GROUND WATER MONITORING WELL INSTALLATION REPORT

Lampros Steel

9040 Burgard Way
Portland, Oregon

Agency Information

NPDES 1200-Z Permit

ODEQ File No. 125660

ODEQ ECSI File No. 2441

Prepared for:

Johnson-Lampros Warehouse LLC

PO Box 1265
Canby, Oregon 97013

Issued on:

June 19, 2025

EVREN NORTHWEST, INC.

Project No. 1355-19001-02

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This

Ground Water Monitoring Well Installation Report

for

Lampros Steel

9040 N Burgard Way
Portland, Oregon
(NPDES 1200-Z Permit, ODEQ File No. 125660, ODEQ ECSI File No. 2441)

Has been prepared for the sole benefit and use of our Client:

Johnson-Lampros Warehouse LLC

9040 N Burgard Way
Portland, OR 97203

and its assignees

Issued June 19, 2025 *by:*

CERTIFIED OREGON LYNN DELAVAN GREEN E2332 ENGINEERING GEOLOGIST

EXP. 2.1.2026

EVREN NORTHWEST INC.
environmental natural resource consultants

REGISTERED PROFESSIONAL OREGON EVAN J. BRUGGEMAN G2578 GEOLOGIST

EXP 1/1/26

Lynn D. Green, C.E.G.
Principal Engineering Geologist

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IN TEXT (*labeled by Section – Number)*

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List of Acronyms and Abbreviations

AEC	Anderson Environmental Contracting
Axis	Axis Mapping and Surveying Company
bgs	below ground surface
BTOC	below top of casing
Client	Johnson—Lampros Warehouse LLC
CAB	cellulose acetate butyrate
COI	constituents of interest
DO	dissolved oxygen
DOT	Department of Transportation
DPT	direct-push technology
DRO	diesel-range organics
DTW	depth to shallow ground water
ECSI	Environmental Cleanup Site Inventory
ENW	EVREN Northwest, Inc.
EPA	US Environmental Protection Agency
ESA	Environmental Site Assessment
ft/sec	feet per second
GRO	gasoline-range organics
GWSCE	Ground Water Source Control Evaluation
ID	inside diameter
IDW	investigation-derived waste
ODEQ	Oregon Department of Environmental Quality
ORP	oxygen reduction potential
OWRD	Oregon Water Resources Department
PID	photoionization detector
ppmv	parts per million by volume
PVC	polyvinyl chloride
SOW	scope of work
VOC	volatile organic constituent

1.0 Introduction

On behalf of Johnson-Lampros Warehouse LLC (Client), EVREN Northwest, Inc. (ENW) prepared this report documenting the installation of three ground water monitoring wells at the subject site (Lampros Steel, 9040 Burgard Way, Portland, Oregon as part of a Ground Water Source Control Evaluation (GWSCE) at the above-referenced subject property (Figures 1 and 2; subject site). Three (3) permanent ground water monitoring wells (MW01 through MW03) were installed, developed, and surveyed as part of this scope of work (SOW).

This SOW was generally consistent with ENW's March 2025 Work Plan which was requested and approved by the Oregon Department of Environmental Quality (ODEQ).[1]

2.0 Scope of Work

The SOW for this portion of the project was described in Section 4 (methods and procedures) of the March 2025 work plan[1] of the work plan and is outlined in this below. Figure 2 shows the monitoring well locations**.**

- Conduct a private and public utility locate prior to any drilling to clear proposed monitoring well locations of public and private utilities.
- Installation of three (3) monitoring wells (MW01 through MW03) with screened intervals based on observations during drilling.
- Log soil lithology and document well construction details on boring logs.
- Develop the new monitoring wells to clean out the solids remaining from installation and document this activity.
- Conduct a professional survey of the monitoring well locations and measure the top of casing elevations of each of the wells.
- Complete a report documenting the above activities.
- Ground water sampling and analytical data from the monitoring wells will be reported separately.

In addition to the above procedures, ENW performed the scope of work with the following general objectives:

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

A photographic log of well installation activities is included in Appendix A.

[1] ENW, March 11, 2025. *Work Plan. Monitoring Well Installation and Ground Water Monitoring.* Lampros Steel, 9040 North Burgard Way, Portland, Oregon 97023.

2.1 Roles and Responsibilities

All work was performed by employees and subcontractors with appropriate training and licensing.

ENW (Environmental Consultant) provided an Oregon-registered Geologist to supervise monitoring well installation, and coordinated all work completed for this scope of work with the following subcontractors:

- Recon Locates of Portland, Oregon performed a private utility survey prior to drilling.
- Anderson Environmental Contracting (AEC) of Kelso, Washington, provided a direct-push and hollow-stem auger drilling rig operated by an Oregon licensed driller.
- Axis Mapping and Surveying Company (Axis) of Bend, Oregon, surveyed the top of casings and monuments of the new monitoring wells.

3.0 Methods and Procedures

Drilling was directed by ENW and performed by Anderson Environmental Contracting using a tracked direct-push technology (DPT) drill rig with capabilities to advance 4.5-inch outside diameter hollow-stem auger flights. Work was conducted on January 20 and 21, 2025. In total, three well borings were advanced at locations identified as MW01 through MW03 as illustrated on Figure 2.

3.1 Monitoring Well Installation

Three, two-inch ground water monitoring wells were constructed at the locations shown on Figure 2. The ground water monitoring wells were constructed in 15-foot-deep boreholes drilled with direct-push technology (DPT) drilling rig. All boring equipment was steam-cleaned prior to use.

Soil cores were collected at five (5)-foot depth intervals inside a five-foot long soil sampler lined with cellulose acetate butyrate (CAB) sample tubes. Each five-foot long soil core was retrieved, opened, and examined for soil type and evidence of contamination. Vapor headspace readings were colle3cted from a portion of each 5-foot-long soil core using a photoionization detector (PID) to screen for the presence of petroleum-related volatile organic constituents (VOCs). Soil lithology and screening results were recorded by the on-site geologist onto boring logs. As outlined in the work plan, a soil sample would only be collected from each proposed monitoring well location if soil with evidence of possible impacts (based on field screening, i.e., PID response, presence of odor and/or discoloration, presence of sheen, etc.) was observed.

3.2 Monitoring Well Construction

Monitoring wells were constructed by a well driller licensed to construct monitoring wells in Oregon. The wells were constructed of 2-inch inside diameter (ID) Schedule 40 polyvinyl chloride (PVC) blank casing and screened with approximately 10 feet of factory machined 10-sloe (0.010-inch) well screen placed from approximately five (5) feet to fifteen (15) feet below ground surface (bgs). A filter sand pack consisting of #10 - #20 silica sand will be placed from the bottom of the borehole to at least one foot above the top of the well screen. The remainder of the borehole will be backfilled with bentonite chips and sealed at the surface with Portland Cement grout. The well monument will be traffic rated flush-to-grade and set in a concrete apron.

3.3 Soil Assessment

Field Screening. Recovered soil cores were inspected continuously for the presence of petroleum impacts. Field headspace screening of soil samples collected from grab samples from the drilling core was conducted and readings recorded on the boring log. Field headspace was measured by placing an aliquot of soil to be tested in a resealable plastic bag and inserting the tip of a photoionization detector (PID) into the bag and reading headspace volatiles in parts per million by volume (ppmv).

3.4 Monitoring Well Installation

The monitoring wells were constructed by an Oregon licensed driller, and details of the construction were recorded by ENW geologist. Screened intervals were based on field observations of subsurface lithology. Each well was screened within a water-bearing sandy gravel and was constructed of the following materials:

- Two (2)-inch inside diameter (ID), Schedule 40 polyvinyl chloride (PVC) blank casing, 10-slot (0.010-inch) well screen, and end cap
- #10-20 Gillibrand silica sand pack
- Annular seal composed of hydrated 3/8" bentonite chips
- Above-ground locking monuments finished flush with the surface

3.5 Monitoring Well Development

On January 24, 2025, monitoring wells MW01 through MW03 were developed through a process of surging and pumping until development water was clear of sediment and monitored ground-water parameters had stabilized. Development water and recovered sediment were placed in Department of Transportation (DOT) approved 55-gallon drums for off-site recycling and disposal.

Prior to developing monitoring wells, the following characteristics were noted:

- Recorded depth to water and well depth to the nearest 0.01 foot.
- Based on the above information, the height of the water column and well volume were calculated to determine minimum purge volume.

Development of each well was completed using an electric high-flow pump system connected to a power source at the surface. The pump discharged at a rate of 1 to 2 gallons per minute. During pumping, water quality parameters were measured regularly to track the progress of development. The following water quality parameters were monitored using a Horiba U-52 water quality probe:

- pH
- Temperature
- Conductivity
- ORP (oxygen-reduction potential)
- DO (dissolved oxygen)

Each well was surged before pumping using a surge block. Additional surging was conducted by moving the pump up and down the well screen within the water column. This resulted in additional sediment being suspended and pumped to the surface. This was done several times during pumping.

At a minimum, 15 gallons and up to 10 or more well volumes were purged from each well. All purge water was contained in 55-gallon DOT drums. Once the water cleared substantially with pumping and surging, development ceased, and the pump was removed from the well. Water levels in monitor wells MW01 through MW03 were noted to return to the original elevation quickly after removing the pump from the well. A total of approximately 95 gallons of development water was pumped from all three wells.

Development data was recorded on a Well Development Measurements form, and included purge volumes, time of beginning and termination of purging, and observations regarding color and water quality parameters. A copy of the completed forms for each well is included in Appendix C.

3.6 Monitoring Well Surveying

The monitoring wells were professionally surveyed by Axis on January 27, 2025, relative to the North American 1983 datum (Conus). The top-of-casing of the new monitoring wells were surveyed to the nearest 0.01-foot relative to this datum. The northing and easting coordinates of the monitoring well monuments were also established. Surveyed well locations are shown on Figure 3.

3.7 Investigation-Derived Waste Storage and Disposal

Potentially impacted investigation-derived waste (IDW) was generated during well installation. All soil cuttings were placed in DOT-approved 55-gallon drums. Well development water was also stored in 55-gallon drums. All containers were properly sealed/covered and labeled. Analytical data from the first round of ground water sampling will be used to profile the water IDW for disposal. Soil IDW has been characterized based and approved for disposal. Soil drums are awaiting pickup at the time of this report.

3.8 Monitoring Well Design Objectives

The three shallow monitoring wells MW01 through MW03 (see Figure 4 for locations) were sited to provide information in the northwest (MW01), southwest (MW02), and southeast (MW03) regions of the facility. The planned screened intervals were based on the known hydrogeologic characteristics of the water bearing units. Table 4-2 summarizes the identities, construction, locations, soil samples, and objectives of the new monitoring wells.

Table 3-1. Monitoring Well Locations and Objectives

Boring ID	Date Drilled	First Ground Water (feet)	Static Water Level		Total Depth (feet)	Screen Interval (feet)	Objectives
			feet (BTOC)	Date			
MW01	1/20/2025	5	4.36	3/26/2025	15	5 - 15	Northwest Quadrant
MW02	1/20/2022	5	5.48	3/26/2025	15	5 - 15	Southwest Quadrant
MW03	1/21/2025	9	7.99	3/26/2025	15	5 - 15	South-Central Area

Note: BTOC = below top of casing

4.0 Site Work Results

On-site monitoring well borings for MW01 through MW03 were drilled and the monitoring wells constructed on January 20 and 21, 2025, and the monitoring wells were developed on January 24, 2025.

4.1 Soil Logging

All soil cores were logged by an ENW Oregon Registered Geologist onto field boring logs which are included in Appendix B. Consistent with previous work, medium sand with occasional silt were encountered in all three borings to completion depth. Buried reinforced concrete was encountered at a depth of six feet at the monitoring well MW03; however, the concrete was drilled through and did not continue downbore. Field screening revealed no obvious indication of petroleum impacts in any of the borings and therefore no soil samples were collected during monitoring well installation.

Soil borings completed at the subject site encountered up to 1 foot of what is interpreted as fill soils, composed of silty gravel road base material and light gray gravelly sand with silt. Underlying the road base was a yellowish-brown to dark gray loose sand extending to the completion depth of all borings.

4.2 Installation of MW01 through MW03

Monitoring wells were installed as previously described. Oregon Water Resources Department (OWRD) monitoring well reports are included with ENW's well logs in Appendix B. Well construction details are summarized in Table 4-1 below.

Table 4-1. Well Construction Details

Monitoring Well Identification	Dated Installed	Start Card No.	OWRD Well Tag ID	Total Depth Drilled (Feet bgs)	Slot Size (inches)	Slotted PVC Screen Interval (feet bgs)	Top of Casing Elevation (feet)
MW01	1/20/2025	1076468	L155858	15	0.010	5 - 15	27.301
MW02	1/20/2025	1076469	L155859	15	0.010	5 - 15	27.491
MW03	1/21/2025	1076470	L155860	15	0.010	5 - 15	29.814
[1] Survey conducted on 01/27/2025 by Axis Mapping and Survey Co. relative to NAD 1983							
TOC = top of casing							

4.3 Results of Hydraulic Testing

Permeability testing was conducted for all three monitoring wells (MW01 through MW03). The printout sheets of hydraulic testing results for MW01 through MW03 using Bouwer-Rice, KGS, and Slinger-Gelhar (inertia method) KGS curve test solutions are provided in Appendix D. Of all results, ENW selected those representing the best matched curves, as shown by bolded/shaded text in Table 4-2.

Table 4-2. Summary of Hydraulic Testing

Monitoring Well and Test #	Solution Method	Hydraulic Conductivity (feet/second)
MW01, Test 1 (falling head)	KGS Model	0.000883
MW01, Test 2 (falling head)	Springer-Gelhar (inertia method)	**0.007613**
MW01, Test 2 (rising head)	Springer-Gelhar	0.009637
MW01, Test 2 (falling head)	KGS Model	0.0007272
MW01, Test 3 (falling head)	KGS Model	0.0008992
MW01, Test 4 (rising head)	Bouwer-Rice	0.0001023
	KGS Model	0.0007834
MW02, test 2 (rising head)	Bouwer-Rice	**0.001404**
	Springer-Gelhar (inertia method)	**0.002539**
	KGS Model	**0.001749**
MW02, test 3 (falling head)	Bouwer-Rice	0.0008263
	Springer-Gelhar (inertia method)	0.02914
MW03, Test 1 (falling head)	Springer-Gelhar (inertia method)	0.001224
	KGS Model	**0.0008252**
	Bouwer-Rice	**0.0007034**
MW03, Test 2 (rising head)	Bouwer-Rice	**0.0004908**
	Springer-Gelhar (inertia method)	0.002755
	KGS Model	0.0008131
MW03, Test 3 (falling head)	Bouwer-Rice	**0.0008147**
	KGS Model	**0.0009742**
Statistical Analysis of Hydraulic Conductivity [K, using best fit data (bolded)]		
	Average	0.0019
	Minimum	0.0005
	Maximum	0.0076
	Standard Deviation	0.00068
	Confidence interval (95%)	0.00052
	Low estimate of K	0.0014
	High estimate of K	0.0024

The results of testing suggest relatively variable hydraulic conductivity values ranged from 5E-4 to 7.6E-3 feet per second (ft/sec), with average of 1.9E-3 ft/sec on the selected (bolded) falling head and rising head tests shown in Table 4-2. These values are generally considered high permeability and are considered typical of the medium-grained sands of the shallow water-bearing unit at the subject site.

Estimate of Ground Water Flow Velocity. Monitoring data from the March 2025 monitoring event showed that ground water flow at the subject property is generally to the southeast, with a hydraulic gradient of 0.001 foot per foot (Figure 2). The velocity of ground water flow can be estimated using the equation:

Velocity = (hydraulic conductivity x gradient)/effective porosity

where effective porosity is the interconnected pore space within the aquifer. Effective porosity is difficult to measure, but McFarland and Morgan[2] determined that the specific yield, which is generally approximately equal to the effective porosity, was in the range of 0.05 to 0.20 (unitless) for unconfined sedimentologically and stratigraphically equivalent sediments in the Willamette Basin. Using the equation above with the average hydraulic conductivity determined for the slug test data, the estimated velocity of ground water flow in the uppermost water-bearing zone at the subject stie is calculated between 2.5E-6 ft/sec and 2.5E-4 ft/sec.

5.0 Summary

Three ground water monitoring wells were installed in 15-foot-deep hollow-stem auger drilled boreholes at the subject site. The wells were placed in northwest, southwest, and southcentral portions of the site. Each well was constructed with 2-inch PVC casing, 10 feet of 10-slot (0.010-inch) well screens set in a #10-20 silica sand pack and completed with locking flush-mount monuments, was developed through a process of surging and pumping and professionally surveyed. Development water and soil cuttings were placed in DOT-approved drums at the site awaiting disposal.

6.0 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 work does not extend to the presence of the following conditions:

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

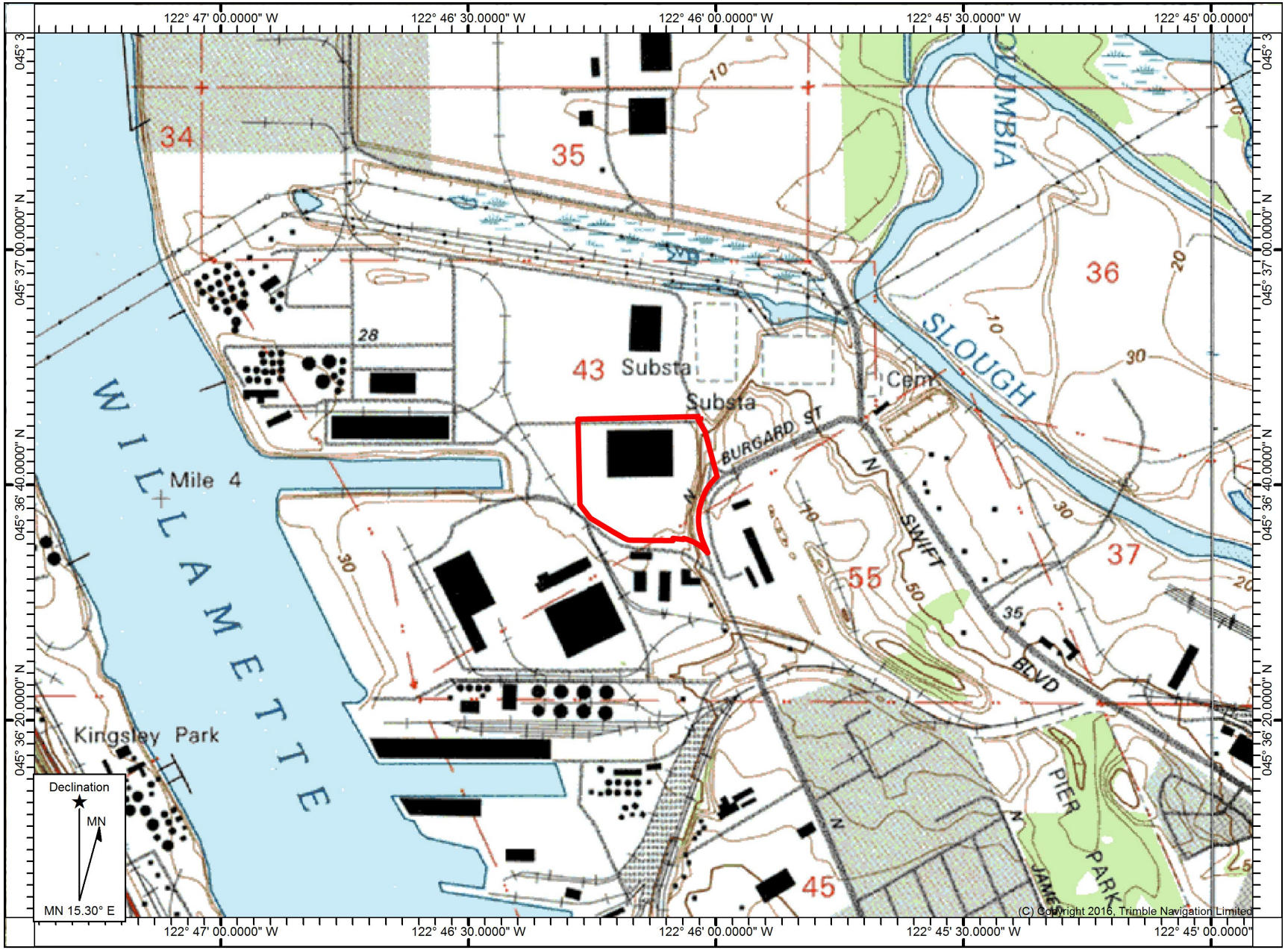
There is no practice that is thorough enough to absolutely identify the presence of all hazardous substances that may be present at a given site. ENW's investigation has been focused only on the potential for contamination that was specifically identified in the Scope of Work. Therefore, if contamination 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 has 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.

[2] McFarland, W.D., and Morgan, D.S., 1996, Description of the Ground-Water Flow System in the Portland Basin, Oregon and Washington: US Geological Survey, Water-Supply Paper 2470-A, 58 p., maps

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. 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.

Figures



Name: LINNTON
Date: Jan 1, 1990

0 1000 2000
Feet

Location: 045° 36' 40.8547" N, 122° 46' 08.7935" W
Contour Interval: 10 ft

EVREN NORTHWEST INC environmental, natural resource consultants	Date Drawn: 7/8/2019 CAD File Name: 1355-19001-fig1sv_map(v01) Drawn By: JOB Approved By: LDG	Lampros Steel 9040 N Burgard Way Portland, Oregon	**Site Vicinity Map**	Project No. 1355-19001 Figure No. **1**

DRAWING NUMBER	1355-19001(V05)
APPROVED BY	L. GREEN 6/18/2025
CHECKED BY	T. BENNETT 6/18/2025
DRAWN BY	M. FERRY 6/18/2025

LEGEND:

- SUBJECT PROPERTY BOUNDARY
- SUBJECT BUILDING
- CONCRETE PAD
- GROUND WATER POTENTIOMETRIC SURFACE 0.1-FOOT CONTOURS (MARCH 26, 2025)
- MONITORING WELL

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

0 100 200 400 Feet

(APPROXIMATE 1" = 150 FEET WHEN PRINTED 11X17)

N

EVREN NORTHWEST INC.
environmental natural resource consultants

FIGURE 2

SITE PLAN & MONITORING WELL LOCATION DIAGRAM WITH THIRD QUARTER 2025 GROUND WATER POTENTIOMETRIC SURFACE CONTOURS

LAMPROS STEEL
9040 N BURGARD WAY
PORTLAND, OREGON

Appendix A

Site Photographs

Private locator clearing the location of MW01 in the northwest section of the site.

Utilizing direct-push rig outfitted with hollow stem auger to advance boreholes for monitoring well installation (MW01 location shown).

Logging subsurface conditions from direct-push core recovery.

Installing MW02 in the southwest portion of site.

EVREN NORTHWEST INC. environmental / natural resource consultants	Lampros Steel 9040 N Burgard Way Portland, Oregon	**Site Photographs**	Project No. 1355-19001-02 Appendix **A**

Pouring sand pack around MW02.

All wells were finished with a flush-mount monument (manually stamping wells with unique identification numbers).

Soil cuttings and decontamination water stored in drums in northwest area of site, pending offsite disposal.

EVREN NORTHWEST INC. environmental & natural resource consultants	Lampros Steel 9040 N Burgard Way Portland, Oregon	**Site Photographs**	Project No. 1355-19001-02 Appendix **A**

Appendix B

Well Boring Logs

OWRD Monitoring Well Reports

EVREN Northwest, Inc.

DRILL LOG

PROJECT	PROJECT NO.	BORING NO.
Lampros Steel	1355-19001-05	**MW01**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
9040 N. Burgard Way, Portland, Oregon	01-20-25	01-20-25	4"	

COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
		01-20-25	4.92		

DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
AEC				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
6011 DT	Jordan Morris	15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Asphalt and base gravel.						
			10YR 3/1 gray brown medium SAND, wet, loose, no mica observed, quartz-rich, red lithics.					0.0	
						70			
3			Sharp color shift to 10YR 4/4 orange-brown at 3.5 feet.					0.0	
			Saturated at 5 feet.					0.0	
6									
								0.0	
			10YR 3/1 gray fine SAND and SILT, saturated, soft, micaceous, wood debris.			100		0.0	
			10YR 3/1 gray medium SAND, saturated, extremely loose, no mica observed, quartz-rich, red lithics.						
9								0.0	
12			2" lens of wood debris at 12 feet.					0.0	
						100			
								0.0	
15			End of boring at 15 feet.					0.0	
18									
21									

EVREN Northwest, Inc.

DRILL LOG

PROJECT	PROJECT NO.	BORING NO.
Lampros Steel	1355-19001-05	**MW02**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
9040 N. Burgard Way, Portland, Oregon	01-20-25	01-20-25	4"	

COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
		01-20-25	6'		

DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
AEC				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
6011 DT	Jordan Morris	15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Asphalt and coarse fill gravel with silt and fine sand, dry, dense, no mica.						
			10YR 4/4 orange-brown medium SAND with trace fine to medium rounded GRAVEL, moist, extremely loose, no mica observed, quartz-rich, red lithics.			80		0.0	
3								0.0	
			Lens of fine GRAVEL at 5 feet. Saturated at 5 feet.					0.0	
6						80		0.0	
			Color sharply grades to 10YR 3/1 gray at 8.5.					0.0	
9								0.0	
12						100		0.0	
								0.0	
15			End of boring at 15 feet.					0.0	
18									
21									

EVREN Northwest, Inc.

DRILL LOG

PROJECT	PROJECT NO.	BORING NO.
Lampros Steel	1355-19001-05	**MW03**

SITE	BEGUN	COMPLETED	HOLE SIZE	ANGLE FROM HORIZ.
9040 N. Burgard Way, Portland, Oregon	01-21-25	01-21-25	4"	

COORDINATES	DEPTH GROUND WATER	DATE SL	STATIC LEVEL	FIRST WATER	GROUND ELEVATION
		01-21-25	8.38		

DRILLER	CORE RECOVERY (%)	# SAMPLES	# CORE BOXES	DEPTH TOP OF ROCK
AEC				

DRILL MAKE AND MODEL	LOGGED BY:	DEPTH BOTTOM OF HOLE
6011 DT	Jordan Morris	15

DEPTH	STRATA ELEVATION/ DEPTH	GRAPHIC LOG	DESCRIPTION	SAMPLE DATA: SAMPLE NO.	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: CORE RECOVERY	MW Const./ Completion	PID/OVM	REMARKS: NOTES ON WATER LEVELS, LOSSES, CAVING, CASING, DEPTH & DRILLING CONDITIONS.
0			Asphalt and round to angular coarse base gravel.						
			10YR 4/4 orange-brown medium SAND, wet, loose, no mica observed, quartz-rich.						
			10YR 5/1 coarse subround GRAVEL, dry, extremely dense, no mica observed.						
			10YR 3/1 gray SILT and fine SAND, wet, medium soft, micaceous.			70		0.0	
3			10YR 3/1 medium SAND, wet, loose, no mica observed, quartz-rich, gray lithics.					0.0	
								0.2	
			Color grades to 10YR 4/4 by 5. 5 feet.						
6			Lens of concrete at 6 feet (extremely difficult drilling as a result).					0.0	
						60		0.0	
9			Saturated at 9 feet.					0.0	
								0.0	
12						100		0.0	
			Color grades to 10YR 3/1 gray by 13 feet.					0.0	
15			End of boring at 15 feet.					0.0	
18									
21									

Appendix C

Well Development Measurements Forms

EVRENNORTHWEST INC.
environmental & natural resource consultants

Well Development Measurements

Site: Lamprey Steel (PDW) Project No.: 1355-1904-02
Monitoring Well: MW01 Date: 01-24-25

Well Information

Depth to Water: 4.92 ft
Depth to Bottom of Well: 15 ft.
Height of Water Column: 10.08 ft.
Vol. of Water in Well: 1.65 gal. Conversion Factor: 2" - 0.164 gal/ft.

Added water during installation? NO How much? —

Weather: Sunny 20°F

Water Quality Parameters During Development

Time	Volume of Water Removed	Temperature (°C)	pH	Conductivity (mS/cm)	ORP (± mv)	Dissolved Oxygen (mg/L)	Appearance of Water
10:33	2 gal	11.33	6.41	.284	-49	6.42	Dark brown / turb.
10:34	5 gal	11.67	6.45	.292	-85	4.82	Dark brown / turbid
10:35	7 gal	12.78	6.44	.287	-92	7.61	Dark brown / turbid
10:36	10 gal	12.49	6.45	.291	-90	7.65	Dark Brown / turbid
10:37	12 gal	12.79	6.53	.286	-94	7.58	Dark brown / turb.
10:38	15 gal	12.67	6.43	.252	-92	7.56	Brown / turbid
10:39	17 gal	12.76	6.52	.293	-96	4.73	Brown / turbid
10:40	20 gal	13.02	6.48	.296	-98	7.55	Brown / turbid
10:41	22 gal	12.86	6.52	.298	-95	7.47	Brown / turbid
10:42	25 gal	13.01	6.56	.300	-99	4.06	Brown / turbid
10:43	27 gal	12.89	6.63	.299	-100	7.53	Brown / turbid
10:44	30 gal	12.65	7.51	.124	-104	7.75	Brown / turbid

Meter Calibration

Meter Number: New Horiba

Parameter	*Date & Time Calibrated*	*Calibration Results*
pH		
Conductivity		
ORP		
DO		

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Develop by pumping 5 to 10 well volumes out - or until water clears after surging.

5=8.25 ~~10=16.50~~ 10=16.5

All NTU > 1000 water usually cleared up

EVRENNORTHWEST INC.
environmental & natural resource consultants

Well Development Measurements

Site: Longview Steel (PIW) Project No.: 1355-19001-02
Monitoring Well: MW02 Date: 9-24-25

Well Information

Depth to Water: 6.20 ft
Depth to Bottom of Well: 15 ft.
Height of Water Column: 9.80 ft.
Vol. of Water in Well: 1.476 gal. Conversion Factor: 2" - 0.164 gal/ft.
Added water during installation? No How much? —
Weather: Sunny, 70°F

Water Quality Parameters During Development

Time	Volume of Water Removed	Temperature (°C)	pH	Conductivity (mS/cm)	ORP (± mv)	Dissolved Oxygen (mg/L)	Appearance of Water
9:59	2 gal	10.43	7.53	.150	-57	8.05	Dark brown turbid
10:00	5 gal	11.52	6.94	.130	-72	3.28	Dark brown turbid
10:01	7 gal	13.34	6.80	.123	-86	7.01	Dark brown turbid
10:02	10 gal	13.24	6.83	.123	-85	7.12	Brown turbid
10:03	12 gal	13.65	6.84	.123	-84	7.13	Brown turbid
10:04	15 gal	12.86	6.92	.130	-66	7.64	Brown turbid
10:05	17 gal	13.10	6.88	.123	-74	7.37	Brown turbid
10:06	20 gal	13.57	6.61	.123	-79	3.02	Brown turbid
10:07	25 gal	13.65	6.57	.132	-77	7.18	Brown turbid
10:08	27 gal	13.81	6.64	.128	-74	7.16	Brown turbid
10:09	30 gal	13.68	7.32	.124	-80	7.41	Brown turbid

Meter Calibration

Meter Number: New Horiba

Parameter	Date & Time Calibrated	Calibration Results
pH		
Conductivity		
ORP		
DO		

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)
Develop by pumping 5 to 10 well volumes out - or until water clears after surging.

5 = 7.38 10 = 14.76

All NTU > 1000
Water got visibly clearer

EVRENNORTHWEST INC
environmental & natural resource consultants

Well Development Measurements

Site: Lamb-03 Fuel (PTW) Project No.: 1355-19001.02
Monitoring Well: MW03 Date: 01-29-25

Well Information

Depth to Water: 8.38 ft
Depth to Bottom of Well: 15 ft.
Height of Water Column: 6.62 ft.
Vol. of Water in Well: 1.09 gal. Conversion Factor: 2" - 0.164 gal/ft.
Added water during installation? No How much? —
Weather: Sunny, 70°F.

Water Quality Parameters During Development

Time	Volume of Water Removed	Temperature (°C)	pH	Conductivity (mS/cm)	ORP (± mv)	Dissolved Oxygen (mg/L)	Appearance of Water
9:07	2 gal	13.15	6.76	.497	-78	7.65	Very brown / turbid
9:09	6 gal	15.11	7.06	.375	-122	7.17	Very brown / turbid
9:10	10 gal	14.52	7.20	.373	-81	3.10	Very brown / turbid
9:12	13 gal	15.35	7.02	.354	-67	7.57	Very brown / turbid
9:14	15 gal	14.78	6.99	.347	-38	3.01	Very brown / turbid
9:16	17 gal	14.95	7.06	.377	-42	7.45	Very brown / turbid
9:18	20 gal	14.16	7.12	.373	-39	7.74	Very brown / turbid
9:19	22 gal	14.24	7.06	.366	-36	3.45	Very brown / turbid
9:20	23 gal	13.92	6.36	.371	-33	7.89	Very brown / turbid
9:21	25 gal	15.40	6.95	.368	-50	7.27	Very brown / turbid
9:22	28 gal	15.55	6.93	.368	-47	2.56	Very brown / turbid
9:23	30 gal	14.44	6.90	.370	-46	4.72	Very brown / turbid
							NTU > 1000

Meter Calibration

Meter Number: New Horiba

Parameter	Date & Time Calibrated	Calibration Results
pH		
Conductivity		
ORP		
DO		

Notes: (well condition, nearby activities or changes in land use, odors, problems, deviations from plan, etc.)

Develop by pumping 5 to 10 well volumes out - or until water clears after surging.

NTU > 1000 every time, but visually clearer

5 = 5.45 10 = 10.9