



# SOIL SAMPLING AND ANALYSIS SUMMARY REPORT

I-5, SR 522 VICINITY TO SR 527 ETL

## PREPARED FOR:

Adrian Zoodsma Skanska  
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## PREPARED BY:

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Oct. 10, 2025



October 10, 2025

Mr. Zoodsma

**SKANSKA**

18911 North Creek Parkway S, Suite 300  
Bothell, WA 98011

**Subject: Soil Sampling and Analysis Summary Report  
I-405, SR 522 Vicinity to SR 527 ETL  
King County Parks/former BNSF Rail Line Parcel, Bothell, WA**

Dear Mr. Zoodsma

Atlas is pleased to present this report describing our findings and recommendations associated with the in-situ soil sampling performed at the King County Parks/former BNSF Rail Line Parcel, Bothell, Washington (Herein referred to as A5).

If you have any questions, please call us at (407) 733-4367.

Respectfully submitted,

**Atlas Technical Consultants LLC**

Mike Foster  
Environmental Compliance Manager

Mika Miyamoto  
Deputy Environmental Compliance Manager

Attachment: Soil Sampling and Analysis Summary Report

Distribution: Adrian Zoodsma, Travis Cox, Scott Turner



## **EXECUTIVE SUMMARY**

Based on the analytical results of the sampling event conducted on September 24, 2025, the stockpiles at the railroad grade were determined to be Class 2 and Class 3 soils. Based on Washington Department of Ecology (herein: Ecology)'s 2016 Guidance for Remediation of Petroleum Contaminated Sites, Table 12.1, Class 2 soils are soils with residual levels of petroleum hydrocarbons that could have adverse impacts on the environment in some circumstances. Class 3 soils contain moderate levels of petroleum hydrocarbons that could have adverse impacts on the environment unless re-used in carefully controlled situations. Soil in Class 2 and Class 3 soils can be reused in specific circumstances if they meet all criteria outlined in Ecology's 2016 Guidance, Tables 12.2, including that soils should not be placed in or directly adjacent to wetlands or surface water.

All samples met Class 2 soil criteria, with exception of the sample collected from TP-2, at 4 feet below ground surface (ft bgs); these results met Class 3 criteria. In this sample, arsenic also exceeded MCTA Level A Cleanup Standards (20 milligrams per kilogram), at 23.6 milligrams per kilogram.

During excavation, Atlas recommends either segregating excavated soils into Class 2 and Class 3 and managing them as separate piles, or excavating and stockpiling all soils together for disposal as Class 3 soils. If the second option is selected, Atlas recommends submitting current results to a permitted landfill, and completing any additional characterization required prior to disposal.

## **1. BACKGROUND, PURPOSE, AND SCOPE OF SERVICES**

The Washington State Department of Transportation (WSDOT) acquired a temporary construction easement on the King County/Former BNSF rail line parcel in Bothell, Washington (Herein referred to as the parcel) for the purpose of constructing the I-405, Brickyard to SR527 Improvement Project (Project). The parcel is situated on the south bank of the Sammamish River, underneath the I-405 bridges. This area is a former BNSF railroad right of way. Railroad materials are known to contain petroleum, creosote, and heavy metals, and a previous investigation adjacent to the currently proposed excavation identified petroleum and heavy metals on-site. While the major components of the rail line have long been removed from this area, residual contaminants are still present in soils and further identification of contaminant concentrations can support future management of soils at the site.

Based on the Appendix E09 - Hazardous Material Reports of the RFP regarding the former rail line facility, the site was considered a low impact risk due to the defined limitations of the Project. Initially, the parcel was only to be used for staging and minor activities. Based on recommendations and requirements from project materials, if construction activities requiring excavation are proposed or implemented, any soil generated during these activities must be characterized to determine its use in accordance with Washington State Department of Ecology.



Skanska requested Atlas perform in-situ soil sampling to determine the presence of, and extent of, contamination within the proposed excavation area underneath the westbound SR-522 to southbound I-405 collector-distributor bridge. An estimated 3000 cubic yards (CY) of soil is planned for disposal or re-use.

The Scope of services provided is summarized below, outlined in the Sampling and Analysis Plan (SAP), submitted September 15, 2025 for King County South Sammamish Parcel.

- Collect discrete in-situ soil samples at six different locations along the proposed excavation boundary within the King County Parks/former BNSF rail line parcel boundary
- Submit samples for laboratory analysis.
- Review available data.
- Compare soil analytical results to appropriate regulatory limits.
- Prepare a summary report describing the findings and recommendations regarding this sampling event.

See **Figure 1** for a site map of the stockpile locations on the parcel.

## 2. FIELD ACTIVITIES

On September 24<sup>th</sup>, 2025, soil sampling activities were conducted according to the procedures outlined in the SAP Section 4.0 Field Screening and Soil Sampling Procedures. Atlas met Skanska excavator operators and site workers to conduct test-pit excavations at the six locations outlined in the approved SAP. While excavating to depth, Atlas recorded visual, olfactory observations, as well as soil type, texture, color, and other relevant soil characteristics in a field log. Atlas used a calibrated photo-ionization detector (PID) to collect organic vapor readings from soils via the baggie headspace screening method at regular intervals, and recorded values in parts-per-million by volume (ppmv). Based on observations during excavation, Atlas selected depths to collect discrete soil samples.

A total of twelve (12) discrete soil samples were collected; three samples were collected from test-pits 4 through 6 at a maximum depth of 7 feet below ground surface (ft bgs), and one sample was collected from test pits 1 through 3, at a maximum depth of 4 ft bgs (**Table 1**).

The samples were packaged in the appropriate sampling containers, placed in a cooler on ice, then transported to the Alliance Technical Group laboratory in Seattle, WA for analysis. Soil samples were analyzed for gasoline, diesel range, and lube oil total petroleum hydrocarbons by Washington Department of Ecology Method NWTPH-Dx and -Gx, for polyaromatic hydrocarbons (PAHs) by EPA Method 8270E-SIM, for select volatile organic compounds (benzene, toluene, ethylbenzene, toluene, and total xylenes – BTEX) by EPA Method 8260D, and RCRA 8 Metals by EPA Method 6020B. A chain of custody was completed and transmitted along with the samples to the analyzing laboratory for documentation of delivery and receipt by the laboratory. Sampling locations and the associated screening results are documented on the attached **Figure 1** and in the Field Log which is included as **Appendix I**.



### 3. FINDINGS

Field observations noted the soils transitioned from a medium-coarse, brown sand to a dense, light-brown/tan clay with some silt around 2-3 ft bgs and extended to the base of the excavation along the southern side of the proposed excavation area (TP-4 through TP-6). The clay layer contained rust-red staining, which can be indicative of the high water table mark in soils. At TP-1, the clay layer began at 0.5 ft bgs. The clay layer was not encountered at TP-2, nor at TP-3. Atlas screened soils with a PID every 1-2 feet; no readings exceeded 0.0 ppmv. No visual staining or olfactory observations indicated the presence of petroleum contamination.

Analytical results were characterized into 4 soil re-use classes (Class 1, 2, 3 and 4) which are outlined below, based on Ecology's 2016 Guidance (Table 12.1 and 12.2) and MTCA Level A Cleanup Levels.

- Class 1: No evidence of contamination and can be reused on-site based on testing and geotechnical properties.
- Class 2: Low levels of contamination that exceed natural background levels but below Ecology's MTCA Cleanup levels.
- Class 3: Moderate levels of contamination that exceed Ecology's MTCA Cleanup levels.
- Class 4: Higher levels of contamination that exceed MTCA Methods A cleanup levels and may contain F-listed waste that require handling and disposal as Dangerous Waste.

Based on the analytical results, TP-1, TP-3, TP-4, TP-5, and TP-6 can be categorized as Class 2; no analytes exceeded MTCA Level A Cleanup standards. TP-2 is categorized as Class 3 due to three compounds meeting Class 3 levels, and one compound, Arsenic, exceeded the MTCA Level A Cleanup Level (**Table 2**).

Class 2 Soils can be used as backfill at cleanup sites, fill in commercial or industrial areas, or road and bridge embankment constructions, given that the soils are:

- Placed the highest water mark, or, if not known, placed 10 feet above the water table
- Not placed within 100 feet of any private drinking water well or within the 10-year wellhead protection area of a public water supply well
- Not placed in or directly adjacent to a wetland/surface water where contact with water is possible
- Not placed under a surface water infiltration facility or septic drain

Class 3 Soils are soils with moderate levels of residual petroleum contamination and PAHs that could have adverse impacts on the environment. Class 3 soil may be re-used on-site if it meets all conditions described in Class 2, as well as:

- Should be a maximum of 2 feet thick to minimize potential for leaching or vapor impacts.
- Not be placed under a surface water infiltration facility or septic drain field



- When exposed, runoff from area in use should be contained or treated to prevent entrance to storm drains, surface water or wetlands

If Class 2 soils meet criteria outlined above, the soils could be re-used as backfill at cleanup sites above the water table, as fill in commercial or industrial areas above the water table, or as road and bridge embankment construction in areas above the water area. Class 3 soils, if all criteria are met, can be re-used as pavement base material under public and private paved streets and roads, and as material under commercial industrial parking lots.

Copies of the Analytical Laboratory Results and completed chain-of-custody are provided in **Appendix II**.

#### **4. CONCLUSIONS AND RECOMMENDATIONS**

Soil sample results from TP-2 meet Class 3 criteria, as well as exceed MTCA Level A Cleanup levels for Arsenic. All other soil sample results meet Class 2 criteria, and do not exceed any MTCA Cleanup Levels. Atlas recommends either:

- 1) Segregate soils excavated in the vicinity of TP-2 (up to the extent of the other sample locations), and manage that soil as Class 3 soils – the other soils excavated could be considered Class 2 soils. Skanska could then assess their ability to meet on-site re-use criteria for Class 2 soils and engage the services of a landfill for disposal recommendations for Class 3 soils. This option would require additional resources up-front during excavation and additional time required for two separate management plans. Disposal costs may be lower overall, if Class 2 soils are able to be re-used on-site.
- 2) Excavation of all soils without segregation, for disposal at a landfill. Combining soils would likely dilute the higher concentrations from TP-3. If the landfill required additional waste characterization, the results of the diluted soils may support lower cost for disposal of all soils. This option would mean all soils are treated similarly by selected landfill, and unless additional testing occurs, the highest laboratory results may be applied to all soils. This option also requires less resources, as soils are not being managed separately.

Atlas also recommends outreach to landfills to determine if any additional analysis is required prior to submitting soils for acceptance, and that the landfill itself is permitted to accept the material.

#### **5. LIMITATIONS**

The scope of services described herein was intended to provide additional information regarding the presence of Petroleum Hydrocarbons, VOCs, PAHs and RCRA 8 Metals within proposed

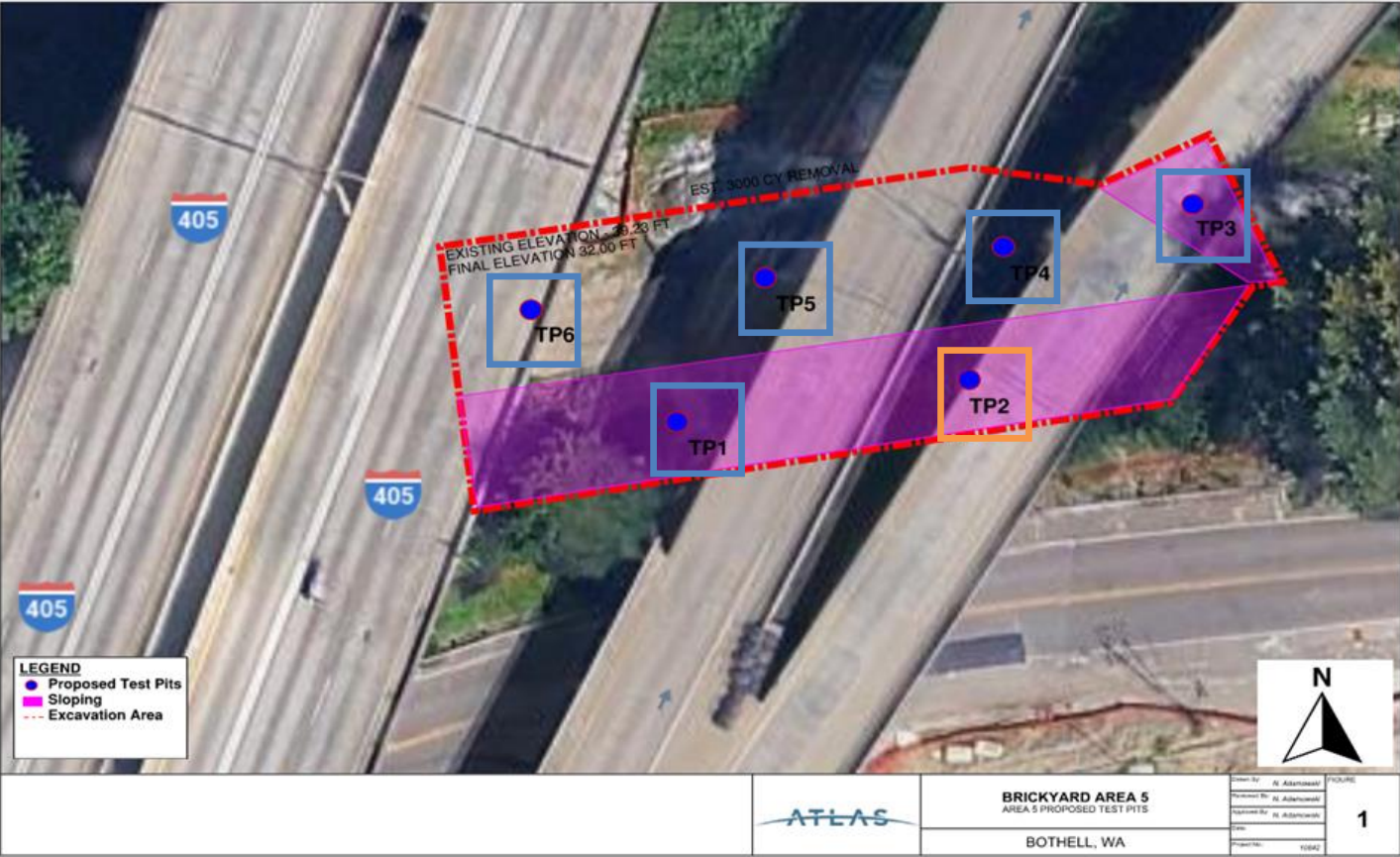


excavation in A5. This scope collected discrete soil samples from six locations, at depths extending to 7 ft bgs in three locations and 4 ft in three locations – as such, data presented can only describe the soils analyzed – additional samples would be required for full site characterization. If the proposed excavation extends beyond the limits of the test pits horizontally or vertically, additional data may be required to confirm results align with previous data.

This work was not designed to identify all potential concerns or to eliminate all risk associated with the subject Property. Even the most rigorous professional assessments may fail to identify all existing conditions. This work will not provide a guarantee regarding site contamination and may not generate sufficient data to accurately define the lateral and vertical extent of contamination. This work does not include other services not specifically described in the scope of services presented above.

Property activities and regulations beyond Atlas control could change at any time after the completion of our sampling. Therefore, Atlas observations, findings, and opinions can be considered valid as of the property visit and at the locations where samples were collected and tested.

Our report may be used only by the client and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions, (both on-site and off-site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use the generated report shall notify Atlas of such intended use. Based on the intended use of the report, Atlas may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Atlas from any liability resulting from the use of the report by any unauthorized party. No warranty, express or implied, is made



**Figure 1: Soil Test Pit Locations and Soil Categories .**  
Blue boxes indicate Class 2 soils, while the orange box indicates Class 3 Soils.



**Table 1**  
Test Pit Location Information  
Brickyard Area A5  
Skanska I405, SR 522 Vicinity To SR 527 ETL  
Bothell, Washington  
Atlas PN: 3181

Test Pit ID	Location Description	Latitude:	Longitude:	Sample IDs	Sample Depths (ft bgs)	Max PID (ppmv)
TP-1	Along slope, south western side of proposed excavation	47.75646136	-122.18485795	TP-1-4	4	0.0
TP-2	Along slope, south-eastern side of proposed excavation	47.75642372	-122.18460247	TP-2-4	4	0.0
TP-3	Northeastern corner of proposed excavation	47.75665655	-122.18424574	TP-3-4	4	0.0
TP-4	Northeastern middle of proposed excavation	47.75658105	-122.18466584	TP-4-3	3	0.0
				TP-4-5	5	0.0
				TP-4-7	7	0.0
TP-5	Northwestern middle of proposed excavation	47.75656978	-122.18448646	TP-5-3	3	0.0
				TP-5-5	5	0.0
				TP-5-7	7	0.0
TP-6	Northwestern corner of proposed excavation	47.75657406	-122.18477078	TP-6-3	3	0.0
				TP-6-5	5	0.0
				TP-6-7	7	0.0

Notes:

Coordinates obtained using UTM Geo Map application, created by Geodesy Engineers, © Y2 Technology  
UTM Geo Map application utilizes Google Maps software  
Coordinates presented in Decimal Degrees

**Table 2**  
Select Soil Analytical Results  
Brickyard Area A5  
Skanska I405, SR 522 Vicinity To SR 527 ETL  
Bothell, Washington  
Atlas PN: 3181

Sample ID	Analyte	ECOLOGY SOIL REUSE CATEGORIES				MTCA CLEANUP STANDARDS		Result (mg/kg)
		1	2	3	4	A - Unrestricted	A - Industrial	
TP-1-4	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.0055961
TP-1-4	Arsenic	--	--	--	--	20	20	7.04
TP-1-4	Barium	--	--	--	--	16,000	--	148
TP-1-4	Cadmium	--	--	--	--	2	2	0.128
TP-1-4	Chromium	--	--	--	--	2,000	--	46
TP-1-4	Copper	--	--	--	--	--	--	31
TP-1-4	Lead	<17	17-50	>50-220	<220	250	1000	6.68
TP-1-4	Mercury	--	--	--	--	2	2	0.0545
TP-1-4	Nickel	--	--	--	--	--	--	56.2
TP-1-4	Selenium	--	--	--	--	--	--	0.541
TP-1-4	Silver	--	--	--	--	400	--	ND<0.126
TP-1-4	Zinc	--	--	--	--	400	--	73.1
TP-1-4	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.01096
TP-1-4	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<13.1
TP-1-4	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.637
TP-1-4	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<45.9
TP-1-4	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.0049
TP-1-4	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.00675
TP-1-4	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0117
TP-1-4	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.01803
TP-2-4	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.109648
TP-2-4	Arsenic	--	--	--	--	20	20	23.6
TP-2-4	Barium	--	--	--	--	16,000	--	183
TP-2-4	Cadmium	--	--	--	--	2	2	0.583
TP-2-4	Chromium	--	--	--	--	2,000	--	44.5
TP-2-4	Copper	--	--	--	--	--	--	50.5
TP-2-4	Lead	<17	17-50	>50-220	<220	250	1000	178
TP-2-4	Mercury	--	--	--	--	2	2	0.0616
TP-2-4	Nickel	--	--	--	--	--	--	51
TP-2-4	Selenium	--	--	--	--	400	--	0.651
TP-2-4	Silver	--	--	--	--	400	--	ND<0.128
TP-2-4	Zinc	--	--	--	--	--	--	266
TP-2-4	Naphthalene	See Total Naphthalenes				5	5	ND<0.00338
TP-2-4	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.01086
TP-2-4	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<13.1
TP-2-4	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.751
TP-2-4	Lube Oil	<100	100-200	>200-500	>500	2000	2000	259
TP-2-4	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00578
TP-2-4	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.00796
TP-2-4	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0138
TP-2-4	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.02129
TP-3-4	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.0049684

TP-3-4	Arsenic	--	--	--	--	20	20	2.87
TP-3-4	Barium	--	--	--	--	16,000	--	59.7
TP-3-4	Cadmium	--	--	--	--	2	2	0.0871
TP-3-4	Chromium	--	--	--	--	2,000	--	23.6
TP-3-4	Copper	--	--	--	--	--	--	18.2
TP-3-4	Lead	<17	17-50	>50-220	<220	250	1000	4.11
TP-3-4	Mercury	--	--	--	--	2	2	ND<0.00788
TP-3-4	Nickel	--	--	--	--	--	--	29.3
TP-3-4	Selenium	--	--	--	--	400	--	0.342
TP-3-4	Silver	--	--	--	--	400	--	ND<0.105
TP-3-4	Zinc	--	--	--	--	--	--	38.4
TP-3-4	Naphthalene	See Total Naphthalenes				5	5	ND<0.00303
TP-3-4	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.00973
TP-3-4	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<11.1
TP-3-4	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.607
TP-3-4	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<38.8
TP-3-4	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00467
TP-3-4	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.00643
TP-3-4	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0112
TP-3-4	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.01723
TP-4-3	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.00595485
TP-4-3	Arsenic	--	--	--	--	20	20	6.48
TP-4-3	Barium	--	--	--	--	16,000	--	128
TP-4-3	Cadmium	--	--	--	--	2	2	0.0766
TP-4-3	Chromium	--	--	--	--	2,000	--	52.3
TP-4-3	Copper	--	--	--	--	--	--	29.4
TP-4-3	Lead	<17	17-50	>50-220	<220	250	1000	5.88
TP-4-3	Mercury	--	--	--	--	2	2	0.0671
TP-4-3	Nickel	--	--	--	--	--	--	48.9
TP-4-3	Selenium	--	--	--	--	400	--	0.551
TP-4-3	Silver	--	--	--	--	400	--	ND<0.128
TP-4-3	Zinc	--	--	--	--	--	--	61.6
TP-4-3	Naphthalene	See Total Naphthalenes				5	5	ND<0.00363
TP-4-3	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.01166
TP-4-3	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<13.4
TP-4-3	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.625
TP-4-3	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<47
TP-4-3	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00481
TP-4-3	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.00663
TP-4-3	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0115
TP-4-3	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.01771
TP-4-5	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.0057165
TP-4-5	Arsenic	--	--	--	--	20	20	6.68
TP-4-5	Barium	--	--	--	--	16,000	--	153
TP-4-5	Cadmium	--	--	--	--	2	2	0.0809
TP-4-5	Chromium	--	--	--	--	2,000	--	55
TP-4-5	Copper	--	--	--	--	--	--	31.8
TP-4-5	Lead	<17	17-50	>50-220	<220	250	1000	7.15
TP-4-5	Mercury	--	--	--	--	2	2	0.0825
TP-4-5	Nickel	--	--	--	--	--	--	55.2
TP-4-5	Selenium	--	--	--	--	400	--	0.56

TP-4-5	Silver	--	--	--	--	400	--	ND<0.127
TP-4-5	Zinc	--	--	--	--	--	--	72.4
TP-4-5	Naphthalene	See Total Naphthalenes				5	5	ND<0.00349
TP-4-5	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.01119
TP-4-5	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<13.3
TP-4-5	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.63
TP-4-5	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<46.7
TP-4-5	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00484
TP-4-5	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.00667
TP-4-5	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0116
TP-4-5	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.01786
TP-4-7	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.0061445
TP-4-7	Arsenic	--	--	--	--	20	20	7.46
TP-4-7	Barium	--	--	--	--	16,000	--	185
TP-4-7	Cadmium	--	--	--	--	2	2	0.119
TP-4-7	Chromium	--	--	--	--	2,000	--	56.7
TP-4-7	Copper	--	--	--	--	--	--	40
TP-4-7	Lead	<17	17-50	>50-220	<220	250	1000	8.77
TP-4-7	Mercury	--	--	--	--	2	2	0.0637
TP-4-7	Nickel	--	--	--	--	--	--	65.5
TP-4-7	Selenium	--	--	--	--	400	--	0.721
TP-4-7	Silver	--	--	--	--	400	--	ND<0.123
TP-4-7	Zinc	--	--	--	--	--	--	90.7
TP-4-7	Naphthalene	See Total Naphthalenes				5	5	ND<0.00375
TP-4-7	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.01204
TP-4-7	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<13.6
TP-4-7	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.667
TP-4-7	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<47.5
TP-4-7	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00513
TP-4-7	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.00706
TP-4-7	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0122
TP-4-7	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.01893
TP-5-3	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.00575465
TP-5-3	Arsenic	--	--	--	--	20	20	7.7
TP-5-3	Barium	--	--	--	--	16,000	--	165
TP-5-3	Cadmium	--	--	--	--	2	2	0.0926
TP-5-3	Chromium	--	--	--	--	2,000	--	55.6
TP-5-3	Copper	--	--	--	--	--	--	27.3
TP-5-3	Lead	<17	17-50	>50-220	<220	250	1000	8.14
TP-5-3	Mercury	--	--	--	--	2	2	0.0518
TP-5-3	Nickel	--	--	--	--	--	--	48.8
TP-5-3	Selenium	--	--	--	--	400	--	0.558
TP-5-3	Silver	--	--	--	--	400	--	ND<0.122
TP-5-3	Zinc	--	--	--	--	--	--	63.7
TP-5-3	Naphthalene	See Total Naphthalenes				5	5	ND<0.00351
TP-5-3	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.01127
TP-5-3	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<13
TP-5-3	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.572
TP-5-3	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<45.8
TP-5-3	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00439
TP-5-3	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.00605



TP-5-3	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0105
TP-5-3	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.01617
TP-5-5	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.00604665
TP-5-5	Arsenic	--	--	--	--	20	20	6.77
TP-5-5	Barium	--	--	--	--	16,000	--	184
TP-5-5	Cadmium	--	--	--	--	2	2	0.139
TP-5-5	Chromium	--	--	--	--	2,000	--	51.7
TP-5-5	Copper	--	--	--	--	--	--	44.4
TP-5-5	Lead	<17	17-50	>50-220	<220	250	1000	8.78
TP-5-5	Mercury	--	--	--	--	2	2	0.0589
TP-5-5	Nickel	--	--	--	--	--	--	68.1
TP-5-5	Selenium	--	--	--	--	400	--	0.599
TP-5-5	Silver	--	--	--	--	400	--	ND<0.135
TP-5-5	Zinc	--	--	--	--	--	--	92.1
TP-5-5	Naphthalene	See Total Naphthalenes				5	5	ND<0.00369
TP-5-5	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.01184
TP-5-5	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<13.8
TP-5-5	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.698
TP-5-5	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<48.5
TP-5-5	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00537
TP-5-5	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.0074
TP-5-5	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0128
TP-5-5	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.01985
TP-5-7	Arsenic	--	--	--	--	20	20	4.81
TP-5-7	Barium	--	--	--	--	16,000	--	153
TP-5-7	Cadmium	--	--	--	--	2	2	0.0787
TP-5-7	Chromium	--	--	--	--	2,000	--	50.9
TP-5-7	Copper	--	--	--	--	--	--	27.1
TP-5-7	Lead	<17	17-50	>50-220	<220	250	1000	6.29
TP-5-7	Mercury	--	--	--	--	2	2	0.0615
TP-5-7	Nickel	--	--	--	--	--	--	53.1
TP-5-7	Selenium	--	--	--	--	400	--	0.546
TP-5-7	Silver	--	--	--	--	400	--	ND<0.127
TP-5-7	Zinc	--	--	--	--	--	--	68.1
TP-5-7	Naphthalene	See Total Naphthalenes				5	5	ND<0.00353
TP-5-7	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.01133
TP-5-7	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<12.9
TP-5-7	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.623
TP-5-7	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<45.4
TP-5-7	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00479
TP-5-7	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.0066
TP-5-7	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0115
TP-5-7	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.01769
TP-6-3	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.0046789
TP-6-3	Arsenic	--	--	--	--	20	20	3.49
TP-6-3	Barium	--	--	--	--	16,000	--	98.2
TP-6-3	Cadmium	--	--	--	--	2	2	0.0897
TP-6-3	Chromium	--	--	--	--	2,000	--	30.6
TP-6-3	Copper	--	--	--	--	--	--	20.4
TP-6-3	Lead	<17	17-50	>50-220	<220	250	1000	3.63
TP-6-3	Mercury	--	--	--	--	2	2	ND<0.00804

TP-6-3	Nickel	--	--	--	--	--	--	35.7
TP-6-3	Selenium	--	--	--	--	400	--	0.315
TP-6-3	Silver	--	--	--	--	400	--	ND<0.107
TP-6-3	Zinc	--	--	--	--	--	--	41.1
TP-6-3	Naphthalene	See Total Naphthalenes				5	5	ND<0.00285
TP-6-3	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.00916
TP-6-3	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<11.3
TP-6-3	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.549
TP-6-3	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<39.6
TP-6-3	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00422
TP-6-3	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.00582
TP-6-3	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0101
TP-6-3	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.01554
TP-6-5	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.00567785
TP-6-5	Arsenic	--	--	--	--	20	20	4.86
TP-6-5	Barium	--	--	--	--	16,000	--	160
TP-6-5	Cadmium	--	--	--	--	2	2	0.161
TP-6-5	Chromium	--	--	--	--	2,000	--	52.6
TP-6-5	Copper	--	--	--	--	--	--	28.8
TP-6-5	Lead	<17	17-50	>50-220	<220	250	1000	7.6
TP-6-5	Mercury	--	--	--	--	2	2	0.0575
TP-6-5	Nickel	--	--	--	--	--	--	56.4
TP-6-5	Selenium	--	--	--	--	400	--	0.581
TP-6-5	Silver	--	--	--	--	400	--	ND<0.118
TP-6-5	Zinc	--	--	--	--	--	--	82.5
TP-6-5	Naphthalene	See Total Naphthalenes				5	5	ND<0.00346
TP-6-5	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.01112
TP-6-5	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<13.3
TP-6-5	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.577
TP-6-5	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<46.6
TP-6-5	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00444
TP-6-5	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.00611
TP-6-5	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0106
TP-6-5	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.01632
TP-6-7	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.0058304
TP-6-7	Total cPAHs	<0.05	0.05-0.1	>0.1-2	>2	--	--	0.00578675
TP-6-7	Arsenic	--	--	--	--	20	20	6.2
TP-6-7	Barium	--	--	--	--	16,000	--	153
TP-6-7	Cadmium	--	--	--	--	2	2	0.0911
TP-6-7	Chromium	--	--	--	--	2,000	--	56.6
TP-6-7	Copper	--	--	--	--	--	--	35.2
TP-6-7	Lead	<17	17-50	>50-220	<220	250	1000	6.75
TP-6-7	Mercury	--	--	--	--	2	2	0.0715
TP-6-7	Nickel	--	--	--	--	--	--	59.7
TP-6-7	Selenium	--	--	--	--	400	--	0.54
TP-6-7	Silver	--	--	--	--	400	--	ND<0.13
TP-6-7	Zinc	--	--	--	--	--	--	71.4
TP-6-7	Naphthalene	See Total Naphthalenes				5	5	ND<0.00355
TP-6-7	Total Naphthalenes	<0.05	0.05-5	<=5	>5	--	--	ND<0.01141
TP-6-7	Diesel Range Organics	<25	25-200	>200-500	>500	2000	2000	ND<13.7
TP-6-7	Gasoline Range Organics	<5	5-30	>30-100	>100	100	100	ND<0.828

TP-6-7	Lube Oil	<100	100-200	>200-500	>500	2000	2000	ND<48.1
TP-6-7	Benzene	<0.005	0.005-0.03	<=0.03	>0.03	0.03	0.03	ND<0.00636
TP-6-7	Ethylbenzene	<0.005	0.005-6	<=6	>6	6	6	ND<0.00877
TP-6-7	Toluene	<0.005	0.005-7	<=7	>7	7	7	ND<0.0152
TP-6-7	Total Xylenes	<0.015	0.015-9	<=9	>9	9	9	ND<0.02346

**Notes:**

Samples collected 9/24/2025 and analyzed via EPA Methods SW8270SIM, 8260D, 6020B,

NWTPH-Dx, and NWTPH-Gx

Soil Re-use Categories, Table 12.1, *Guidance for Remediation of Petroleum Contaminated Sites*,

Washington Department of Ecology, 2016

Green highlighted value indicates Category 1 Blue highlighted value indicates Category 2

Light Orange value indicates Category 3 Dark Orange value indicates Category 4

ND> indicates non-detect less than the method mg/Kg = micrograms per kilogram

**Bold, Red** value indicates the value exceeds the MTCA Level A Cleanup Standard (Specified), Unrestricted or Industrial

cPAHs = Carcinogenic Polyaromatic Hydrocarbons

Total cPAH calculated via Environmental Protection Agency guidance:

Each of the seven carcinogenic PAHs were multiplied by their EPA-designated

Toxic Equivalency Factor (TEF) and summed. Non-detect concentrations are included via

multiplying the method detection limit by one-half and by its TEF, and summing.

APPENDIX I  
FIELD NOTES