contaminants via storm water conveyance lines to the Columbia Slough.

The SCE report will further document these lines of evidence as well as additional information identified during the implementation of this SCE work plan.

3.3 Contaminants of Interest

Based on current and historical site use, and recent communications with ODEQ¹, contaminants of interest (COIs) in storm water discharging from the subject site include the following.

- PCBs,
- PAHs, and
- Total metals (specifically: copper, lead, nickel, and zinc).

4.0 Storm Water Control Measures

4.1 Storm Water Source Control Measures

During the current tenancy of the subject site by DCW, best management practices (BMPs) are employed to minimize pollutant contact with storm water runoff. The storm water treatment system on site and BMPs currently utilized are described in detail in the SWMP prepared for the BES⁸ and includes the following:

- Much of site is graveled and bounded by landscaped areas, generating minimal surface runoff. Similarly, a significant portion of the roof of the onsite building conveys storm water to buried drywells. Only storm water from the western portion of the roof and paved areas in the western portion of the site is conveyed offsite.
- Routinely clean all exposed areas that may contribute pollutants to storm water using such measures as sweeping at regular intervals and litter pick-up.

- Assess paved surfaces daily and sweep when visual dust/debris is observed in order to prevent accumulated sediment from entering storm water discharge.
- Trench drains, although not strictly components of the storm water system, are cleaned twice per year to ensure continued function.
- Solid waste collection receptacles will be maintained so as to eliminate overflow, fluid leakage, particulate accumulation, and inappropriate disposal, and will be covered to the maximum extent practicable to prevent rain intrusion and protect from wind. No waste materials will be allowed to be set on the pavement outside the receptacles.
- No storage of industrial materials is conducted in the western exterior of the site.
- Inspect, maintain and repair all storm water conveyance features to ensure effective operation and in a manner that prevents the discharge of pollution.
- Facility vehicles and equipment exposed to precipitation will be maintained in good working order. Automobile maintenance will be strictly prohibited on the property.
- Use drip pans to collect leaks and spills from commercial equipment such as trucks and other vehicles stored outside (if applicable).
- Do not allow forklifts utilized indoors to track oily material to exterior portions of the site.
- Spill response kits will be strategically located and any identified leaks and spills, including oils, fuels, and dust will be promptly contained and cleaned up.
- If a spill has reached or may reach a sanitary or a storm sewer, ground water, or surface water notify the local jurisdiction, ODEQ, and the local sewer authority immediately. Notification must comply with federal spill reporting requirements.
- Regular training of employees in BMPs.

5.0 Erodible Surface Soil Sampling Plan

The following surface soil sampling plan is intended to evaluate the potential for COIs running offsite from graveled areas during heavy rain events.

5.1 Proposed Surface Soil Sampling Plan

5.1.1 Sampling Locations

To obtain comprehensive surface soil data, three (3) decision units (DUs) have been defined in exposed soil (i.e., gravel) areas on the subject site. Decision units are illustrated on Figure 2 and include graveled areas in the northwest, northeast, and southeast portions of the site.

5.1.2 Sampling Methods and Handling

Surface soil samples will be conducted using incremental sampling methods (ISM), which consists of many small increments of soil (discrete soil increments) collected from a given DU and composited into one

larger sample. The relatively large soil sample is thoroughly homogenized and subsampled in the laboratory. The resulting contaminant concentrations represent the average concentration for the entire DU. This sampling procedure will minimize effects of heterogeneity (micro scale and short scale) in the soil to provide a more accurate representation of contaminant concentrations within each DU. Sampling will follow the decision unit characterization guidance developed by the ODEQ.⁹

The locations targeted for sampling in DU01-DU03 and are illustrated in Figure 2. Decision units will be divided in a grid pattern consisting of approximately 50 grids and soil increments (soil samples of equal mass) will be collected from the center node of each increment grid (grid-center systematic sampling) resulting in collection of 50 soil increments from each DU. Grid locations will be distributed evenly within decision units to ensure that the entire decision unit population is equally represented in the final multi-increment sample. Approximately 40-gram soil increments will be collected within 0.5-feet below the gravel surface, where present, and will be sampled with a stainless-steel push probe and/or hand auger. A digital scale will be utilized to measure initial increments so that the mass of subsequent increments can be approximated. Wood debris and large gravel will be removed from each soil increment prior to combining in the laboratory-provided sample container.

5.1.3 Sample Transport and COC Procedures

Upon collection, samples will be placed in a cooler with ice and transported to the analytical laboratory, Friedman and Bruya, Inc. (F&BI) of Seattle, Washington. Chain-of-custody (COC) procedures will begin in the field and will track delivery of the samples to the laboratory. The COC will include each sample listed, date, time, number of jars, and the analytical testing requested.

Upon transfer of samples to the laboratory, the COC form will be signed by the persons transferring custody of the coolers. Upon receipt of samples by the laboratory, the shipping-container seal will be broken, and the condition of the samples will be recorded by the receiver.

5.1.4 Laboratory Sub-Sampling and Compositing

All laboratory subsampling and sample preparations will be conducted in accordance with Interstate Technology & Regulatory Council (ITRC) protocols¹⁰ (air dried, sieved, subsampled, and composited). An ISM sub-sampling and compositing standard operating procedure prepared by F&BI is included as an Attachment.

5.2 Analytical Methods and Concentration Goals

ISM surface soil samples will be submitted to the analytical laboratory for analysis of COIs. Analytical concentration goals will be consistent with the Lower Columbia Slough Screening Levels for Upland Source Control. Table 1 presents the COIs with corresponding screening values. The samples will be analyzed

⁹ ODEQ, September 14, 2020. *Decision Unit Characterization. Internal Management Directive.*

¹⁰ The Interstate Technology & Regulatory Council (ITRC). October 2020. *Incremental Soil Sampling Methodology (ISM) Update.*

according to the Analysis Plan shown in Table 5-1, below. Sample containers, preservatives, and holding times for each analytical method are provided on Table 5-2.

Table 5-1. Proposed Analytical Plan, Surface Soil

Analytical Method	Constituents	Surface Soil
EPA 8270-SIM	PAHs	All
EPA 8082	PCBs (as aroclors)	All
EPA 200/6000/7000 series	Total metals: <ul style="list-style-type: none"> • Copper • Lead • Nickel • Zinc 	All

EPA = Environmental Protection Agency

Table 5-2. Analytical Protocol, Surface Soil

Analyte(s)	Analytical Method	Container	Holding time	Preservation
Surface Soil:				
PAHs	EPA Method 8270-SIM	1-galon clear wide mouth glass	7 days	none
PCBs (as aroclors)	EPA Method 8082	1-galon clear wide mouth glass	14 days	none
Total Select Metals	EPA 200/6000/7000 series	1-galon clear wide mouth glass	6 months	none

6.0 Storm Water Sampling Plan

The following storm water sampling plan is intended to assess storm water discharging from the site and eventually discharging to the Columbia Slough for the COIs identified in Section 3.3.

6.1 Proposed Storm Water Sampling Plan

6.1.1 Sampling Locations

Storm water samples will be collected at the Storm Water Monitoring Points 001, 002, and 003 (Figure 2). MP001 and MP002 are located where onsite roof drains discharge into the eastern curblin of NE 14th Place. MP003 is located where the roof drain on the south side of the site building discharges to the paved surface of the parking lot that subsequently sheet flows to NE Argyle Drive.

6.1.2 Sample Frequency

Sampling frequency will follow ODEQ guidance¹¹ and will be conducted based on the criteria put forth in Section 6.1.3. It is expected that an initial round of sampling followed by several rounds of additional storm water sampling will be performed.

6.1.3 Storm Event Criteria

Two storm water confirmation samples will be collected to represent a first-flush condition, and the other two storm water confirmation samples will be collected to represent a longer rain event. In accordance with ODEQ guidance, specific conditions necessary to support first-flush sampling include the following:

- An antecedent dry period of at least 24 hours (less than 0.1 inch of precipitation over the previous 24 hours).
- A minimum predicted rainfall exceeding 0.2 inch for the storm event.
- An expected storm duration of at least three hours.
- Samples collected within the first 30 minutes of observed storm water flow.

It should be noted that logistical challenges exist with efforts to collect first flush samples within these time frames and storm events; however, ENW will endeavor to meet these criteria.

6.1.4 Sampling Methods and Handling

Storm water sampling methods will be completed in general accordance with ODEQ guidance.¹¹ Grab samples will be collected from Storm Water Monitoring Points 001 and 002 using either decontaminated stainless steel, or disposable sampling tools in conjunction with a peristaltic pump and disposable polyethylene tubing.

Samples will be transferred directly into laboratory-supplied containers (as specified in Table 6-2) from the access points described above. Samples submitted for dissolved metals analysis will be field filtered using new disposal 0.45-micron filters. The sampler will wear disposable nitrile gloves during sampling activities. The sample containers will be placed in a cooler with ice and transported to an analytical laboratory under standard chain-of-custody procedures.

6.1.5 Sample Transport and COC Procedures

After storm water samples have been collected, they will be placed in a cooler with ice and transported to the analytical laboratory. COC procedures will begin in the field and will track delivery of the samples to the laboratory. The COC will include each sample listed, date, time, number of jars, and the analytical testing requested.

Upon transfer of samples to the laboratory, the COC form will be signed by the persons transferring custody of the coolers. Upon receipt of samples by the laboratory, the shipping-container seal will be broken, and the condition of the samples will be recorded by the receiver.

¹¹ ODEQ, January 2009. *Guidance for Evaluating the Stormwater Pathway at Upland Sites*. Updated October 2010.

6.2 Analytical Methods and Concentration Goals

Storm water samples will be submitted to the analytical laboratory for analysis of COIs. Analytical concentration goals will be consistent with the ODEQ’s guidance for evaluating the storm water pathway at non-Portland Harbor sites. Table 1 presents a list of analytes with corresponding screening values. We note that some screening level values (SLVs) may be lower than the achievable laboratory method detection limits (MDLs) using approved analytical methods. The samples will be analyzed according to the Analysis Plan shown in Table 6-1, below. Sample containers, preservatives, and holding times for each analytical method are provided on Table 6-2.

Table 6-1. Proposed Analytical Plan, Storm Water

Analytical Method	Constituents	Storm Water
EPA 8270-SIM	PAHs	All
EPA 8082	PCBs (as aroclors)	All
EPA 200/6000/7000 series	Total and dissolved metals: <ul style="list-style-type: none"> • Copper • Lead • Nickel • Zinc 	All

Table 6-2. Analytical Protocol, Storm Water

Analyte(s)	Analytical Method	Container	Holding time	Preservation
Storm Water:				
PAHs	EPA Method 8270-SIM	1-L amber container	7 days	none
PCBs (as aroclors)	EPA Method 8082	1-L amber container	14 days	none
Total Select Metals	EPA 200/6000/7000 series	250-ml poly container	6 months	HNO ₃
Dissolved Select Metals	EPA 200/6000/7000 series	250-ml poly container (filed filtered)	6 months	HNO ₃

6.3 Quality Assurance and Quality Control

6.3.1 Field Duplicates / Replicates

Quality assurance samples will be collected of both storm water and surface soil to assess data quality in terms of laboratory precision and variability. A blind field duplicate sample will be collected during one storm water sampling event, and two field replicate ISM samples of surface soil will be collected from one of the decision units, following ISM guidance for replicate sampling. Each ISM field replicate sample will be collected, handled, and analyzed in the same manner as its paired primary field sample, but replicate increment locations will be offset from primary increment locations in opposite directions.

Results from field duplicates are useful in determining potential sampling variability. Greater than expected differences between duplicates may occur due to variability within the sample matrix. Field duplicates shall be used as a quality control measure to monitor precision of sample collection methods.

Precision is independent of the error (accuracy) of the analyses and reflects only the degree to which the measurements agree with one another, not the degree to which they agree with the “true” value for the parameter measured.

Precision is calculated in terms of Relative Percent Difference (RPD), which is expressed as:

$$\text{RPD} = \frac{|X_1 - X_2|}{(X_1 + X_2) / 2} \times 100$$

Where X1 and X2 represent the individual values found for the target analytes in the duplicate analyses. RPDs for field duplicate samples include the additional variability of field sampling methods and sample homogeneity. Therefore, RPDs for field duplicate samples will be evaluated against an acceptance criterion of 50 percent for quantitative data.

6.4 Data Evaluation

Laboratory analytical results will be reviewed and presented with respect to SLVs and achievable laboratory MDLs. The data evaluation will also incorporate a discussion of the following:

- Adherence to quality assurance/quality control (QA/QC) procedures detailed in Section 6.3.
- Characterization of storm water and surface soil samples relative to the SLVs.
- A discussion of the nature of the sampling storm event regarding storm event criteria.
- Comparison to other numeric standards (typical background concentrations, etc.).

6.5 Schedule

At this time, it is anticipated that proposed surface soil and storm water confirmation sample activities will be initiated during the 2025-2026 storm season, pending ODEQ approval of this work plan.

6.6 Documentation and Reporting

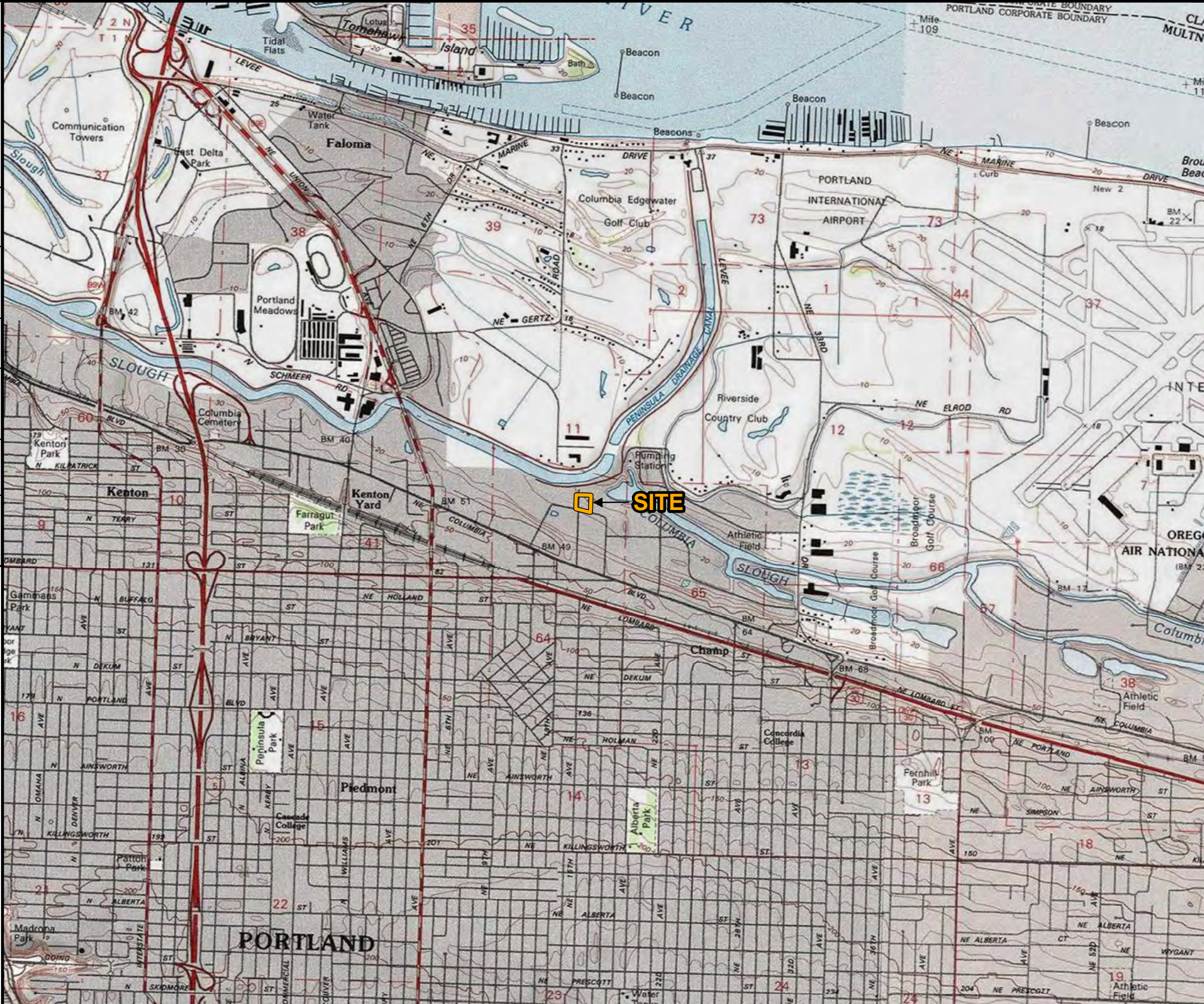
Upon completion of storm water system cleaning, and following receipt of the subsequent storm water and sediment sampling analytical data reports, an SCE report will be submitted that includes a description of the following:

- Field sampling methods and deviations from the sampling plan.
- Field documentation, including photographs, field notes, and supporting storm event hydrographs.
- A figure showing the sampling locations.
- Tabulated data comparing results to applicable SLVs, with copies of supporting laboratory analytical reports with chain-of-custody documentation and QA/QC summaries.

- A discussion of contaminant concentrations and any exceedances of SLVs.
- Lines of evidence to support a Source Control Determination from ODEQ.
- Conclusions and recommendations, and request for an ODEQ Source Control Determination, as warranted.

The SCE report will follow the recommended format of ODEQ's *Guidance for Evaluating the Stormwater Pathway at Upland Sites*.

947-24001(V02)
 DRAWING NUMBER
 APPROVED BY L. GREEN 11/11/2025
 CHECKED BY T. BENNETT 11/11/2025
 DRAWN BY M. FERRY 11/11/2025



LEGEND:
 SUBJECT PROPERTY BOUNDARY

NOTES:
 1. BASE MAP DEVELOPED BY THE USGS. (PORTLAND, 1:24000, 2013)
 2. GROUND CONTOUR IS IN 10-FOOT INTERVALS.

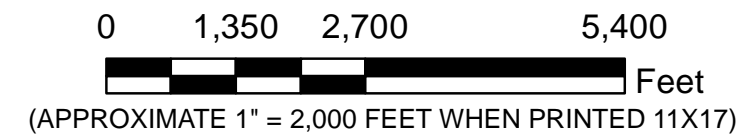
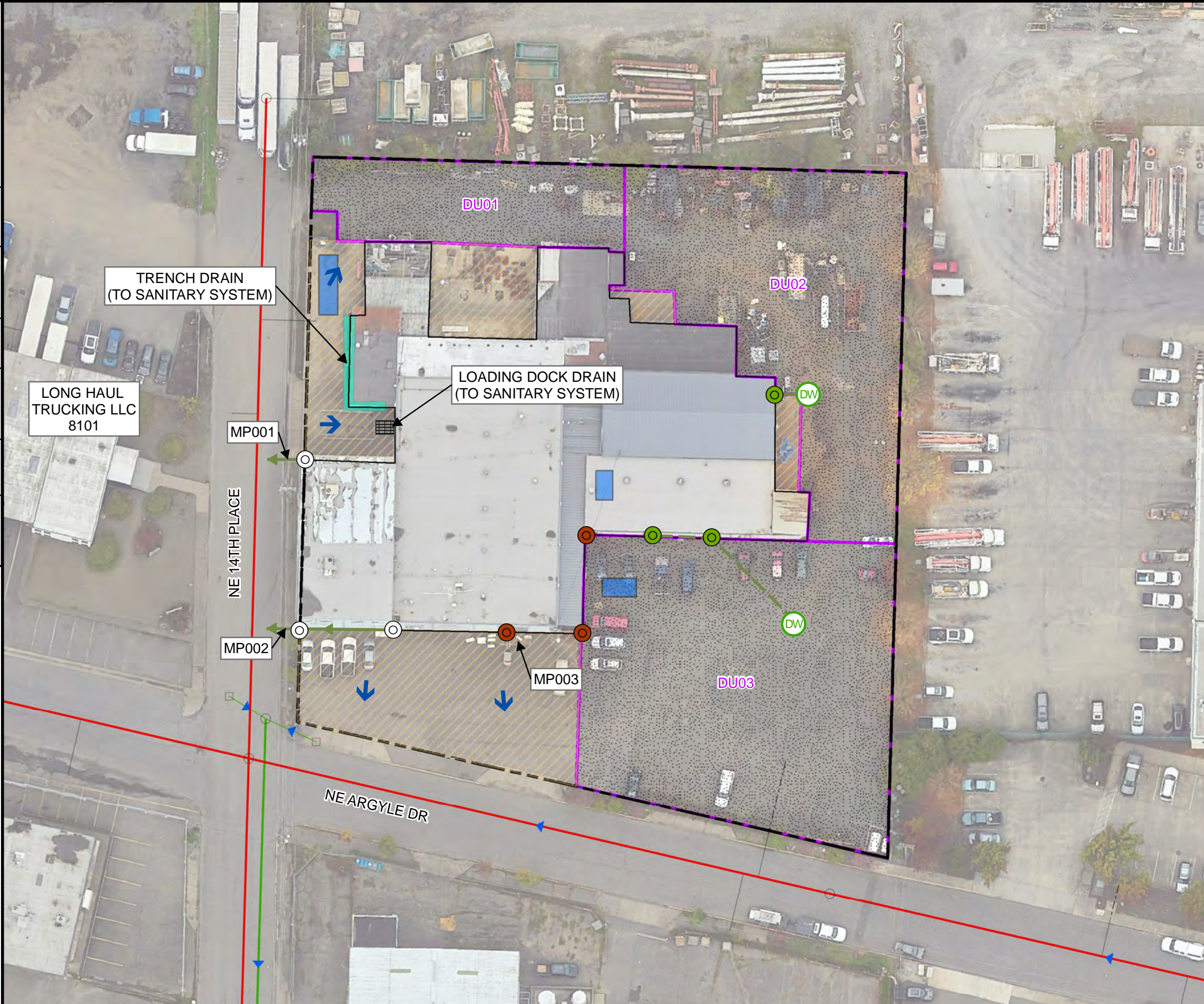


FIGURE 1
SITE VICINITY MAP
DIESEL CAST WEST
8100 NE 14TH PLACE
PORTLAND, OREGON

947-24001(V04)
 DRAWING NUMBER
 12/3/2025
 L. GREEN
 APPROVED BY
 12/3/2025
 T. BENNETT
 CHECKED BY
 12/3/2025
 M. FERRY
 DRAWN BY



LEGEND:

- SUBJECT PROPERTY BOUNDARY
- PROPERTY BUILDING
- PROPOSED DECISION UNIT
- GRAVEL
- PAVEMENT
- OIL/WATER SEPARATOR (PLUMBED TO SANITARY)
- STORM WATER CONVEYANCE LINE
- INFERRED STORM WATER CONVEYANCE LINE
- SLOPE
- POSSIBLE DRYWELL (BASED ON CITY PERMIT RECORDS)

ROOFDRAIN

- INFERRED DISCHARGE TO DRYWELL
- DISCHARGE TO GROUND
- DISCHARGE TO STREET

NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2023 AND ENW FIELD NOTES.
2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION

0 30 60 120
 Feet
 (APPROXIMATE 1" = 50 FEET WHEN PRINTED 11X17)

EVREN NORTHWEST INC.
 environmental, natural resource consultants

FIGURE 2
SITE PLAN AND
SAMPLE LOCATION DIAGRAM
DIESEL CAST WEST
8100 NE 14TH PLACE
PORTLAND, OREGON

Table

Table 1. ODEQ Screening Level Values For Lower Columbia Slough (Surface Soil) and Non-Portland Harbor Storm Water Discharge

Constituents of Interest	Screening Levels	
	ODEQ Non-Portland Harbor ROD Cleanup Levels (Storm Water - µg/L)	Lower Columbia Slough Upland Source Control Screening Level (Surface Soil - mg/Kg)
Total (and Dissolved) Select Metals		
Copper	2.7	34
Lead	0.54	79
Nickel	16	47
Zinc	36	123
Polychlorinated Biphenyls (PCBs)		
Aroclor 1016	NE	NE
Aroclor 1221	0.28	NE
Aroclor 1232	0.58	NE
Aroclor 1242	0.053	NE
Aroclor 1248	0.081	0.01
Aroclor 1254	0.033	0.01
Aroclor 1260	94	0.01
Semi-Volatile Organic Constituents (PAHs)		
Acenaphthene	520	0.29
Acenaphthylene	NE	0.16
Anthracene	40000	0.057
Fluorene	3.9	0.077
2-Methylnaphthalene	2.1	0.02
Naphthalene	620	0.176
Phenanthrene	NE	0.042
Benz(a)anthracene	0.018	0.032
Benzo(a)pyrene	0.018	0.032
Benzo(b)fluoranthene	0.018	NE
Benzo(k)fluoranthene	0.018	0.03
Benzo(g,h,i)perylene	NE	0.3
Chrysene	0.018	0.057
Dibenz(a,h)anthracene	0.018	0.06
Fluoranthene	140	0.111
Indeno(1,2,3-cd)pyrene	0.018	0.017
Pyrene	4000	1.9

NOTE: List of COIS is based on October 1, 2025 communications with ODEQ
 NE = Not Established

Attachment A

*Laboratory ISM
Standard Operating Procedures*

Sample Drying and Sieve Preparation for Multi Increment Soil Sampling

Friedman & Bruya, Inc. Standard Operating Procedure

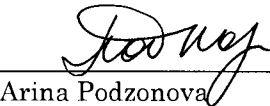
Revision Number 2
September 25, 2019

Approved by

Extraction Manager:


Eric Young

Quality Assurance Manager:


Arina Podzonova

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Document Control
Number: 2

1.0 SCOPE, APPLICATION, AND SUMMARY

- 1.1 This Standard Operating Procedure (SOP) is used by Friedman and Bruya, Inc. (F&BI) to prepare soil and solid samples that require sieve and/or drying prior to extraction and analysis, including sub samples collected for soil multi increment sampling.
- 1.2 Deviation from the procedures outlined in this SOP may sometimes be needed, due to specific project requirements, or due to laboratory circumstances. Deviations are documented using the extraction worksheet, analysis logs, and/or other documents such as the non-conformance report form.

2.0 METHOD BASIS

The following regulatory method serves as the basis for this standard operating procedure. Adherence to the minimum criteria set forth in this method is a general data quality objective of this SOP.

- 2.1 State of Alaska Department of Environmental Conservation, "Draft Guidance on Multi Increment Soil Sampling", March 2009.

3.0 DEFINITIONS

- 3.1 A list of definitions for terms used in this SOP may be found in the F&BI Quality Assurance Manual, appendix F.

4.0 SAFETY

- 4.1 The most important safety measure is to handle all samples and equipment in an appropriate manner to ensure a minimum of personal danger and exposure to potentially hazardous chemicals.
- 4.2 When samples are handled, appropriate personal protection equipment (PPE) should be used. Gloves, lab coat, and goggles are all available for use.
- 4.3 Glassware can break at any time, so caution needs to be used at all times when handling it. Cut resistant gloves are available for use.
- 4.4 MSDSs for all chemicals in the lab are available to all employees. They are located in the GC room, and all employees are strongly encouraged to read them.
- 4.5 Analysts are required to complete general safety training prior to performing any analysis. Details of initial and on-going safety training are provided in the F&BI Quality Assurance Manual and "Training" SOP.
- 4.6 If uncertain about the safety of a material or procedure or in the event that a spill or other potentially hazardous situation arises, notify your supervisor or any chemist immediately.

5.0 INTERFERENCES

5.1 Certain sample matrices may not be amenable to sieving, such as peat or tundra. Alternate sample processing measures would be required for those media.

6.0 APPARATUS AND EQUIPMENT

6.1 #10 Sieve – particle size <2mm

6.2 Drying Pans (Aluminum or Pyrex)

6.3 Stainless Steel Scoopula

6.4 Analytical Balance

6.5 4 oz. or 8 oz. Glass Jars with Lid

6.6 Steel Baking Sheet or Other Tray

6.7 Stainless Steel Bowl

7.0 REAGENTS AND CHEMICALS

7.1 Methylene Chloride, pesticide grade or better

7.2 Alconox

8.0 SAMPLE HANDLING, PRESERVATION, AND PREPARATION

8.1 Before preparing the samples, double check the sample identification on the container to that listed on the Chain of Custody. Document that the sample ID has been checked by initialing the extraction worksheet.

8.1.1 If more than one container exists for the sample, write the corresponding letter of the container used in the extraction on the extraction paperwork.

8.2 Note any unexpected sample characteristics on the extraction worksheet under “Observations” heading.

8.3 Sample Moisture Determination Procedure

8.3.1 The analyst will perform the following to determine if the sample will require a drying procedure. Drying should only be performed if necessary.

8.3.2 Visually inspect the sample to determine if free liquid is present. Samples containing a visible liquid layer will require drying prior to sieve

preparation.

- 8.3.3 For samples that do not contain free liquid but appear moist, a small amount of sample (~10.0 grams) will be tested in the sieve. The sample will require the drying procedure if sample fines do not pass through the sieve screen.

8.4 Sample Drying Procedure

- 8.4.1 Assign F&B sample ID to a drying pan.
- 8.4.2 Empty the entire contents of the sample container into the drying pan to a depth of ½ to 1 inch in thickness.
- 8.4.3 Place drying pan in fume hood at ambient temperature until processing.
- 8.4.4 Drying at elevated temperatures, i.e. “baking” is not allowed. Turning the soil can be used to facilitate the drying process.
- 8.4.5 Drying is acceptable for less temperature sensitive contaminants such as metals, PCBs, DRO, RRO, etc. Drying may not be appropriate for some contaminants, including volatile constituents or PAHs. If samples are processed for non-appropriate testing, the data will be estimated and qualified appropriately.

8.5 Sieve Procedure

- 8.5.1 Wash sieve with warm water and Alconox and allow to dry.
- 8.5.2 For samples requiring organic analysis, triple rinse sieve screen with methylene chloride and allow to dry.
- 8.5.3 Place entire contents of sampling container or drying pan into the sieve. The minimum amount of sample required for sieve preparation is 30 g.
- 8.5.4 Shake sieve for 2 minutes.
- 8.5.5 Remove sample collection tray from sieve and collect the entire contents into a labeled 4 oz. or 8 oz. glass jar.
- 8.5.6 When multiple sub samples are sieved, the entire contents of each sieved sub sample will be poured into a stainless steel bowl, stirred for a minimum of 30 seconds and collected for sample analysis.

9.0 **SAMPLE ANALYSIS**

- 9.1 Wash a steel baking sheet or other tray with warm water and Alconox and allow to dry.

- 9.2 For samples requiring organic analysis, triple rinse the tray with methylene chloride and allow to dry.
- 9.3 Pour the entire contents of the sample into the tray to a depth of no more than ½ inch.
- 9.4 Individual aliquots of sample will be randomly scooped from a minimum of 20 distinctly different areas of the tray and added to the extraction vessel until the required sample amount is reached.

10.0 QUALITY CONTROL AND CORRECTIVE ACTIONS

General quality control procedures are outlined in the corresponding F&B analytical method SOPs. F&BI QC procedures are described in sections 12 and 13 of the QA Manual. If, following corrective actions, quality control results still fail, or if corrective actions are not possible, then affected results are reported with appropriate qualifying flags.

The minimum requirements for QC samples analyzed with each preparation batch (within 24 hours) of up to 20 samples are:

1 sample duplicate

11.0 DATA ARCHIVAL

- 11.1 The hardcopy of the QA paperwork is filed in the extraction room on the paperwork desk.
- 11.2 The extraction paperwork for each project is filed in the downstairs filing cabinets with the hardcopies of the final reports.

12.0 HAZARDOUS WASTE MANAGEMENT AND POLLUTION PREVENTION

- 12.1 Hazardous waste managements procedures are found in the F&BI QA Manual section 10, and the "Disposal" SOP.
- 12.2 Actions that can result in the reduction or elimination of chemical wastes and chemical pollutants associated with this SOP are strongly encouraged. Such actions should be discussed with the Executive Committee for approval prior to implementation.

END OF DOCUMENT