

Groundwater Monitoring Letter Report – December 2025

Former Automotive Services, Inc. Site

2327 West Mill Plain Boulevard, Vancouver, Washington
Ecology Facility Site ID: 4380; Cleanup Site ID: 5210

April 7, 2026

Prepared for:
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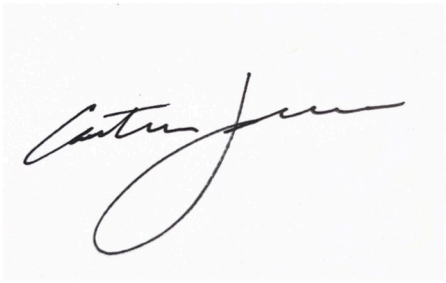
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Abbreviations and Acronyms

ASI	Former Automotive Services, Inc.
bgs	below ground surface
COC	contaminant of concern
CUL	cleanup level
DVR	data validation report
Ecology	Washington Department of Ecology
EPA	U.S. Environmental Protection Agency
GSI	GSI Water Solutions, Inc.
GWMP	Groundwater Monitoring Plan
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MTCA	Model Toxics Control Act
NFA	No Further Action
Port	Port of Vancouver
Report	Groundwater Monitoring Letter Report – December 2025
RPD	relative percent difference
Site	Former Automotive Services, Inc. Site
TOC	top of casing
TPH	Total Petroleum Hydrocarbons
UST	underground storage tank
VOC	volatile organic compound

1 Introduction

On behalf of the Port of Vancouver (Port), GSI Water Solutions, Inc. (GSI), has prepared this Groundwater Monitoring Letter Report (Report) for the Former Automotive Services, Inc. (ASI) Site (Site) (Figure 1). This Report summarizes the results of the December 2025 groundwater monitoring event conducted in accordance with the Groundwater Monitoring Plan (GWMP), as outlined in Section 3 and Table 1.

1.1 Purpose and Scope

Groundwater monitoring was completed in December 2025 to evaluate the current extent and concentrations of contaminants of concern (COCs) at long-term monitoring locations within the boundaries of the former Automotive Services, Inc. Site (Figure 2). The results of the December 2025 groundwater monitoring are used to assess how COC concentrations have changed over time and to compare analytical results to Method A groundwater cleanup levels (CULs) established by the Model Toxics Control Act (MTCA). The groundwater monitoring network currently includes four monitoring wells (Table 1 and Figure 2). Monitoring includes measuring groundwater elevations, conducting well inspections, purging and sampling groundwater in accordance with Washington Department of Ecology (Ecology) and industry standard methodologies, including, but not limited to, collecting field parameter readings, and collecting and analyzing groundwater samples (Table 1).

1.2 Limitations

This Report documents the work performed by GSI at the request and direction of the Port in accordance with Task Order 2 between the Port and GSI in our proposal dated December 22, 2025. The findings, opinions, and conclusions included herein are for the exclusive use of the Port. Reliance shall not be provided to any other person or entity without the Port's and GSI's written consent. Reliance on this document for any use or by parties, other than those specifically identified, is prohibited without the expressed written consent of GSI and the Port, and such use is at the sole risk of the user.

2 Site Location and Background

This section provides a summary of the Site location and background, including its geologic and hydrogeologic setting, facility operations and history, regulatory history, and GWMP. Information regarding the Site's location, setting, and operational history can be found in other Site reports, including the most recent Groundwater Monitoring Letter Report from June 2024 (AECOM, 2024a).

2.1 Location and Description

The Site is located at the property at 2327 West Mill Plain Boulevard in Vancouver, Washington (Site, Figure 1). The Property is a 4.33-acre, paved parcel that is zoned for heavy industrial use owned by the Port. The Port leases the Property to CalPortland for use as an aggregate distribution plant. The northern, western, and southern adjoining properties are zoned for heavy industrial use related to manufacturing, bulk fuel storage, and a storage facility for the Vancouver Police Department, respectively. Mill Plain Boulevard runs along the eastern property boundary (Figure 2).

2.2 Geology and Hydrogeology

The Site is located in the Portland Basin geologic province within the Columbia River floodplain (Orr, 2012). The surface soils on Site are classified as Hillsboro loam and McBee silt loam by the U.S. Department of

Agriculture Natural Resources Conservation Service soil survey (USDA NRCS, 2019). Based on previous field observations at the Site, the upper 10 to 15 feet of the subsurface is characterized as silty sand before transitioning to water-bearing, unconsolidated, medium-coarse grained sand at approximately 18 feet below ground surface (bgs). The depth to groundwater at the Site ranges between 14 to 21 feet bgs with a relatively flat gradient that varies seasonally to the northwest and south-southeast (Ecology, 2014).

2.3 Regulatory History and Cleanup Actions at Areas of Concern

The Site was historically used for agricultural purposes until 1972 when the ASI car wash facility was constructed. The car wash facility operated using hot water mixed with kerosene to remove a Cosmoline-based protective coating from newly imported cars post-arrival at the Port. In 1998, the Mill Plain Boulevard extension bisected the car wash facility, reshaping property boundaries closer to the current parcel boundaries. Residual contamination related to car wash facility activities remain, as summarized below (Ecology, 2014):

- Petroleum-contaminated soil was identified at the Site in the 1980s due to a fault in the facility's water treatment system. As a result, a water-kerosene mixture flowed onto the ground surface adjacent to the car wash building.
- Four underground storage tanks (USTs), containing kerosene, gasoline, and diesel, were decommissioned by removal in three separate excavation areas at the car wash facility in 1991. Confirmation soil samples collected from the excavation boundaries of the area that housed one of the kerosene USTs indicated that residual petroleum contamination at concentrations of up to 9,600 milligrams per kilogram (mg/kg) remained. Additional excavation at this time was limited by structures present in the area.
- Diesel-impacted soil was uncovered in 1992 on the west side of the Site near the Marathon (formerly Tesoro) tank farm. Based on field evidence, the suspected source appeared to be a surface spill that occurred prior to the placement of the Columbia River sand and silt dredge spoils, likely during the 1960s.

Cleanup activities were conducted at the Site between September 1999 and February 2001. On-Site bioremediation was utilized on the kerosene- and diesel-impacted soils generated during the excavation events described below (Ecology, 2014):

- The initial excavation event took place in August 1999. Diesel impacted soils were excavated to approximately 16 feet bgs where groundwater was encountered. Although obvious contamination remained in place, Site conditions such as the presence of groundwater, limited stockpile space, and obstacles present along the property boundary with Marathon prevented further excavation. The diesel-impacted area was backfilled to provide access to the kerosene-impacted area to the excavation crew. Kerosene-impacted soil was removed and treated on-site.
- The residual diesel contamination from the initial excavation event was removed in July 2000. The excavation reached 17 to 20 feet bgs, and the lateral extent of observed contamination was removed as far as the adjoining Marathon property boundary. Confirmation soil samples collected from the sidewalls and bottom of this excavation effort indicated that an estimated volume of approximately 389 cubic yards of diesel-impacted soil remained below 16 feet bgs. The area was backfilled with imported clean fill and treated, kerosene-impacted soil from the Site as approved by Ecology.

As detailed in the 2014 No Further Action (NFA) letter from Ecology, groundwater impacts on site are limited to the area around GL-2. The remaining groundwater and soil contamination was addressed in an Environmental Covenant 3407456 that was filed with Clark County in 2012 and revised in 2013.

Confirmational groundwater sampling was required to determine the long-term effectiveness of the cleanup actions, and Ecology approved a monitoring plan for the Site in the 2014 NFA (Ecology, 2014).

Seven monitoring wells have been installed at the Site from 1991 to 2002: GL-1 through GL-7. GL-1 through GL-3 were previously identified as MW-1 through MW-3. The monitoring plan has periodically been updated to reduce the scope and is described in the following section. Additionally, two monitoring wells (MW-4I and MW-4D; Figure 2) are located on or directly adjacent to the Site; these wells are not part of the current monitoring program and are owned by an adjacent property.

3 Current Groundwater Monitoring Plan

Groundwater monitoring activities have been conducted at the Site every 18 months since June 2007. The following documents outline the GWMP and revisions approved by Ecology.

- *Long-Term Confidential Groundwater Monitoring Plan* (CEC, 2007)
- Email from Ecology approving use of low-flow sampling techniques (Ecology, 2009)
- Revised Long-Term Confirmational Groundwater Monitoring Plan (Kennedy/Jenks Consultants, 2010)
- Groundwater Monitoring Letter Report – December 2022 (AECOM, 2023)
- Email from Ecology approving decommissioning of monitoring well GL-4 (Ecology, 2024)

The *Long-Term Confidential Groundwater Monitoring Plan* (CEC, 2007) outlines the original scope for the seven monitoring wells installed at the Site: GL-1; GL-2 and GL-3 installed in 1991; and GL-4, GL-5, GL-6 and GL-7 installed in 2002. All wells were to be sampled for diesel- and oil-range total petroleum hydrocarbons (TPH) as well as volatile organic compounds (VOCs).

In the 2010 Revised Long-Term Confirmational Groundwater Monitoring Plan (Kennedy/Jenks Consultants, 2010), Ecology approved the reduction in the number of wells sampled during each event as well as the decommissioning of GL-5 and GL-7. Monitoring wells GL-7 and GL-5 were decommissioned by AECOM in October 2019 and April 2020, respectively (AECOM, 2022a and 2022b).

The letter report prepared by AECOM in 2023 and approved by Ecology in 2024 recommended reducing the monitoring plan by discontinuing sampling at GL-3, GL-4, and GL-6; discontinuing VOC analysis at all wells; reporting to the method reporting limit; and discontinuing the use of disposable bailers for sample collection. In September 2024, AECOM decommissioned GL-4 in place (AECOM, 2024b).

Additional details regarding modifications of the groundwater monitoring plan can be found in the documents outlined above, as well as Groundwater Monitoring Letter Report – June 2024 (AECOM, 2024a). The current GWMP includes collecting groundwater samples and field parameters from GL-1 and GL-2, as well as a duplicate sample from GL-2, to be analyzed for diesel- and oil-range TPH. Additionally, depth-to-water is collected at GL-1 through GL-3 and GL-6. Groundwater monitoring events will continue to be conducted at a frequency of once every 18 months. Analytical results are screened against the Ecology MTCA Method A groundwater CULs. The GWMP is outlined in Table 1.

4 December 2025 Groundwater Monitoring

The following sections summarize the groundwater monitoring activities that were conducted at the Site on December 10, 2025, in accordance with the GWMP discussed above.

4.1 Activities Conducted During December 2025

GSI completed the December 2025 groundwater monitoring event in accordance with the following documents:

- U.S. Environmental Protection Agency (EPA) guidance document titled *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures* (EPA, 1996)
- Revised Long-Term Confirmational Groundwater Monitoring Plan for the ASI/Glacier Site (Kennedy Jenks Consultants, 2010)
- Ecology NFA letter (Ecology, 2014)

4.1.1 Groundwater Elevation Monitoring

The depth to groundwater was measured from the top of casing (TOC) on the north side of monitoring wells GL-1 through GL-3 and GL-6. Table 2 presents depth to groundwater measurements and calculated groundwater elevations, and Appendix A contains copies of the field forms.

4.1.2 Groundwater Sampling

Low-flow purging and sampling techniques (less than 500 milliliters per minute) utilizing peristaltic pumps and dedicated polyethylene tubing were used to collect samples from monitoring wells GL-1 and GL-2 as outlined in the current GWMP (Table 1). Groundwater was pumped until field parameters (pH, temperature, specific conductivity, dissolved oxygen, and oxidation-reduction potential) stabilized prior to collecting the sample for a period of 15 minutes or three consecutive readings. Appendix A contains copies of the field forms. Table 3 presents the final field parameter measurement values at each well sampled.

After purging was complete, groundwater samples were collected directly into sample containers. The sample containers were then placed in coolers with wet ice under chain-of-custody protocols, packaged, and delivered to Apex Laboratories of Tigard, Oregon, for chemical analysis. Samples were submitted for diesel- and oil-range TPH analysis by NWTPH-Dx as outlined in Table 1 on a standard turnaround time. Appendix B contains a copy of the chain-of-custody form.

GSI submitted a field duplicate collected from GL-2 as a laboratory control sample. The field duplicate sample was submitted for the same analytical suite as the parent sample.

Purge and decontamination water was disposed of on-site in an aboveground polyethene storage tank staged in a secure area under the 26th Avenue overpass. Other waste, including nitrile gloves and sampling tubing, was disposed of off-site as municipal solid waste.

4.2 Results

Groundwater field parameters and chemical concentrations were monitored to assess the current extent and magnitude of COCs at long-term monitoring points, assess how COC concentrations have changed over time, and for comparison of results to the CULs. The following sections describe the results of this monitoring event.

4.2.1 Groundwater Elevations

Groundwater elevations were calculated using the depth to water data collected during the field event based on surveyed casing elevations (Table 2). Elevation data is recorded in feet relative to the National Geodetic

Vertical Datum based on the City of Vancouver Benchmark L-181. The groundwater elevations ranged from 16.64 feet at GL-6 to 18.96 feet at GL-2.

Figure 3 shows groundwater elevation contours. The inferred groundwater flow direction during the December 2025 sampling event was towards the southeast. The horizontal hydraulic gradient was calculated as 0.002 feet/feet to the southeast. Groundwater elevations and inferred flow directions are generally consistent with previous monitoring events. Additionally, Ecology noted in its July 2020 Five-Year Review of the Site that groundwater flow direction was eastward, which aligns with the results observed during the December 2025 monitoring event (Ecology, 2020).

4.2.2 Groundwater Sampling

The groundwater sampling analytical results for the December 2025 sampling event are summarized below:

- **GL-1:** Diesel- and oil-range TPH were not detected above the laboratory reporting limit in the sample collected from GL-1. The laboratory reporting limit is below the MTCA Method A Groundwater CUL of 0.5 milligrams per liter (mg/L) for both diesel- and oil-range TPH.
- **GL-2:** Diesel-range TPH was detected above the laboratory reporting limit at a concentration of 0.362 mg/L, which did not exceed the established MTCA Method A Groundwater CUL of 0.5 mg/L. Oil-range TPH was not detected above the laboratory reporting limit. The laboratory reporting limit is below the MTCA Method A Groundwater CUL of 0.5 mg/L.

Appendix B contains a copy of the laboratory report.

4.3 Quality Control

The following sections summarize the analytical results of the field and laboratory quality control samples.

4.3.1 Field Duplicate

The relative percent difference (RPD) was calculated between the primary and duplicate samples collected during the monitoring event at GL-2. The primary and duplicate samples were analyzed for diesel- and oil-range TPH by NWTPH-Dx; the RPDs between the primary and duplicate samples for diesel-range TPH was 4 percent, and oil-range TPH was not detected above laboratory reporting limits in either sample. All results are acceptable and within control limits; RPDs of less than 50 percent are deemed acceptable.

5 Data Quality and Management

An EPA Stage 2A data validation report (DVR) generated for this sampling event (Appendix C). The DVR provides a review of laboratory quality assurance and quality control. The DVR shows that the laboratory report complied with the project's data quality objectives, and the data are acceptable to use for decision-making purposes. Upon completion of data validation, all results were deemed acceptable and included for evaluation in this Report.

6 Conclusions and Recommendations

Groundwater monitoring was conducted at the Site during the December 2025 sampling event in accordance with the current GWMP (Table 1).

6.1 Groundwater Monitoring Results

GSI completed groundwater monitoring at the Site on December 10, 2025. Only one analyte, diesel-range TPH, was detected above the laboratory reporting limit. Where detected (well GL-2), the concentration was below the established MTCA Method A Groundwater CUL for diesel-range TPH of 0.5 mg/L.

6.2 Future Activities

Groundwater monitoring will continue to be conducted every 18 months with the next event scheduled for June 2027. GSI does not recommend any other modifications from the current sampling program for future monitoring events.

7 References

AECOM. 2022a. *Monitoring Well Decommissioning Summary Letter – GL-7*. Former Automotive Services, Inc. Site. Port of Vancouver USA. April 2, 2020.

AECOM. 2022b. *Monitoring Well Decommissioning Summary Letter – GL-5*. Former Automotive Services, Inc. Site. Port of Vancouver USA. June 15, 2020.

AECOM. 2023. *Groundwater Monitoring Letter Report – December 2022.* Former Automotive Services, Inc. Site. Port of Vancouver USA. March 9, 2023.

AECOM. 2024a. *Groundwater Monitoring Letter Report – June 2024.* Former Automotive Services, Inc. Site. Port of Vancouver USA. March 9, 2024.

AECOM. 2024b. Monitoring Well Decommissioning Summary Letter – GL-4. Former Automotive Services, Inc. Site. Port of Vancouver USA. June 15, 2024.

CEC. 2007. *Long-Term Confirmational Groundwater Monitoring Plan for the ASI/Glacier Site.* Port of Vancouver USA. March 9, 2007.

Ecology. 2014. Letter from Washington State Department of Ecology to Port of Vancouver. *No Further Action for the Former Automotive Services Inc Site.* March 7, 2014.

Ecology. 2020. Periodic Review Report Final, Automotive Services, Inc. July 2020.

Ecology. 2024. Letter from Washington State Department of Ecology to Port of Vancouver. *Approval of Request for Monitoring Requirements.* May 28, 2024.

EPA. 1996. Ground Water Issue. Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures. By Robert W. Puls and Michael J. Barcelona. EPA/540/S-95/504. April 1996.

Kennedy/Jenks. 2010. Letter from Kennedy/Jenks Consultants to the Washington State Department of Ecology. Subject: Automotive Services, Inc. – REVISED Long Term Groundwater Monitoring Plan, Former ASI/Glacier Site, Port of Vancouver USA. May 10, 2010.

Orr, E. L. 2012. *Oregon Geology.* Sixth Edition (W. N. Orr). 2012.

USDA NRCS. 2019. Web Soil Survey. Last modified July 31, 2019. United States Department of Agriculture Natural Resources Conservation Service. https://websoilsurvey.nrcs.usda.gov/app/.

Tables

Table 1. Current Groundwater Monitoring Plan

Current Well ID	Original Well ID	Monument Type	Total Depth	Diameter	Current Compliance Monitoring Plan					
					Monitoring Conducted Every 18 Months	Well Inspection	Groundwater Level Gauging	Sampling and Field Parameters	Analytes	Field Quality Assurance Samples
		Units:	feet bgs	Inches	—	—	—	—	—	—
GL-1	MW-1	Flush	33	2	X	X	X	X	Dx	Field Duplicate[1]
GL-2	MW-2	Flush	27.2	2	X	X	X	X	Dx	
GL-3	MW-3	Flush	26.8	2	X	X	X	—	—	—
GL-6	—	Flush	28	2	X	X	X	—	—	—
GL-4	Decommissioned in September 2024									
GL-5	Decommissioned in April 2020									
GL-7	Decommissioned in October 2019									
MW-4D	Included only in the adjacent Cadet Manufacturing Site investigation									
MW-4I	Included only in the adjacent Cadet Manufacturing Site investigation									

Notes

[1] One duplicate sample collected during each sampling event.

— = not applicable or not included

Dx = Diesel and oil-range total petroleum hydrocarbons

Table 2. Groundwater Elevation - December 2025 Sampling Event

Well ID	Date	Top of Casing Elevation	Depth to Groundwater	Groundwater Elevation	Water Bearing Zone	Change in Groundwater Elevation[3]
	Units:	feet[1]	feet below TOC[2]	feet[1]	—	feet[1]
GL-1	4/1/2009	27.42	21.03	6.39	Shallow	—
	12/16/2010		18.03	9.39		-3.00
	4/26/2012		13.79	13.63		-4.24
	10/17/2013		23.41	4.01		9.62
	4/29/2015		22.48	4.94		-0.93
	11/3/2016		20.70	6.72		-1.78
	6/10/2019		20.01	7.41		-0.69
	12/5/2019		23.20	4.22		3.19
	6/25/2021		20.68	6.74		-2.52
	12/29/2022		18.78	8.64		-1.90
	6/6/2024		19.32	8.10		0.54
	12/10/2025		18.55	8.87		-0.77
GL-2	4/1/2009	27.82	21.41	6.41	Shallow	—
	12/16/2010		18.41	9.41		-3.00
	4/26/2012		14.23	13.59		-4.18
	10/17/2013		23.75	4.07		9.52
	4/29/2015		22.85	4.97		-0.90
	11/2/2016		21.62	6.20		-1.23
	6/10/2019		20.31	7.51		-1.31
	12/5/2019		23.47	4.35		3.16
	6/25/2021		21.00	6.82		-2.47
	12/29/2022		19.16	8.66		-1.84
	6/6/2024		19.71	8.11		0.55
	12/10/2025		18.96	8.86		-0.75
GL-3	4/1/2009	27.17	20.79	6.38	Shallow	—
	12/16/2010		17.75	9.42		-3.04
	4/26/2012		13.51	13.66		-4.24
	10/17/2013		23.08	4.09		9.57
	4/29/2015		22.48	4.69		-0.60
	11/2/2016		20.72	6.45		-1.76
	6/10/2019		19.69	7.48		-1.03
	12/5/2019		23.16	4.01		3.47
	6/25/2021		20.46	6.71		-2.70
	12/29/2022		18.51	8.66		-1.95
	6/6/2024		19.06	8.11		0.55
	12/10/2025		18.36	8.81		-0.70
GL-6	4/1/2009	25.88	19.51	6.37	Shallow	—
	12/16/2010		16.53	9.35		-2.98
	4/26/2012		12.45	13.43		-4.08
	10/17/2013		21.85	4.03		9.40
	4/30/2015		22.90	2.98		1.05
	11/2/2016		19.17	6.71		-3.73
	6/11/2019		19.39	6.49		0.22
	12/5/2019		22.12	3.76		2.73
	6/25/2021		19.38	6.50		-2.74
	12/29/2022		18.01	7.87		-1.37
	6/6/2024		18.88	7.00		0.87
	12/10/2025		16.64	9.24		-2.24

Notes

[1] Elevation in feet relative to the National Geodetic Vertical Datum based on the City of Vancouver Benchmark L-181.

[2] Measured in feet below the top of the well casing.

[3] Compared to previous groundwater measurement.

— = not applicable

TOC = top of casing

Table 3. Groundwater Field Parameters - December 2025 Sampling Event

Well ID	Sample Date	Field Parameters				
		Temperature	Specific Conductivity	Dissolved Oxygen	pH	ORP
	Units:	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)
GL-1	4/1/2009	13.20	0.369	0.78	6.53	NM
	12/16/2010	13.30	0.537	0.54	NM	NM
	4/26/2012	14.10	0.300	2.97	6.79	NM
	10/17/2013	14.10	0.890	0.10	6.61	NM
	4/29/2015	14.00	0.946	0.10	6.42	NM
	11/3/2016	12.70	0.514	17.20	6.64	NM
	6/10/2019	14.40	0.794	6.92	NM	NM
	12/5/2019	14.10	0.991	0.00	7.05	-113.0
	6/25/2021	18.02	0.981	0.00	6.61	-75.0
	12/29/2022	13.66	0.571	0.00	6.55	-42.0
	6/6/2024	15.70	1.990	0.12	6.60	-118.0
	12/10/2025	14.8	313.9	0.14	6.72	-102.5
GL-2	4/1/2009	12.60	0.858	1.38	6.03	NM
	12/16/2010	12.90	0.890	1.00	NA	NM
	4/26/2012	13.00	0.715	0.71	6.92	NM
	10/17/2013	13.20	1.000	0.08	6.68	NM
	4/29/2015	13.80	0.946	0.54	6.70	NM
	11/2/2016	12.30	0.540	1.91	6.72	NM
	6/10/2019	14.20	0.845	NM	6.59	NM
	12/5/2019	12.97	1.030	0.00	6.85	37.0
	6/25/2021	15.82	1.030	0.00	6.56	299.0
	12/29/2022	12.39	0.599	0.00	6.70	10.0
	6/6/2024	15.10	0.920	0.33	6.50	232.0
	12/10/2025	14.4	546	0.24	6.73	73.8

Notes

°C = degrees Celsius

mg/L = milligrams per liter

mS/cm = millisiemens per centimeter

mV = millivolts

NM = not measured

ORP = oxidation reduction potential

SU = standard units

Table 4. Groundwater Analytical Results - December 2025 Sampling Event

Well ID	Sample Date	Sample Matrix	Chemical Compound	
			Diesel[2]	Oil[2]
			mg/L	mg/L
		MTCA Method A Cleanup Levels[1]	0.5	0.5
		Units:	mg/L	mg/L
GL-1	4/1/2009	Groundwater	**0.290**	0.400 U
	12/16/2010		**0.077**	0.380 U
	4/26/2012		**0.490**	0.380 U
	10/17/2013		**1.100**	0.240 U
	4/29/2015		**1.400**	0.380 U
	11/3/2016		**1.900**	0.380 U
	6/10/2019		**0.404**	0.381 U
	12/5/2019		**0.475**	0.076 U
	6/25/2021		**0.715**	0.076 U
	12/29/2022		**0.138**	0.080 U
	6/6/2024		**0.273**	**0.107 J**
	12/10/2025		<0.0755	<0.151
GL-2	4/1/2009	Groundwater	**0.780**	0.400 U
	12/16/2010		**0.800**	0.400 U
	4/26/2012		**0.920**	0.380 U
	10/17/2013		**1.200**	0.240 U
	4/29/2015		**0.943**	0.380 U
	11/2/2016		0.189 U	0.380 U
	6/10/2019		**0.659**	0.381 U
	12/5/2019		**0.647**	0.076 U
	6/25/2021		**0.681**	0.076 U
	12/29/2022		**0.270**	0.091 U
	6/6/2024		**0.660**	0.174 U
	12/10/2025		**0.362**	<0.151

Notes

[1] Washington State Department of Ecology, Model Toxics Control Act (MTCA) Cleanup Amendments, Cleanup Levels and Risk Calculation (CLARC) Master Table, February 2026.

[2] Analyzed via Northwest Total Petroleum Hydrocarbon Diesel Range Organics Low Level method.

Bolded values indicate a detection above the laboratory reporting limit.

= exceeds applicable MTCA Cleanup Level

J = Estimated result

mg/L = milligrams per liter

MTCA = Model Toxics Control Act

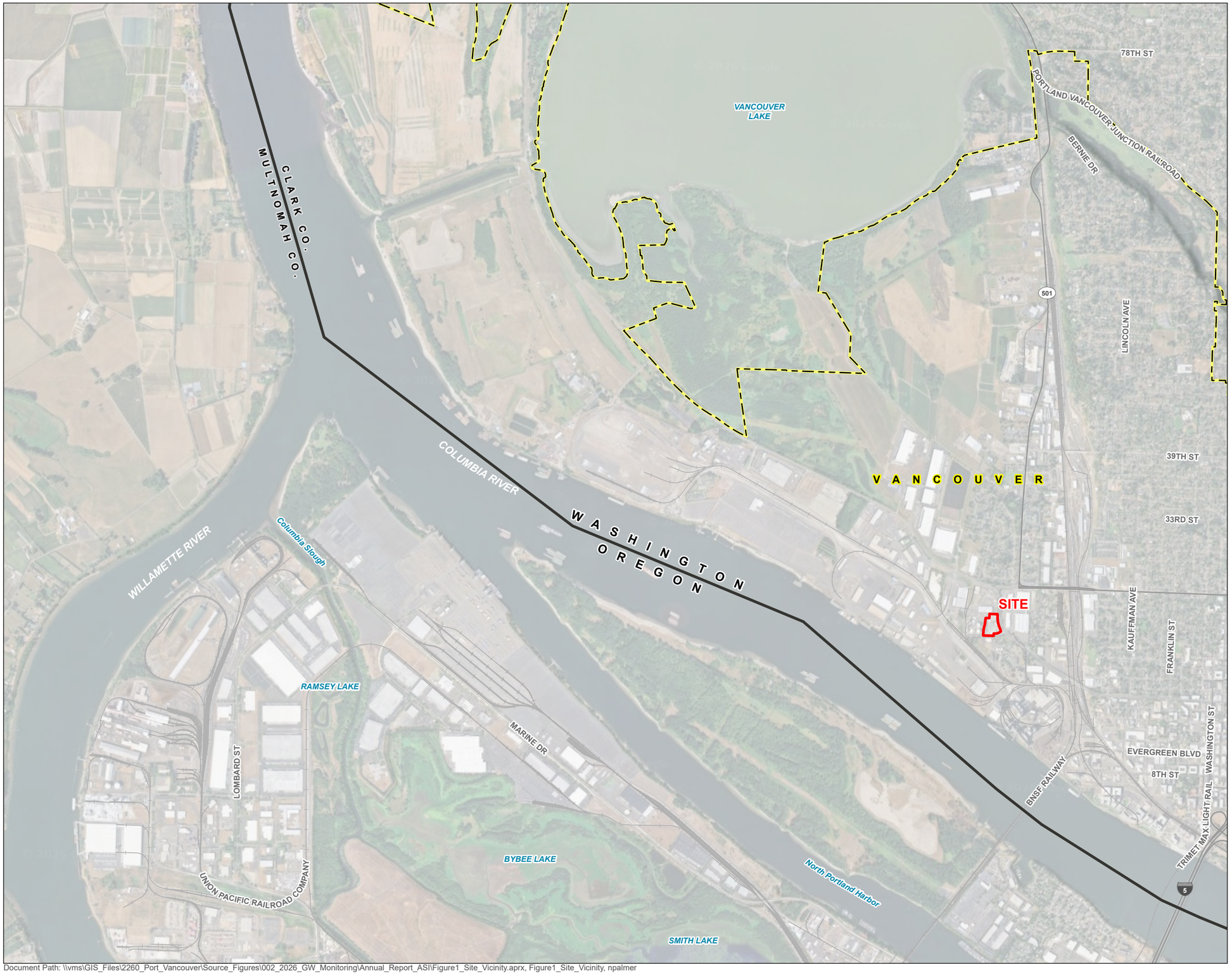
U = Result not detected above the laboratory reporting limit

Figures

FIGURE 1

Site Vicinity

Former Automotive Services, Inc. Site
Port of Vancouver, USA



LEGEND

- Site Boundary

All Other Features

- City Boundary
- County Boundary
- State Boundary
- Major Road
- Railroad

N

0 1,250 2,500 3,750
FEET

Date: January 19, 2026
Data Sources: BLM, ESRI, ODOT, USGS, Imagery (2022)

GSI Water Solutions, Inc.

Document Path: \\vms\GIS_Files\2260_Port_Vancouver\Source_Figures\002_2026_GW_Monitoring\Annual_Report_ASI\Figure1_Site_Vicinity.aprx, Figure1_Site_Vicinity, npalmer



FIGURE 2

Site Map

Former Automotive Services, Inc. Site
Port of Vancouver, USA

LEGEND

- Monitoring Well
- Abandoned Monitoring Well
- Monitoring Well for Adjacent Site (Screened in Deep Water Bearing Unit, Not Monitored In ASI Program)
- Monitoring Well for Adjacent Site (Screened in Intermediate Water Bearing Unit, Not Monitored In ASI Program)
- Site Boundary

N

0 40 80 120
FEET

Date: March 27, 2026
Data Sources: BLM, ESRI, ODOT, USGS, Imagery (2022)

GSI Water Solutions, Inc.

Document Path: Y:\2260_Port_Vancouver\Source_Figures\002_2026_GW_Monitoring\Annual_Report_ASI\Figure2_Site_Map.aprx, Figure2_Site_Map, npalmer



FIGURE 3

Groundwater Contour Map – December 2025

Former Automotive Services, Inc. Site
Port of Vancouver, USA

LEGEND

- **Monitoring Well**
  December 2025 Groundwater Elevation (Groundwater Elevation in Feet)
- **Abandoned Monitoring Well**
- Monitoring Well for Adjacent Site (Screened in Deep Water Bearing Unit, Not Monitored In ASI Program)
- Monitoring Well for Adjacent Site (Screened in Intermediate Water Bearing Unit, Not Monitored In ASI Program)
- **Groundwater Elevation Contour (dashed where inferred)**
- Approximate Groundwater Flow Direction Gradient
- Site Boundary

All Other Features

- Major Road

NOTE
ft/ft: feet per foot

N

0 40 80 120
FEET

Date: March 27, 2026
Data Sources: BLM, ESRI, ODOT, USGS, Imagery (2022)

GSI Water Solutions, Inc.

Document Path: Y:\2260_Port_Vancouver\Source_Figures\002_2026_GW_Monitoring\Annual_Report_ASI\Figure3_GW_Conours.aprx, Figure3_GW_Contours, npalmer

APPENDIX A

Field Forms

GSI Water Solutions, Inc.

WATER LEVEL DATA FORM

Project Number: 2260.001.002.001

Project: Port of Vancouver ASI December 2(Field Personnel:

Weather:

Well ID	Date	Time	Depth to Water (ft bmp)	Well Depth (ft btoc)	Well Inspection Results/General Comments
GL-1	12/10/25	10:40	18.55	33.05	Vault flooded - replaced lock
GL-2	12/10/25	11:50	18.96	27.23	Vault flooded
GL-3	12/10/25	9:22	18.36	26.64	Sand on top of lid ~1.5"
GL-4					
GL-6	12/10/25	1000	16.64	28.24	Slick entire manhole cover.

General Comments:

GSI Water Solutions, Inc.

Client, Event	Well ID	Date
Port of Vancouver, ASI Decemeber 2025 Event	GL-2	12/10/25

GROUNDWATER SAMPLING LOG

Total Depth (ft):	DTW (ft bmp):	@ Time	0.16 - 2" / 0.65 - 4" / 1.47 - 6" gal/feet	Well Casing Volume
27.23	18.96	11:50		1.32 gal

Calculation: total depth – DTW x conversation factor = well casing volume

Field Conditions: Overcast, 40s

Decontamination: liquinox + tap wash; tap rinse; DI rinse

PURGE INFORMATION

- [✓] Purge Method: peristaltic pump
- [ ] Purge Method:
- [ ] Refer to calibration log this date, YSI # 6

Pump Suction Depth (ft BTOC): ~21 ft

Purge Water Disposal: on site

Type of Flow Through Cell: [ ] 10 oz cup [✓] YSI Flow Through Cell

Comments/Exceptions to SAP:

Time	Purge Volume (gallons)	Temp. (°C)	SC (µS/cm)	DO (mg/L)	pH	ORP (mV)	Purge Rate (mL/min)	DTW (ft BTOC)	Pump Speed/*Clarity/ Color/Remarks (NTU)
Stabilization Criteria		± 0.2	±3% (SC>100) ±5% (SC≤100)	± 0.3	± 0.1	± 10	–	–	± 10% (NTU>5) 3 readings < 5 (NTU<5)
12:00	Pump On, Water Reaches the Purge Bucket						260	19.15 Initial	
12:05	0.25	14.5	528	0.22	6.73	5.1	260	19.26	C, 2.21 some flakes
12:10	0.4	14.4	538	0.19	6.74	29.4	280	19.38	4.34, C, some flakes (black)
12:15	0.8	14.4	537	0.19	6.74	36.9	280	19.39	4.30, C, trace flakes
12:20	1.2	14.4	536	0.20	6.74	47.0	280	19.39	3.27, " "
12:25	1.7	14.4	538	0.21	6.74	61.2	280	19.39	2.33 " "
12:30	2.25	14.4	541	0.21	6.73	70.1	280	19.39	~~X~~ 1.71 " "
12:35	2.75	14.4	543	0.23	6.73	67.2	280	19.39	1.34, C, trace flakes
12:40	3.2	14.4	545	0.24	6.73	71.5	280	19.39	1.44, " "
12:45	3.6	14.4	546	0.24	6.73	73.8	280	19.39	1.53, " "
:									
12:50	Start Sampling							19.39	
13:05	End Sampling							19.39	

* VC=Very cloudy Cl=Cloudy SC=Slightly Cloudy VSC=Very Slightly Cloudy AC=Almost Clear C=Clear CC=Crystal Clear

GSI Water Solutions, Inc.

Client, Event

Port of Vancouver, ASI Decemeber 2025 Event

LABORATORY ANALYTICAL PROGRAM

Date: 12/10/25	**Time:** 12 : 50	

Sampling Method (circle one):

(A) dedicated purge tube disconnected from flow through cell
B dedicated sampling port
C other:

Sample I.D. ~~Eg~~	**Number of Sample Containers (circle)**	**Volume of Each Container**	**Container Type**	**Pres.**	**Analytical Method**
GL-2-20251210	2	1L	Glass	HCl	
GL-200-20251210	2	1L	Glass	HCL	

QAQC: **Sample ID & Time –>** GL-200-20251210 @ 1255

Sampling Criteria (circle one):

Collect anytime: stable parameters over 15 minutes (4 readings) with stable/rising WL	(1)
After 3 well casing volumes: stable parameters but uncontrolled/falling water level	2
After 5 well casing volumes: unstable parameters with or without drawdown control	3
Pump dry: return anytime if there is adequate volume for containers within 24 hours	4

Comments: Collected DUP @ 1255

COC Info: PM is Joe Sherrod, 650 NE Holladay Street, Suite 900, Portland 97232; 253.486.9014, jsherrod@gsiws.com

Write on COC in Notes: Please include bjohnson@gsiws.com and cjohnson@gsiws.com on distribution list for lab report.

Lab: Apex Laboratory, 6700 SW Sandburg St, Tigard, OR 97223; 503.718.2323
Lab PM: Darrell Auvil, dauvil@apex-labs.com

GSI Water Solutions, Inc.

Client, Event: Port of Vancouver, ASI Decemeber 2025 Event

Well ID: GL-1

Date: 12/10/25

GROUNDWATER SAMPLING LOG

Total Depth (ft):	DTW (ft bmp):	@ Time	0.16 - 2" / 0.65 - 4" / 1.47 - 6" gal/feet	Well Casing Volume
30.05	18.55	10:45	0.16 - 2"	1.84 gal

Calculation: *total depth* – *DTW* x *conversation factor* = *well casing volume*

Field Conditions: Cloudy, sprinkling

Decontamination: liquinox + tap wash; tap rinse, DI rinse

PURGE INFORMATION

- [✓] Purge Method: peristaltic pump
- [ ] Purge Method:
- [ ] Refer to calibration log this date, YSI # 6

Pump Suction Depth (ft BTOC): ~20 — Purge Water Disposal: On site

Type of Flow Through Cell: [ ] 10 oz cup [✓] YSI Flow Through Cell

Comments/Exceptions to SAP:

Time	Purge Volume (gallons)	Temp. (°C)	SC (µS/cm)	DO (mg/L)	pH	ORP (mV)	Purge Rate (mL/min)	DTW (ft BTOC)	Pump Speed/*Clarity/ Color/Remarks (NTU)
Stabilization Criteria		± 0.2	±3% (SC>100) ±5% (SC≤100)	± 0.3	± 0.1	± 10	–	–	± 10% (NTU>5) 3 readings < 5 (NTU<5)
1053	Pump On, Water Reaches the Purge Bucket						200	18.57 (Initial)	
10:58	0.2	14.9	320.2	0.32	6.69	-93.9	200	18.58	2.79, C - small blg flakes
11:03	0.4	14.8	318.2	0.27	6.71	-98.3	200	18.58	3.36, C " "
11:08	0.6	14.8	315.3	0.24	6.73	-100.7	200	18.58	2.49, " "
11:13	0.8	14.8	313.8	0.16	6.72	-101.7	200	18.58	1.92, CC, no flakes
11:18	1.0	14.8	313.4	0.15	6.72	-101.9	200	18.58	1.72, CC, no flakes
11:23	1.2	14.8	313.9	0.14	6.72	-102.5	200	18.58	1.64, CC
:									
:									
:									
:									
1125	Start Sampling						200	18.58	
1135	End Sampling								

* VC=Very cloudy CI=Cloudy SC=Slightly Cloudy VSC=Very Slightly Cloudy AC=Almost Clear C=Clear CC=Crystal Clear

GSI Water Solutions, Inc.

Client, Event

Port of Vancouver, ASI Decemeber 2025 Event

LABORATORY ANALYTICAL PROGRAM

Date: 12/10/2025	**Time:** 11 : 25	

Sampling Method (circle one):

(A) dedicated purge tube disconnected from flow through cell
B dedicated sampling port
C other:

Sample I.D.	**Number of Sample Containers (circle)**	**Volume of Each Container**	**Container Type**	**Pres.**	**Analytical Method**
GL-1-20251210	2	1 L	Glass	HCL	
QAQC: **Sample ID & Time –>** N/A					

Sampling Criteria (circle one):

Collect anytime: stable parameters over 15 minutes (4 readings) with stable/rising WL	(1)
After 3 well casing volumes: stable parameters but uncontrolled/falling water level	2
After 5 well casing volumes: unstable parameters with or without drawdown control	3
Pump dry: return anytime if there is adequate volume for containers within 24 hours	4

Comments:

COC Info: PM is Joe Sherrod, 650 NE Holladay Street, Suite 900, Portland 97232; 253.486.9014, jsherrod@gsiws.com

Write on COC in Notes: Please include bjohnson@gsiws.com and cjohnson@gsiws.com on distribution list for lab report.

Lab: Apex Laboratory, 6700 SW Sandburg St, Tigard, OR 97223; 503.718.2323
Lab PM: Darrell Auvil, dauvil@apex-labs.com

APPENDIX B

Laboratory Report and Chain-of-Custody Form

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Thursday, December 18, 2025

Joe Sherrod
GSI Water Solutions
650 NE Holladay St, Ste 900
Portland, OR 97232

RE: A5L1530 - Port of Vancouver - 2260.001.002

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A5L1530, which was received by the laboratory on 12/10/2025 at 2:40:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.
(See Cooler Receipt Form for details)
Default Cooler 2.9 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

Darrell Auvil, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

GSI Water Solutions	Project: **Port of Vancouver**	
650 NE Holladay St, Ste 900	Project Number: **2260.001.002**	**Report ID:**
Portland, OR 97232	Project Manager: **Joe Sherrod**	**A5L1530 - 12 18 25 1136**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GL-1-20251210	A5L1530-01	Water	12/10/25 11:25	12/10/25 14:40
GL-2-20251210	A5L1530-02	Water	12/10/25 12:50	12/10/25 14:40
GL-200-20251210	A5L1530-03	Water	12/10/25 12:55	12/10/25 14:40

Apex Laboratories



Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

GSI Water Solutions	Project: **Port of Vancouver**	
650 NE Holladay St, Ste 900	Project Number: **2260.001.002**	**Report ID:**
Portland, OR 97232	Project Manager: **Joe Sherrod**	**A5L1530 - 12 18 25 1136**

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GL-1-20251210 (A5L1530-01)				**Matrix: Water**		**Batch: 25L0604**		
Diesel	ND	---	0.0755	mg/L	1	12/16/25 21:16	NWTPH-Dx LL	
Oil	ND	---	0.151	mg/L	1	12/16/25 21:16	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		*Recovery: 89 %*		*Limits: 50-150 %*	*1*	*12/16/25 21:16*	*NWTPH-Dx LL*	
GL-2-20251210 (A5L1530-02)				**Matrix: Water**		**Batch: 25L0604**		
Diesel	**0.362**	---	0.0755	mg/L	1	12/16/25 21:36	NWTPH-Dx LL	**F-11**
Oil	ND	---	0.151	mg/L	1	12/16/25 21:36	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		*Recovery: 96 %*		*Limits: 50-150 %*	*1*	*12/16/25 21:36*	*NWTPH-Dx LL*	
GL-200-20251210 (A5L1530-03)				**Matrix: Water**		**Batch: 25L0604**		
Diesel	**0.347**	---	0.0755	mg/L	1	12/16/25 21:57	NWTPH-Dx LL	**F-11**
Oil	ND	---	0.151	mg/L	1	12/16/25 21:57	NWTPH-Dx LL	
Surrogate: o-Terphenyl (Surr)		*Recovery: 92 %*		*Limits: 50-150 %*	*1*	*12/16/25 21:57*	*NWTPH-Dx LL*	

Apex Laboratories



Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

GSI Water Solutions	Project: Port of Vancouver	
650 NE Holladay St, Ste 900	Project Number: 2260.001.002	Report ID:
Portland, OR 97232	Project Manager: Joe Sherrod	A5L1530 - 12 18 25 1136

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25L0604 - EPA 3510C (Fuels/Acid Ext.)									Water			
Blank (25L0604-BLK1)			Prepared: 12/16/25 14:41		Analyzed: 12/16/25 20:14							
NWTPH-Dx LL												
Diesel	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	
Oil	ND	---	0.160	mg/L	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 91 %*		*Limits: 50-150 %*				*Dilution: 1x*			
LCS (25L0604-BS1)			Prepared: 12/16/25 14:41		Analyzed: 12/16/25 20:34							
NWTPH-Dx LL												
Diesel	0.416	---	0.0800	mg/L	1	0.500	---	83	36-132%	---	---	
Surr: o-Terphenyl (Surr)			*Recovery: 99 %*		*Limits: 50-150 %*				*Dilution: 1x*			
LCS Dup (25L0604-BSD1)			Prepared: 12/16/25 14:41		Analyzed: 12/16/25 20:55							Q-19
NWTPH-Dx LL												
Diesel	0.405	---	0.0800	mg/L	1	0.500	---	81	36-132%	3	30%	
Surr: o-Terphenyl (Surr)			*Recovery: 101 %*		*Limits: 50-150 %*				*Dilution: 1x*			

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Darrell Auvil, Client Services Manager

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

GSI Water Solutions	Project: **Port of Vancouver**	
650 NE Holladay St, Ste 900	Project Number: **2260.001.002**	**Report ID:**
Portland, OR 97232	Project Manager: **Joe Sherrod**	**A5L1530 - 12 18 25 1136**

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25L0604							
A5L1530-01	Water	NWTPH-Dx LL	12/10/25 11:25	12/16/25 14:41	1060mL/2mL	1000mL/2mL	0.94
A5L1530-02	Water	NWTPH-Dx LL	12/10/25 12:50	12/16/25 14:41	1060mL/2mL	1000mL/2mL	0.94
A5L1530-03	Water	NWTPH-Dx LL	12/10/25 12:55	12/16/25 14:41	1060mL/2mL	1000mL/2mL	0.94

Apex Laboratories



Darrell Auvil, Client Services Manager

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6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

GSI Water Solutions	Project: **Port of Vancouver**	
650 NE Holladay St, Ste 900	Project Number: **2260.001.002**	**Report ID:**
Portland, OR 97232	Project Manager: **Joe Sherrod**	**A5L1530 - 12 18 25 1136**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

F-11	The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.

Apex Laboratories



Darrell Auvil, Client Services Manager

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6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

GSI Water Solutions	Project: **Port of Vancouver**	
650 NE Holladay St, Ste 900	Project Number: **2260.001.002**	**Report ID:**
Portland, OR 97232	Project Manager: **Joe Sherrod**	**A5L1530 - 12 18 25 1136**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Validated Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting and Detection Limits: Default Limits

Default Reporting and Detection Limits are based on 100% dry weight with the minimum dilution for the analysis. Reporting and Detection Limits are raised due to moisture content, additional dilutions required for analysis, matrix interferences and in other cases, as necessary.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.
Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories



Darrell Auvil, Client Services Manager

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

GSI Water Solutions	Project: **Port of Vancouver**	
650 NE Holladay St, Ste 900	Project Number: **2260.001.002**	**Report ID:**
Portland, OR 97232	Project Manager: **Joe Sherrod**	**A5L1530 - 12 18 25 1136**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to one half of the Reporting Limit (RL).
Blank results for gravimetric analyses are evaluated to the Reporting Level, not to half of the Reporting Level.
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.
-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.
'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories



Darrell Auvil, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

GSI Water Solutions	Project: **Port of Vancouver**	
650 NE Holladay St, Ste 900	Project Number: **2260.001.002**	**Report ID:**
Portland, OR 97232	Project Manager: **Joe Sherrod**	**A5L1530 - 12 18 25 1136**

Decanted Samples:

Soils/Sediments:
Unless TCLP analysis is required or there is notification otherwise for a specific project, all Soil and Sediments containing excess water are decanted prior to analysis in order to provide the most representative sample for analysis.

Water Samples:
Water samples containing solids and sediment may need to be decanted in order to eliminate these particulates from the water extractions. In the case of organics extractions, a solvent rinse of the container will not be performed.

Volatiles Soils (5035s)
Samples that are field preserved by 5035 for volatiles are dry weight corrected using the same dry weight corretion as for normal analyses. In the case of decanted samples, the dry weight may be performed on a decanted sample, while the aliquot for 5035 may not have been treated the same way. If this is a concern, please submit separate containers for dry weight analysis for volatiles can be provided.

All samples decanted in the laboratory are noted in this report with the DCNT qualifier indicating the sample was decanted.

Apex Laboratories



Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

GSI Water Solutions	Project: **Port of Vancouver**	
650 NE Holladay St, Ste 900	Project Number: **2260.001.002**	**Report ID:**
Portland, OR 97232	Project Manager: **Joe Sherrod**	**A5L1530 - 12 18 25 1136**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories



Darrell Auvil, Client Services Manager

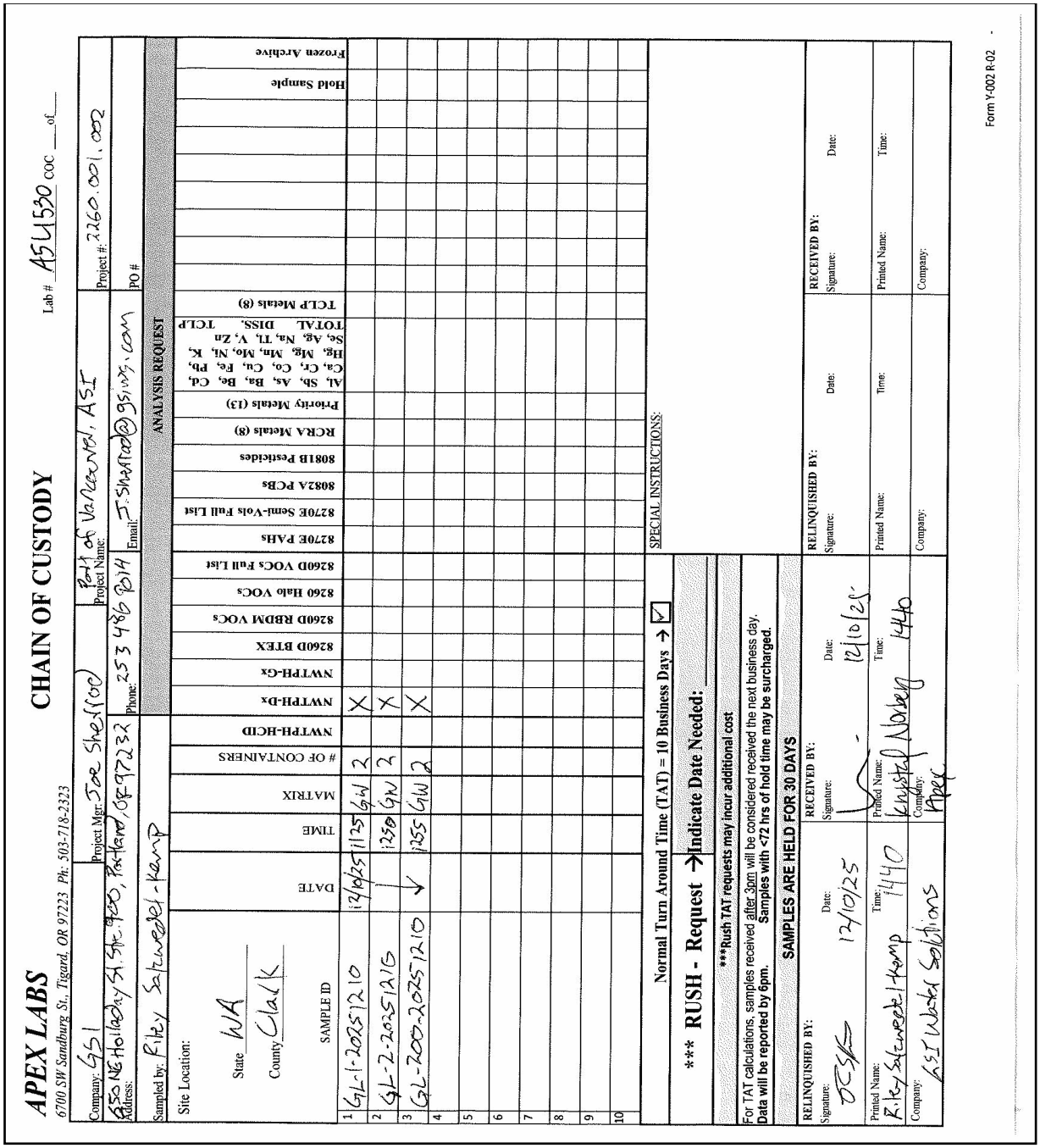
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ANALYTICAL REPORT

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APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A5L1530 COC ___ of ___

Company: GSI — Project Mgr: Joe Sherrod — Project Name: Port of Vancouver ASE — Project #: 2260.001.002
Address: 650 NE Holladay St. Ste. 900, Portland, OR 97232 — Phone: 253 486 8014 — Email: JSherrod@gsiwater.com — PO #
Sampled by: Riley Schroeder-Kemp
Site Location: State WA County Clark

ANALYSIS REQUEST

	SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260D BTEX	8260D RBDM VOCs	8260 Halo VOCs	8260D VOCs Full List	8270E PAHs	8270E Semi-Vols Full List	8082A PCBs	8081B Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
1	GL-1-20251210	12/10/25	1125	GW	2		X														
2	GL-2-20251210		1350	GW	2		X														
3	GL-200-20251210	↓	1255	GW	2		X														
4																					
5																					
6																					
7																					
8																					
9																					
10																					

SPECIAL INSTRUCTIONS:

Normal Turn Around Time (TAT) = 10 Business Days → ☑

*** RUSH - Request → Indicate Date Needed:

***Rush TAT requests may incur additional cost

For TAT calculations, samples received after 3pm will be considered received the next business day.
Data will be reported by 6pm. Samples with <72 hrs of hold time may be surcharged.

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: DCSS Date: 12/10/25 Time: 1440
Printed Name: Riley Schroeder-Kemp
Company: GSI Water Solutions

RECEIVED BY: Signature: Date: 12/10/25 Time: 1440
Printed Name: Krystal Norberg
Company: Apex

RELINQUISHED BY: Signature: Date: Time:
Printed Name:
Company:

RECEIVED BY: Signature: Date: Time:
Printed Name:
Company:

Form Y-002 R-02

Apex Laboratories

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Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

GSI Water Solutions	Project: **Port of Vancouver**	
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APEX LABS COOLER RECEIPT FORM

Client: GSI Element WO#: A5 L1530

Project/Project #: Port of Vancouver, WSI / 2260.001.002

Delivery Info:

Date/time received: 12/10/25 @ 1440 By: KN

Delivered by: Apex__Client X ESS__FedEx__UPS__Radio__Morgan__SDS__Evergreen__Other__

From USDA Regulated Origin? Yes ____ No ✓

Cooler Inspection Date/time inspected: 12/10/25 @ 1440 By: KN

Chain of Custody included? Yes ✓ No ____

Signed/dated by client? Yes ✓ No ____

Contains USDA Reg. Soils? Yes ____ No ✓ Unsure (email RegSoils) ____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	2.9						
Custody seals? (Y/N)	N						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y/(N)) Possible reason why: ____

Green dots applied to out of temperature samples? Yes/(No)

Out of temperature samples form initiated? Yes/(No)

Sample Inspection: Date/time inspected: 12/10/25 @ 1703 By: KN

All samples intact? Yes ✓ No ___ Comments: ____

Bottle labels/COCs agree? Yes ✓ No ___ Comments: ____

COC/container discrepancies form initiated? Yes ___ No ✓

Containers/volumes received appropriate for analysis? Yes ✓ No ___ Comments: ____

Do VOA vials have visible headspace? Yes ___ No ___ NA ✓

Comments ____

Water samples: pH checked: Yes ✓ No ___ NA ___ pH appropriate? Yes ___ No ✓ NA ___ pH ID: A25G771 (ADDL 12/11/25)

Comments: pH for GL-2-20251210 =5 ~~represerved with 4 ml HCl~~

Numbers too full to represerve

Labeled by: KN Witness: [signature] Cooler Inspected by: KN

Form Y-003 R-02

Apex Laboratories



Darrell Auvil, Client Services Manager

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APPENDIX C

Data Validation Report

Data Validation Report

Port of Vancouver
Automotive Services

January 13, 2026

Prepared by: Mitchell Fargher

GSI Water Solutions, Inc.

GSI Water Solutions, Inc.
650 NE Holladay Street, Suite 900, Portland, OR 97232

Introduction

The data in this abbreviated validation and usability report (U.S. Environmental Protection Agency [EPA] Stage 2A) were reviewed using the guidance presented in the following:

- Project Quality Assurance Project Plan (where required)
- Method Specific Control Limits
- Laboratory Standard Operation Procedures and Control Limits
- EPA's *National Functional Guidelines for Organic Superfund Methods Data Review*, EPA 540-R-20-005, November 2020
- EPA's *National Functional Guidelines for Inorganic Superfund Methods Data Review*, EPA 542-R-20-006, November 2020
- EPA's *National Functional Guidelines for High Resolution Superfund Methods Data Review*, EPA 542-R-20-007, November 2020

Data that are not qualified meet the data quality objectives specified in the referenced documents and can be used for decision-making purposes. Data qualified as estimated (J/UJ) may be used for decision-making purposes but should be used in conjunction with the reason codes assigned to the qualifier for further context. Data that are rejected (R) should not be used for any decision-making purposes due to significant deviations in quality control requirements.

Sample Delivery Group (SDG) Summary

SDG	Analytical Laboratory	Sample Receipt Date	Lab Report Date
A5L1530	Apex Laboratories	12/10/2025	12/18/2025

Analytical Methods and Technical Holding Times

Analytical Method	Sample Matrix	Technical Holding Time (4 °C)
NWTPH-Dx	Aqueous	14 Days (7 Days Unpreserved)

Sample Delivery Group A5L1530

SDG A5L1530 was composed of a single Apex Laboratories report. The section below contains qualifications related to the entirety of the package.

Sample Identification

The following three field samples were included in this SDG:

Field Sample ID	Lab Sample ID	Sample Date	Matrix	Sample Type
GL-1-20251210	A5L1530-01	12/10/25 11:25	Aqueous	Primary
GL-2-20251210	A5L1530-02	12/10/25 12:50	Aqueous	Primary
GL-200-20251210	A5L1530-03	12/10/25 12:55	Aqueous	Duplicate

Sample Management

Sample Receipt

All sample receipt documentation was complete and correct. Samples were delivered to the laboratory by the client. Custody seals were not used. The laboratory stated samples were received intact, and the bottle labels agreed with the COC. No other anomalies were noted.

Holding Time/Preservation

The samples were analyzed within the technical holding times and were properly preserved except GL-2-20251210 arrived at pH of 5. Lab attempted to adjust pH to <2, but the amber bottle was too full to add preservative. Samples were analyzed within the 7-day holding time for unpreserved water and the primary and duplicate sample both agreed. No results qualified.

Laboratory Quality Assurance/Quality Control (QA/QC)

Initial and Continuing Calibration Verification (ICV/CCV)

Not independently verified during abbreviated Stage 2A validation with access to only the Level 2 lab report. The lab did not flag any sample results having an associated ICV/CCV outside of specified control limits.

Method Blanks

Method blanks were performed per lab batch and no analytes were detected or did not affect qualification of samples.

Reporting Limits

Reporting limits were not verified against project-specific requirements.

Sample Dilutions

Reported sample dilutions were reviewed and detected analytes were reported from a sample analysis with the lowest dilution. Some samples required extraction/re-extraction at reduced volumes due to matrix/internal standard recovery issues.

Surrogate Spikes/Labeled Standards

Surrogates or labeled standards were added to field and QC samples as required per the method where applicable. Sample surrogate percent recoveries were within QC acceptance limits, or a greater ratio of surrogates were within QC acceptance limits (example: 2 out of 3 surrogates).

Matrix Spike (MS)/Matrix Spike Duplicates (MSD)

The MS and MSD analyses performed on SDG samples met all QC acceptance criteria for percent recovery and relative percent difference (RPD) where required per the method.

Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

An LCS was analyzed for each batch and all recoveries were within QC acceptance criteria where required per the method.

Laboratory Duplicates

Laboratory duplicate analyses were analyzed where required and all recoveries were within QC acceptance criteria where required per the method.

Target Compound Identification

All target compound identifications were within validation criteria for relative retention times, characteristic ions, and relative ion abundances where applicable.

Tentatively Identified Compounds (TIC)

No results were reported as TICs as a part of this SDG.

Field QA/QC

Field Duplicates

One field duplicate was collected as part of this SDG. Results were within control limits.

Equipment Blanks

No equipment blanks were collected and analyzed as part of this SDG.

Trip Blanks

No trip blanks were collected and analyzed as part of this SDG.

SDG Overall Assessment

The data found in this report complied with the data quality objectives as specified. The data, as qualified, are acceptable to use for decision-making purposes. No results were rejected. Data qualifiers are summarized in the following table (results qualified as U due to being non-detect were not included in the table below):

Field Sample ID	Analyte	Result	Qualifier	Validation Code
GL-2-20251210	#2 Diesel	0.362	J	QHD
GL-200-20251210	#2 Diesel	0.347	J	QHD

Overall Assessment

The data found in this report complied with the data quality objectives as specified. The data, as qualified, are acceptable to use for decision-making purposes. In total, 6 results were reviewed from one SDG. The overall completeness for this event was 100 percent, as no results were rejected.

Definitions of Qualifiers

The following table lists each potential validation qualifier and its associated definition.

Qualifier	Definition
U	The analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
J	The reported result is an estimated value.
J+	The reported result is an estimated value, but the result may be biased high.
J-	The reported result is an estimated value, but the result may be biased low.
UJ	The analyte was not detected and is reported as less than the LOD or as defined by the client. However, the associated numerical value is approximate.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.
NJ	The analyte has been “tentatively identified” or “presumptively” as present, and the associated numerical value is the estimated concentration in the sample.
R	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Exclusion of the data is recommended.

Definitions of Validation Codes

The following table lists possible validation codes and their associated definitions.

Code	Definition
BRL	Below reporting limit
HTE	Holding time exceeded
INT	Interference
FDP	Field duplicate RPD outside of control limits
LCS	Laboratory control sample/Laboratory control sample duplicate outside of quality control limits
LDP	Laboratory duplicate sample analysis outside of quality control limits
MSD	Matrix spike/Matrix spike duplicate outside of quality control limits
PRF	Professional judgment
SUR	Surrogate/labeled standard outside of quality control limits
MBK	Method blank contamination
TIC	Tentatively identified compound
CCV	Continuing calibration verification analysis outside of quality control limits
FBK	Field blank contamination (Rinse Blank, Trip Blank, etc…)
SPV	Sample preservation outside of quality control limits
TSP	Total Solids < 30%
ERL	Elevated reporting limit (not due to sample preparation dilution)
EMC	Estimated maximum possible concentration (EMPC)
QHD	Result indicated possible weathering or degradation

Blank Contamination Actions

The following table lists the standard guidelines (with high-resolution noted in parentheses) for applying qualifiers due to blank contamination.

Blank Result	Sample Result	Action
< RL	< RL	Report at RL & qualify U
	> RL, < 5X (2X) Blank Result	Report at sample result & qualify U
	> RL, < 10X (5X) Blank Result	Report at sample result & qualify J+
	> RL, > 10X (5X) Blank Result	No qualification
> RL	< RL	Report at RL & qualify U
	> RL, < 5X (2X) Blank Result	Report at sample result & qualify U
	> RL, < 10X (5X) Blank Result	Report at sample result & qualify J+
	> RL, > 10X (5X) Blank Result	No qualification