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October 30, 2024

Washington State Department of Ecology
Northwest Region Office
PO Box 330316
Shoreline, Washington 98133-9716

Attention: Jing Song

Subject: Request for No Further Action at the following Property:
Former Southgate Oil Site, Ecology VCP No. NW3327
23428 Pacific Highway South
Kent, Washington 98032
King County Parcel: 2500600480
Sound Transit Federal Way Link Extension Parcel FL209
GeoEngineers File No. 4082-072-00

On behalf of Sound Transit, GeoEngineers is submitting the attached Post-Remediation Groundwater Compliance Monitoring Report summarizing September 2024 groundwater investigation activities at the former Southgate Oil Site. The Sound Transit property is located at 23438 Pacific Highway South, Kent, Washington, and is identified by Sound Transit as Federal Way Link Extension (FWLE) project parcel FL209. The Ecology VCP ID is NW3327. Sound Transit is requesting that the Washington State Department of Ecology (Ecology) review the information submitted and provide an opinion and No Further Action (NFA) determination for the completed Site cleanup.

The Sound Transit contact is as follows:

- Name: Ross Stainsby, Sr. Environmental Planner, Sound Transit
- Mailing address: 401 South Jackson Street, Seattle, Washington 98104-2826
- Email address: ross.stainsby@soundtransit.org
- Phone number: 206-553-3607

Prior site investigation and remediation activities are summarized in GeoEngineers' VCP Application and Request for Opinion for the Southgate Oil Site dated May 17, 2022, as well as in the attached report. Ecology determined that groundwater characterization was necessary where deep soil contamination was remediated in 2020. This refers specifically to the area of 2020 remedial excavation where two soil samples (209-PEX-15-30 and 209-PEX-16-30) collected at 30 feet bgs at the base of excavation in the central portion of the Site, contained diesel concentrations of 1,400 mg/kg and 1,960 mg/kg, respectively. These concentrations are below the Model Toxics Control Act (MTCA) Method A soil cleanup level of 2,000 mg/kg.

From 2020 to 2023 the parcel was used as a construction staging yard for the FWLE. The northern portion of the parcel is now developed with new right-of-way (ROW), South 234th Street, with adjacent new sidewalks, landscaping and subsurface utilities. The southern portion of the parcel remains in use as a construction staging area for the FWLE. The elevated FWLE guideway crosses over the eastern portion of the parcel. The ROW will belong to the City of Kent in the future.

In September 2024 soil sampling was conducted beneath the 2020 remedial excavation samples with elevated diesel concentrations. The exploration encountered excavated backfill to a depth of approximately 21 feet bgs. Soil samples were analyzed from depths of approximately 40, 50, 60 and 65 feet bgs. A low concentration of diesel (240 mg/kg) was detected in the sample from 40 to 41 feet bgs. Soil samples from depths of 50 to 65 feet were non-detect for diesel-range hydrocarbons.

The purpose of the 2024 exploration was to assess groundwater beneath the 2020 remedial excavation area at FL209. The exploration was completed to a depth of 65 feet bgs. No evidence of wet soil conditions or perched shallow groundwater was observed. Therefore, it is reasonable to conclude that a minimum separation distance between the previous contamination at FL209 at 30 feet bgs, and possible groundwater could be 35 feet or greater. Also, soil samples from beneath the excavation area indicate the contaminant of concern (diesel) has not migrated downward substantially below a depth of 30 feet bgs.

Based on the previous and recent soil sample results and the lack of perched groundwater beneath the area of excavation, it is unlikely that groundwater at FL209 is impacted by the historical contamination. In our opinion, no further investigation or remediation is warranted at the FL209 parcel. On behalf of Sound Transit, we request a no further action determination for the parcel.

Sincerely,
GeoEngineers, Inc.

Marsi M. Beeson

Marsi Beeson
Senior Environmental Scientist

Dana Carlisle

Dana L. Carlisle PE
Principal

MMB:DLC:atk

cc: Susan Penoyar, Environmental Manager, Sound Transit

Attachment(s):

Post-Remediation Compliance Monitoring, Former Southgate Oil Site, Federal Way Link Extension Parcel FL209, King County Tax Parcel 2500600480, 23428 Pacific Highway South, Kent, Washington, dated October 30, 2024.

Post-Remediation Compliance Monitoring

Former Southgate Oil
VCP Project No. NW3327
23428 Pacific Highway South
King County Tax Parcel 2500600480
Kent, Washington
(Sound Transit Federal Way Link Extension Parcel FL209)

for
Sound Transit

October 30, 2024

1101 Fawcett Avenue, Suite 200
Tacoma, Washington 98402
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GeoEngineers

Post-Remediation Compliance Monitoring

Former Southgate Oil
VCP Project No. NW3327
23428 Pacific Highway South
King County Tax Parcel 2500600480
Kent, Washington
(Sound Transit Federal Way Link Extension Parcel FL209)

File No. 4082-072-00
October 30, 2024

Prepared for:

Sound Transit
401 South Jackson Street
Seattle, Washington 98104-2826

Attention: Susan Penoyar, Environmental Manager

Prepared by:

GeoEngineers, Inc.
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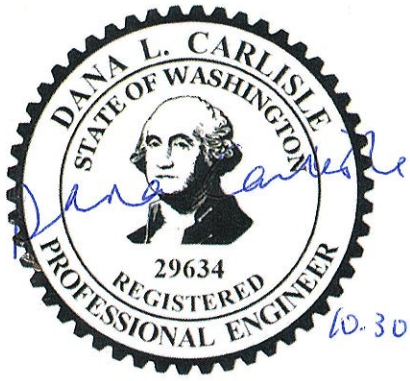
Marsi M. Beeson
Senior Environmental Scientist

Dana L. Carlisle, PE
Principal



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Acronyms and Abbreviations

ASTM	ASTM International
bgs	below ground surface
cPAH	carcinogenic polycyclic aromatic hydrocarbons
CUL	cleanup level
Ecology	Washington State Department of Ecology
ESA	Environmental Site Assessment
FWLE	Federal Way Link Extension
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
NAVD 88	North American Vertical Datum of 1988
NFA	No Further Action
NWTPH	Northwest Total Petroleum Hydrocarbon
PAH	polycyclic aromatic hydrocarbons
PCS	petroleum contaminated soil
PID	photoionization detector
ppm	parts per million
PVC	polyvinyl chloride
ROW	right-of-way
TPH	Total Petroleum Hydrocarbons
TPHDRO/ORO	diesel-range total petroleum hydrocarbons
TPH-GRO	gasoline-range total petroleum hydrocarbons
UST	underground storage tank
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WAC	Washington Administrative Code

1.0 Introduction

This report presents post-remediation compliance monitoring results for the Former Southgate Oil property at 23428 Pacific Highway South in Kent, Washington, King County Tax Parcel 2500600480 (subject property or Site), identified by Sound Transit as Federal Way Link Extension (FWLE) parcel FL209 (Vicinity Map, Figure 1). The Site is identified by Washington State Department of Ecology (Ecology) as Voluntary Cleanup Program (VCP) Project No. NW 3327. The property is currently owned by Sound Transit. Southgate Oil was a bulk fuel distribution facility that operated on the parcel from approximately the 1940s to 1999. An auto repair business continued operation on the property until approximately 2019 when Sound Transit began their FWLE construction activities. The northern portion of the parcel is developed with new right-of-way (ROW), South 234th Street, with adjacent new sidewalks, landscaping and subsurface utilities. The southern portion of the parcel is currently used by Sound Transit's FWLE contractor as a construction staging area. The elevated FWLE guideway crosses over the eastern portion of the parcel (Site Plan, Figure 2).

Prior Site investigation and remediation activities are summarized in Section 1.2 of this report. Sound Transit enrolled in the VCP in 2022 and requested an opinion and No Further Action (NFA) for the completed Site cleanup. Ecology requested groundwater characterization in an area of the Site where deep soil contamination was remediated in 2020. The request specifically refers to the central portion of the Site where two soil samples (209-PEX-15-30 and 209-PEX-16-30) collected at 30 feet bgs at the base of the 2020 remedial excavation contained diesel concentrations of 1,400 milligrams per kilogram (mg/kg) and 1,960 mg/kg, respectively. The detected concentrations in these two samples are below the Model Toxics Control Act (MTCA) Method A soil cleanup level of 2,000 mg/kg.

1.1 PURPOSE AND SCOPE OF SERVICES

The purpose of the post-remediation compliance monitoring was to evaluate soil and groundwater beneath the remedial excavation to confirm the successful completion of the Site cleanup action. The scope of services is described below:

- Locate all public and private utilities in advance of drilling in accordance with state law.
- Retain a licensed drilling company to install a monitoring well in accordance with state law using sonic drilling technology.
- Drill one monitoring well boring within and below the backfilled remedial excavation to observe for the presence of groundwater.
- Collect continuous cores samples from the exploration during drilling from about 5 feet below ground surface (bgs) to the bottom of the boring at 65 feet bgs.
- Visually classify soil in general accordance with ASTM International (ASTM) D 2488 and maintain a detailed log of the exploration.
- Field screen soil samples at approximate 2.5-foot depth intervals using visual, water sheen and photoionization detector (PID) headspace vapor measurements to assess the possible presence of petroleum hydrocarbons and petroleum-related volatile organic compounds (VOCs).

- Submit four soil samples for analysis of diesel and oil-range Total Petroleum Hydrocarbons (TPHDRO/ORO) by the NWTPH-Dx method.
- Check for the presence of groundwater in the monitoring well approximately 24 hours after installation.
- Decommission the monitoring well in accordance with Washington Administrative Code (WAC) 173-160-460.
- Containerize solids and water generated during well installation in 55-gallon steel drums labeled in accordance with applicable Sound Transit guidance and coordinate appropriate off-site transport and disposal of these materials.

1.2 SUMMARY OF PRIOR INVESTIGATIONS AND CLEANUP ACTIONS

The Southgate Oil facility historically had approximately 11 underground storage tanks (USTs), multiple fuel dispensers and an auto repair garage on the subject property. Nine USTs and two dispenser islands were removed in 2000 by a prior owner of the property. Thirty-eight soil samples were collected from the UST excavations and dispenser island areas at depths between 2 and 15 feet bgs. Multiple samples from the UST excavations and dispenser islands areas had TPH-DRO concentrations greater than the MTCA Method A soil cleanup level. Approximately 550 cubic yards of petroleum contaminated soil (PCS) were removed in 2000.

In 2002 the remaining Southgate Oil two USTs and dispenser islands were removed. The 2002 remedial excavation removed approximately 748 tons of PCS to a maximum depth of 25 feet bgs. PCS with TPH-DRO concentrations up to 4,800 mg/kg remained along the northern property boundary. PCS at this location was subsequently removed in connection with remedial excavation activities completed by the owner of the property adjacent to the north.

In June and July 2017, 47 soil samples from depths between 0.5 and 23 feet bgs were collected from 12 soil borings completed in connection with Sound Transit's pre-purchase environmental investigation activities. Nine soil samples had concentrations of TPH-DRO exceeding the MTCA Method A cleanup level. The analytical result for one soil sample reported a concentration of gasoline-range TPH (TPH-GRO) exceeding the MTCA Method A cleanup level for gasoline; however, the laboratory qualified the petroleum hydrocarbons in this sample as resembling a heavier petroleum hydrocarbon product that overlapped into the range quantified as GRO. Naphthalene, carcinogenic PAHs (cPAHs), cadmium, lead and mercury were also detected in several samples at concentrations greater than the respective MTCA Method A cleanup levels.

In 2020, 29 soil samples were collected from 17 test pits to further characterize the areas of remaining contamination to be remediated. TPH-DRO/ORO concentrations exceeded the MTCA Method A cleanup level in eight of the test pit soil samples obtained from depths ranging between 1.5 and 15 feet bgs. In addition, methylene chloride and cPAH concentrations exceeded the MTCA Method A cleanup levels in soil samples collected from the vicinity of the service garage.

Several phases of remedial excavation were conducted at the Site in 2020. Approximately 6,400 tons of PCS were removed from multiple excavations on the property. Confirmation soil samples were collected from the limits of the 2020 excavations; contaminants of concern were less than MTCA Method A cleanup levels. The highest TPH-DRO concentrations in the base of the central excavation at 30 feet bgs were 1,400 and 1,960 mg/kg, below the MTCA Method A cleanup level of 2,000 mg/kg.

As of 2020, all former Southgate Oil and service garage facilities and associated underground utilities were removed. The parcel was utilized as a contractor staging yard from 2020 to 2023. The northern portion of the parcel is developed with new right-of-way (ROW), South 234th Street, with adjacent new sidewalks, landscaping and subsurface utilities. The southern portion of the parcel is currently used by Sound Transit's FWLE contractor as a construction staging area. The elevated FWLE guideway crosses over the eastern portion of the parcel (Site Plan, Figure 2).

In 2022, the Phase II ESA and remediation reports were submitted to Ecology with a request for NFA. Ecology responded with a request to collect a groundwater sample below the 2020 remedial excavation area due to the presence of the elevated TPH-DRO concentrations at 30 feet bgs as described above. The post-remediation investigation activities summarized in this report were performed in response to Ecology's request for groundwater compliance sampling. The post-remediation compliance monitoring well FL209-MW1 documented in this report was installed in the central portion of the new roadway. The exploration needed to be completed approximately 6 to 8 feet west of the deepest point of the 2020 excavation due to the presence of several underground utilities that constrained the ability to complete FL209-MW1 at the originally planned location.

2.0 Physical Setting

2.1 TOPOGRAPHY

The current ground surface elevation is approximately 395 feet above mean sea level (North American Vertical Datum of 1988 [NAVD 88], msl). Surface topography is generally flat.

2.2 SOIL CONDITIONS

Soil conditions observed during this and past investigations consist of sand with silt and gravel and silty sand with gravel (fill) to a depth of approximately 20 feet bgs. The fill is underlain by silty, fine to coarse sand with fine to coarse gravel (glacial till) to the total depth explored, approximately 65 feet bgs. Photographs of soil cores collected at various depths from the September 2024 boring are presented in Figures 3b and 3c.

2.3 GROUNDWATER CONDITIONS

The 2020 remedial excavation was completed to a maximum depth of 30 feet bgs and did not encounter groundwater. In September 2024, monitoring well exploration FL209-MW1 was advanced to a depth of 65 feet bgs, which is 35 to 45 feet below the base of the backfilled 2020 remedial at the central portion of the previous excavation (see Figure 2). No evidence of wet soil conditions or perched groundwater was observed in the September 2024 boring.

Our understanding of groundwater conditions at the Site is also informed by observations from geotechnical and construction drilling and boring in the Site vicinity. Two drilled shafts completed to 60 feet bgs directly southeast of FL209 in connection with columns for the FWLE guideway did not encounter perched groundwater and reported approximately one foot of water at 60 feet bgs in the base of only one of the two drilled shafts. No water was observed in a second drilled shaft adjacent to FL209. Nearby off-property explorations (see Figure 2) include a geotechnical exploration completed in 2016 approximately 30 feet east of FL209 (identified as FWLE-D02) where evidence of groundwater was observed at 78 feet bgs. Based on this available information about groundwater depths, we infer that vertical separation between the contaminated soil (now removed) and groundwater at FL209 could be in the range of 30 feet or more.

3.0 Contaminants of Concern and MTCA Cleanup Levels

Based on the post-remediation soil confirmation samples collected in 2020, potential contaminants remaining at concentrations less than MTCA Method A cleanup levels at the FL209 property are diesel and oil-range total petroleum hydrocarbons (TPH-DRO/ORO) associated with historical operations on the property.

The chemical analytical data for samples obtained during this investigation were compared to the respective MTCA Method A cleanup level.

4.0 September 2024 Investigation Results

4.1 SUBSURFACE EXPLORATION PROGRAM

One soil exploration was completed as a monitoring well on the subject property on September 11, 2024. The approximate exploration location is shown in Figure 2. Photographs of the exploration location and soil cores from which samples were analyzed are presented as Figure 3a through 3c.

Holt Services, Inc. performed sonic drilling services as a subcontractor to GeoEngineers. Sonic drilling was used to reach the target depth of 65 feet bgs after attempts with hollow stem auger drilling met refusal at shallower depths. The subsurface exploration was monitored by a representative of GeoEngineers who visually classified and field screened soil samples collected from the exploration for evidence of petroleum and volatiles. The exploration log and the field exploration program are presented in Appendix B. Subsurface conditions and field screening results are shown in the exploration log presented in Appendix B.

Soil samples were submitted to OnSite Environmental, Inc. in Redmond, Washington for chemical analysis. The soil chemical analytical results are summarized in Table 1. The laboratory report is presented in Appendix C.

4.2 SUBSURFACE OBSERVATIONS AND FIELD SCREENING

Soil conditions observed during drilling are described in Section 2.2. Monitoring well FL209-MW1 was installed in the boring at a depth of 65 feet bgs.

Field screening evidence of residual petroleum (elevated headspace vapors) was observed in soil samples collected from FL209-MW1 at depths of 22.5 to 23 bgs (339 parts per million [ppm]) and 32 to 47 feet bgs (ranged between 2.1 and 158.7 ppm). Headspace vapors were not observed in soil between 25 and 30 feet bgs. The original planned location for FL209-MW-1 was the central area of the 2020 remedial excavation where the base of excavation was 30 feet bgs. Field observations of soil during FL209-MW1 drilling indicated that FL209-MW-1 was in a location corresponding to where the remedial excavation base was approximately 22 to 23 feet bgs. The elevated headspace vapor readings in soil at 22 to 23 feet bgs are likely representative of the residual TPH-DRO at the base of the backfilled excavation for which chemical analyses completed in 2020 demonstrate, based on numerous confirmation soil samples results from this vicinity, that residual petroleum contamination at the base of the backfilled excavation complies with MTCA cleanup levels.

4.3 SOIL ANALYTICAL TESTING RESULTS

Four soil samples from depths of 40- 41, 50-51, 59-60 and 64-65 feet bgs were analyzed for TPH-DRO/ORO. TPH-DRO (240 mg/kg) was reported in the sample collected from the 40-41 foot bgs depth interval; this result is an order of magnitude lower than the MTCA Method A Cleanup Level of 2,000 mg/kg. TPH-DRO and ORO were not detected in the other samples. The sample results are presented in Table 1 and shown in Figure 2.

4.4 GROUNDWATER MONITORING WELL INSTALLATION

No evidence of perched groundwater was observed during drilling. To further assess the potential for groundwater, a 2-inch-diameter polyvinyl (PVC) temporary monitoring well was placed in the exploration with screen extending between 55 and 65 feet bgs. Upon returning to the Site to check for groundwater on September 12, 2024, the well was found to be obstructed at 50 feet bgs, likely due to the casing coupling having been broken after the well installation was completed on September 11. Groundwater was not present in the well to a depth of 50 feet.

5.0 Conclusions

The September 2024 soil sampling conducted beneath the 2020 remedial excavation where elevated diesel concentrations were reported confirm diesel has not migrated downward substantially below a depth of 30 feet bgs. Soil samples were analyzed from depths of approximately 40, 50, 60 and 65 feet bgs. A low concentration of diesel (240 mg/kg) was detected in the sample from 40 to 41 feet bgs. Soil samples from depths of 50, 60 and 65 feet were non-detect for diesel and oil-range hydrocarbons. Therefore TPH-DRO concentrations decrease by nearly an order of magnitude between 30 and 40 feet bgs (1,920 mg/kg to 240 mg/kg) confirming that the contaminant of concern diesel/DRO is not highly mobile in a vertical direction in the dense glacial till. There is no soil vapor to indoor air migration pathway based on the following: 1) remedial excavations have been completed, 2) the substantial depth below ground surface where soil with residual TPH-DRO is present, 3) residual TPH-DRO concentrations are less than MTCA cleanup levels, and 4) the surface is paved for use as future ROW. Furthermore, there are no underground utility confined spaces (e.g. vaults) within the ROW corresponding to the area of the backfilled remedial excavation.

No evidence of wet soil conditions or perched shallow groundwater was observed to a depth of 65 feet bgs. Based on the September 2024 investigation observations and prior construction observations during installation of nearby drilled shafts, it is reasonable to conclude a minimum separation distance between the previous contamination at FL209 (30 feet bgs), and possible groundwater is 30 feet or greater. Based on the results of the remedial actions demonstrating MTCA compliance and the post-remediation groundwater investigation findings, an NFA determination is warranted for the Southgate Oil Site.

6.0 Limitations and Guidelines for Use

These Limitations provide information to help you manage your risks with respect to the use of this report. Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these "Limitations and Guidelines for Use" apply to your project or site.

This report has been prepared for the exclusive use of Sound Transit and their agents. This report is not intended for use by others, and the information contained herein is not applicable to other properties. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty, express or implied, applies to this report.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to the appendix titled "Report Limitations and Guidelines for Use" for additional information pertaining to use of this report.

7.0 References

GeoEngineers Inc. 2017. AE 0044-12 WP 3.S, Phase I Environmental Site Assessment, FL-209 Draft 2, Tax Parcel 2500600480, March 2017. Prepared for Sound Transit.

GeoEngineers Inc. 2018. AE 0044-12 3.7.N, Phase II Environmental Site Assessment Report, Sound Transit - Federal Way Link Extension Parcel FL-209, Former Southgate Oil, 23428 Pacific Highway South, Kent, Washington 98032, September 21, 2018. Prepared for Sound Transit.

Nowicki & Associates, Inc. 2001. Progress Site Assessment Southgate Oil Site, 23428 Pac Hwy S, Kent, WA, May 3, 2001.

O'Neill Service Group, 2000. Soil Characterization and Remediation Report, Parcel FL209, Federal Way Link Extension Project, 23428 Pacific Highway South, Kent, Washington, January 26, 2000. Prepared for Sound Transit.

Sound Environmental Strategies, Corp., 2002. Underground Storage Tank Decommissioning and Soil Remediation Project, 23428 Pacific Highway South, Kent, Washington, February 25, 2002.

Washington Department of Ecology, 2003. No Further Action determination letter, February 10, 2003 (Rescinded).

Washington Department of Ecology, 2006. Re: Further Action Determination under WAC 173-340-515(5) for the following Hazardous Waste Site, Southgate Oil, 23428 Pacific Hwy S, Kent, WA, Facility Site No: 84946863, VCP No.: NW0982, June 9, 2006.

Washington State Department of Ecology, 2007. Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC Washington State Department of Ecology Toxics Cleanup Program. Publication No. 94-06. April 1990, Revised October 12, 2007.

Washington State Department of Ecology, 2016. "Guidance for Remediation of Petroleum Contaminated Sites" Toxics Cleanup Program Publication No. 10-09-057. Revised June 2016.

Washington Department of Ecology, 2022. Re: Opinion pursuant to WAC 173-340-515(5) on Remedial Action for the following Hazardous Waste Site: Southgate Oil, 23428 Pacific Hwy South, Kent, Washington, 98032, Facility/Site No: 84946863, Cleanup Site ID: 6762, VCP Project No.: NW3327, June 15, 2022.

Tables

Table 1

Summary of Soil Chemical Analytical Results[1]

Post-Remediation Compliance Monitoring - Former Southgate Oil (Sound Transit FWLE Parcel FL209)

Kent, Washington

Boring Identification	FL209-MW1				MTCA Method A/B Cleanup Level[5]
Sample Identification[2]	FL209-MW1-40-41	FL209-MW1-50-51	FL209-MW1-59-60	FL209-MW1-64-65	
Sample Date	9/11/2024	9/11/2024	9/11/2024	9/11/2024	
Sample Start Depth (feet bgs)	40	50	59	64	
Sample End Depth (feet bgs)	41	51	60	65	
Field Screening - Headspace Vapor (ppm)	90.8	3.7	<1	<1	
Field Screening - Water Sheen Testing	SS	NS	NS	NS	
NWTPH-Dx[3] (mg/kg)					
Diesel-range hydrocarbons	**240**	27 U	28 U	26 U	2,000
Lube Oil-range hydrocarbons	55 U	53 U	56 U	52 U	2,000

Notes:

[1] Chemical analysis performed by OnSite Environmental, Inc., of Redmond, Washington.

[2] Sample ID = Parcel ID - exploration number - depth of sample [feet bgs]. FL209-MW1-40-41 = Parcel FL209, monitoring well 1, soil sample collected from a depth of 40 to 41 feet bgs

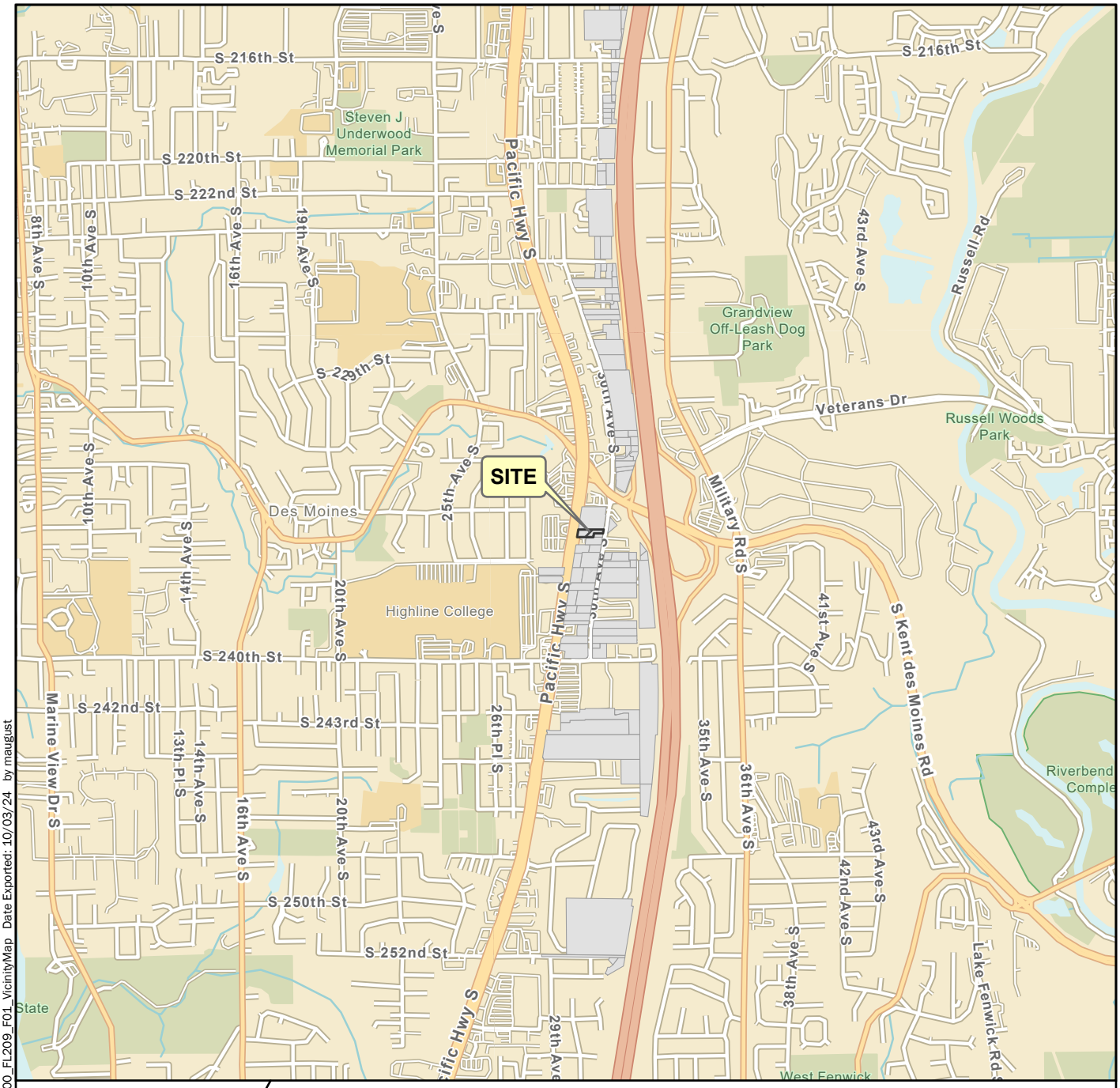
[3] Diesel- and lube oil-range petroleum hydrocarbons by Northwest Method NWTPH-Dx.

U = Analyte was not detected at or greater than the listed reporting limit.

Bold font type indicates that the analyte was detected at a concentration greater than the respective laboratory reporting limit.

bgs = below ground surface
MTCA = Model Toxics Control Act
NS = no sheen
mg/kg = milligrams per kilogram
NE = not established
N/A = not applicable
'"–" = not tested
'"–" = not tested

Figures



Source(s):
- ESRI

Coordinate System: NAD 1983 UTM Zone 10N

Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation as to the accuracy, completeness, or suitability of the figure, or data contained therein. The file containing this figure is a copy of a master document, the original of which is retained by GeoEngineers and is the official document of record.

Vicinity Map
FL209

Post-Remediation Groundwater Compliance Monitoring
Federal Way Link Extension
Washington

GeoEngineers

Figure 1

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Remedial excavation completed in 2020 to 30 feet bgs and no groundwater observed.

Pacific Highway 99

209-PEX-15-30/209-PEX-64-30

FL209-MW1

FL209-B8

209-PEX-16-30/209-PEX-65-30

FL-209

30th Ave S

FWLE-D02

Geotechnical Boring

FWLE Guideway

Date	Depth (feet bgs)	Analyte	Concentration (mg/kg)	Note
9/11/2024	40-41	Diesel	**240**	< MTCA
		Lube Oil	<55	--
	50-51	Diesel	<27	--
		Lube Oil	<53	--
	59-60	Diesel	<28	--
		Lube Oil	<56	--
	64-65	Diesel	<26	--
		Lube Oil	<52	--

Note:
1. No groundwater observed in FL209-MW1 in September 2024.

bing

Legend

- OSG 2020 Confirmation Sample
- GeoEngineers Phase II Boring
- GeoEngineers Compliance Monitoring Well
- Excavation Boundary
- Parcel Boundary
- Water Line
- Sewer Line

N

0 25

Feet

Source(s):
- Aerial from Bing Maps
- Excavation Boundaries digitized from OSG FL209/FL210 Contamination Figure 2

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Site Plan
FL209

Post-Remediation Groundwater Compliance Monitoring
Federal Way Link Extension
Kent, Washington

GeoEngineers

Figure 2

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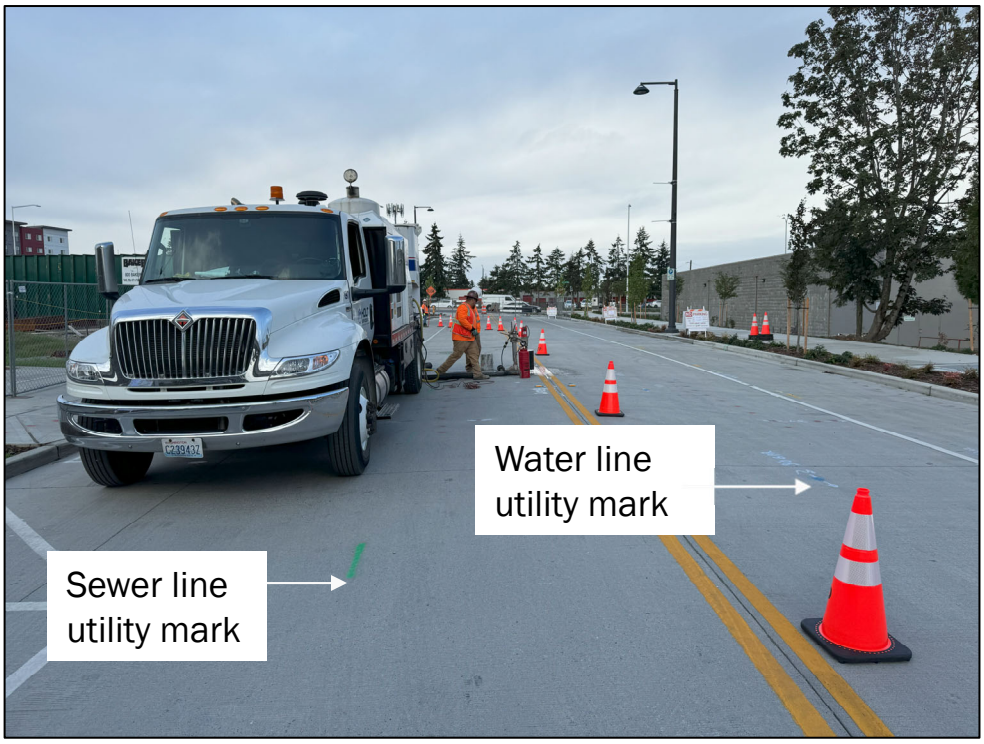


FL209-MW1 pre-drilling site conditions. S 234th Street occupies the parcel. View facing west.

FL209-MW1 concrete coring. View of elevated guideway, facing east.

Site Photographs September 2024 - Former Southgate Oil (Sound Transit Parcel FL209)

Post-Remediation Compliance Monitoring
Federal Way Link Extension
Kent, Washington

GeoEngineers

Figure 3a

004082-072-00 Date Exported: 09/23/2024

FL209-MW1 soil from sonic core drilling depths of 10, 20, 30 and 40 feet below ground surface.

FL209-MW1 soil from sonic core drilling depths of 40, 50 and 60 feet below ground surface.

Site Photographs September 2024 - Former Southgate Oil (Sound Transit Parcel FL209)

Post-Remediation Compliance Monitoring
Federal Way Link Extension
Kent, Washington

GeoEngineers

Figure 3b

FL209-MW1 soil from sonic core drilling depths of 60 and 65 feet below ground surface.

Site Photographs September 2024 - Former Southgate Oil (Sound Transit Parcel FL209)

Post-Remediation Compliance Monitoring
Federal Way Link Extension
Kent, Washington

GeoEngineers

Figure 3c

Appendices

Appendix A
Field Procedures

Appendix A
Field Procedures

GENERAL

Subsurface soil and groundwater conditions were evaluated by completing one boring (FL209-MW1) on September 11, 2024. The boring was completed using continuous-flight, sonic drilling equipment owned by Holt Services, subcontracted to GeoEngineers. The boring was completed to a depth of 65 feet. The approximate boring location is shown in the Site Plan, Figure 2. The boring was continuously monitored by representatives from our firm who reviewed and classified the soils encountered, obtained representative soil samples, observed groundwater conditions and prepared a detailed log of each exploration. Soils encountered in the boring were visually classified in general accordance with the classification system described in Figure A-1. A key to the boring log symbols is also presented in Figure A-1. The boring log is presented in Figure A-2. The boring log is based on our interpretation of the field and laboratory data and indicates the various types of soils and groundwater conditions encountered. The log also indicates the depths at which these soils or their characteristics change, although the change may actually be gradual. If the change occurred between samples, it was inferred.

Observations for evidence of groundwater were made during drilling. No evidence of groundwater was encountered during drilling.

UNDERGROUND UTILITY LOCATE

An underground utility locate was conducted within the area of the proposed boring location to identify any subsurface utilities and/or potential underground physical hazards prior to beginning drilling activities. An underground utility check consisting of contacting a local utility alert service and a private utility locating service was also performed.

SOIL SAMPLING

Non-dedicated sampling equipment was decontaminated before each sampling attempt with an Alconox® solution wash and a distilled water rinse. Soil samples selected for field screening and possible chemical analyses were removed from a sleeve lining the interior of the drilling flights using new nitrile gloves. Soil samples were placed in laboratory-prepared sample jars for chemical analysis.

Samples submitted for chemical analysis are shown on the boring logs. Soil samples were placed in a cooler with ice for transport to Onsite Environmental Inc., Redmond, Washington following standard chain-of-custody procedures.

FIELD SCREENING OF SOIL SAMPLES

Soil samples obtained from the borings were screened in the field for evidence of contamination using: (1) visual examination; (2) sheen screening; and (3) a photoionization detector (PID). The results of headspace and sheen screening are included on the boring logs and in Summary of Chemical Analytical Results, Table 1, for soil samples tested by chemical analysis.

Visual screening consists of inspecting the soil for stains indicative of petroleum-related contamination. Visual screening is generally more effective when contamination is related to heavy petroleum

hydrocarbons, such as motor oil or hydraulic oil, or when hydrocarbon concentrations are high. Sheen screening and headspace vapor screening are more sensitive methods that have been effective in detecting contamination at concentrations less than regulatory cleanup guidelines. Sheen screening involves placing soil in a pan of water and observing the water surface for signs of sheen. Sheen classifications are as follows:

- No Sheen (NS) — No visible sheen on water surface.
- Slight Sheen (SS) — Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil may produce a slight sheen.
- Moderate Sheen (MS) — Light to heavy sheen; may have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on water surface.
- Heavy Sheen (HS) — Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening involves placing a portion of the soil sample in a plastic sample bag or clean 4-ounce jar covered with aluminum foil. Air is captured in the bag or jar and the bag or jar is shaken to expose the soil to the trapped air. The probe of a PID is inserted in the bag or used to puncture the aluminum foil covering the jar and the instrument measures the concentration of combustible vapor in the air removed from the sample headspace. The PID measures concentrations in parts per million (ppm) and is calibrated to isobutylene. The PID is designed to quantify combustible gas and organic vapor concentrations up to 2,500 ppm. Field screening results are site-specific and vary with soil type, soil moisture content, temperature and type of contaminant.

Monitoring Well Construction

Drilling and construction of one groundwater monitoring well was performed by a Washington State licensed driller in accordance with the Minimum Standards for Construction and Maintenance of Wells (Chapter 173-160 Washington Administrative Code [WAC]). Monitoring well installation was observed by a GeoEngineers representative who maintained a detailed log of soil conditions, construction materials and well depths.

The monitoring well was constructed with 2-inch diameter, threaded Schedule 40 PVC slotted screen and blank casing. The well screen was 0.010-inch slot (10-slot) and 10-feet in length. A commercial filter pack consisting of medium (10/20) silica sand was placed around and approximately 1 to 2 feet above the top of well screen. Above the sand, an annular seal consisting of bentonite chips was placed. A concrete surface seal was placed from the ground surface to a depth of 1.5 to 2 feet bgs. The well was protected with a tamper-resistant, steel flush-mount surface monument. The top of the PVC riser pipe was fitted with a watertight locking cap. Monitoring well construction details are shown in Figure A-2 in Appendix A.

Sample Nomenclature

Soil samples collected from the borings were identified using the following identification system: FL#-MW#-depth, where FL# is the Sound Transit parcel number, MW# is the boring number and depth is the depth within the boring at which the specific sample was collected (e.g., FL209-MW1-40-41 was collected from parcel FL209, boring location MW1 at 40 to 41 feet bgs).

Investigation-Derived Waste

Soil and water investigation-derived waste were transferred to labelled 55-gallon steel drums and stored temporarily at the property pending characterization and coordination for approved disposal.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

Sampler Symbol Descriptions

- Modified California Sampler (6-inch sleeve) or Dames & Moore
- Standard Penetration Test (SPT)
- Shelby tube
- Piston
- Direct-Push
- Bulk or grab
- Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	SOD	Sod/Forest Duff
	TS	Topsoil

Groundwater Contact

- Measured groundwater level in exploration, well, or piezometer
- Measured free product in well or piezometer

Graphic Log Contact

- Distinct contact between soil strata
- Approximate contact between soil strata

Material Description Contact

- Contact between geologic units
- Contact between soil of the same geologic unit

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PL	Point load test
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
UU	Unconsolidated undrained triaxial compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

Key to Exploration Logs

GeoEngineers

Figure A-1

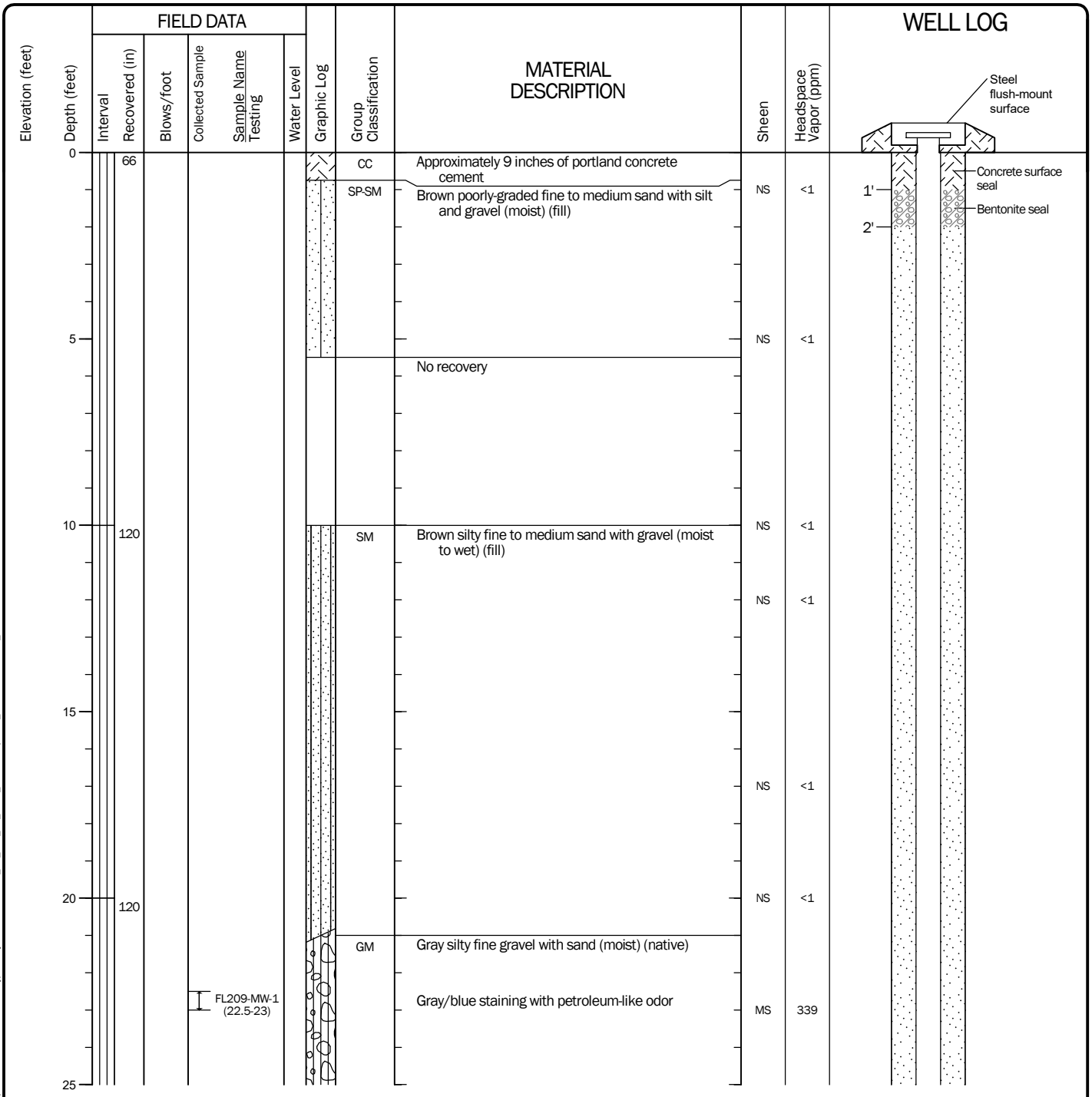
Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	9/11/2024	9/11/2024	65	MHN	MMB	Holt Services, Inc.	Sonic

Hammer Data	NA	Drilling Equipment	TSI-150
Surface Elevation (ft) Vertical Datum	Undetermined	Top of Casing Elevation (ft)	
Latitude Longitude	47.391168 -122.294241	Horizontal Datum	Decimal Degrees WGS84 (feet)

DOE Well I.D.: BPL-282
A 2-in well was installed on 9/11/2024 to a depth of 65 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
9/11/24	Dry	NA

Notes:



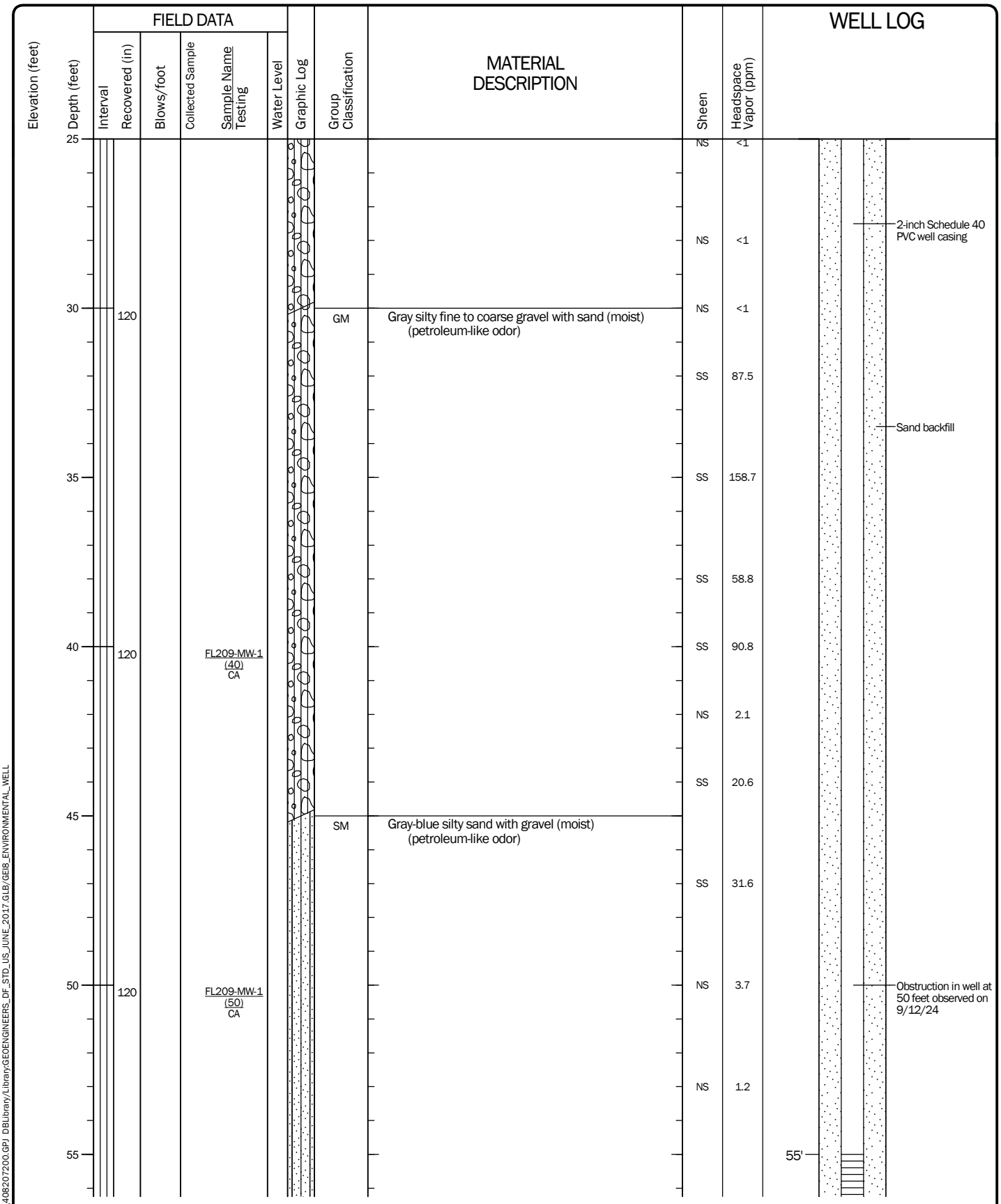
Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on hand-held GPS accurate to approximately 3 to 5 feet. Vertical approximated based on NA.

Log of Monitoring Well FL209-MW1

GeoEngineers

Project: Post-Remediation Compliance Monitoring
Project Location: King County Tax Parcel 2500600480, Kent, Washington
Project Number: 4082-072-00

Figure A-2
Sheet 1 of 3



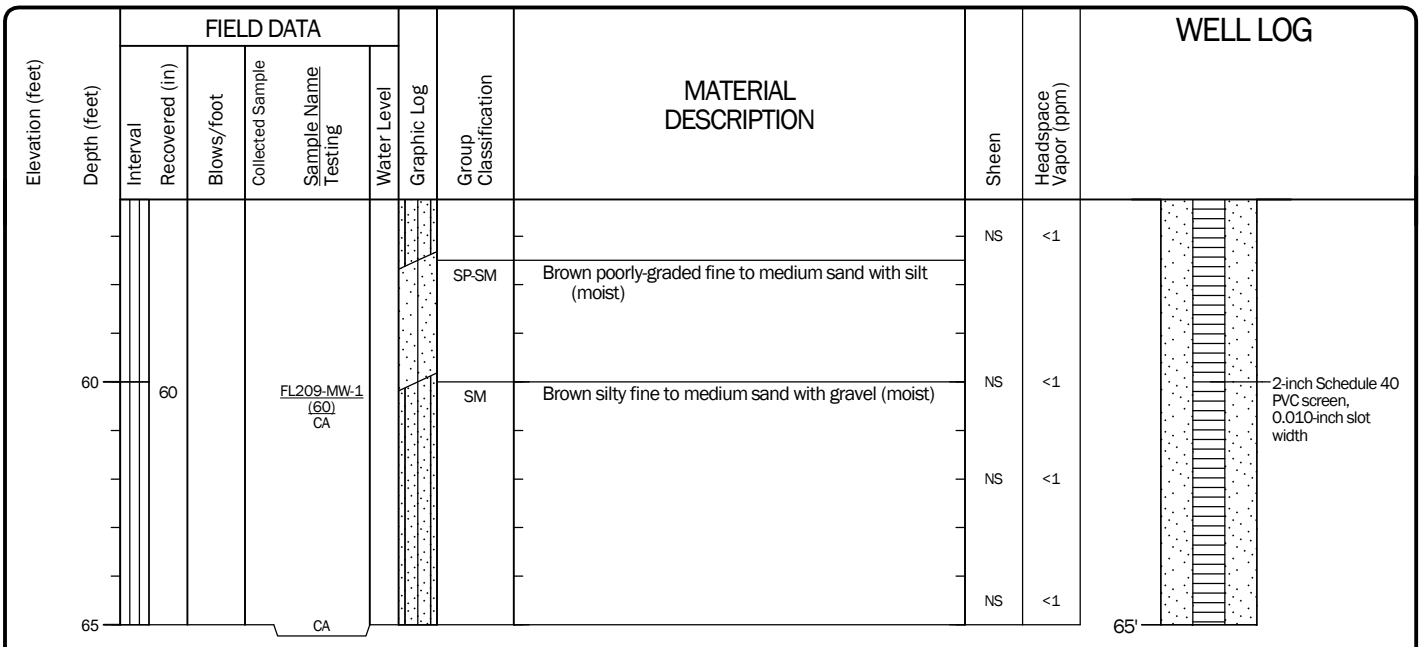
Date:10/7/24 Path:P:\4\4082072\GINT\408207200.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Log of Monitoring Well FL209-MW1 (continued)

GeoEngineers

Project: Post-Remediation Compliance Monitoring
Project Location: King County Tax Parcel 2500600480, Kent, Washington
Project Number: 4082-072-00

Figure A-2
Sheet 2 of 3



Log of Monitoring Well FL209-MW1 (continued)

GeoEngineers

Project: Post-Remediation Compliance Monitoring

Project Location: King County Tax Parcel 2500600480, Kent, Washington

Project Number: 4082-072-00

Figure A-2
Sheet 3 of 3

Appendix B
Chemical Analytical Data

Appendix B
Chemical Analytical Data

ANALYTICAL METHODS

Chain-of-custody procedures were followed during the transport of the groundwater samples to the analytical laboratory. The samples were held in cold storage pending extraction and/or analysis. The analytical results, analytical methods reference and laboratory quality control (QC) records are included in this appendix. The analytical results are also summarized in the text and tables of this report.

ANALYTICAL DATA REVIEW

The laboratory maintains an internal quality assurance program as documented in its laboratory quality assurance manual. The laboratory uses a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries and blank spike duplicate recoveries to evaluate the validity of the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The data quality goals were included in the laboratory reports. The laboratory compared each group of samples with the existing data quality goals and noted any exceptions in the laboratory report. Data quality exceptions documented by the accredited laboratory were reviewed by GeoEngineers and are addressed in the data quality exception section of this appendix.

ANALYTICAL DATA REVIEW SUMMARY

There were no data quality exceptions noted in the laboratory report. Based on our data quality review, it is our opinion that the sample results are considered of acceptable quality for their intended use in this report.

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 19, 2024

John Deeds
GeoEngineers, Inc.
1101 Fawcett Avenue South, Suite 200
Tacoma, WA 98402

Re: Analytical Data for Project 4082-072-00
Laboratory Reference No. 2409-153

Dear John:

Enclosed are the analytical results and associated quality control data for samples submitted on September 12, 2024.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 19, 2024
Samples Submitted: September 12, 2024
Laboratory Reference: 2409-153
Project: 4082-072-00

Case Narrative

Samples were collected on September 11, 2024 and received by the laboratory on September 12, 2024. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: September 19, 2024
Samples Submitted: September 12, 2024
Laboratory Reference: 2409-153
Project: 4082-072-00

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL209-MW1-40-41	09-153-01	Soil	9-11-24	9-12-24	
FL209-MW1-50-51	09-153-02	Soil	9-11-24	9-12-24	
FL209-MW1-59-60	09-153-03	Soil	9-11-24	9-12-24	
FL209-MW1-64-65	09-153-04	Soil	9-11-24	9-12-24	

Date of Report: September 19, 2024
Samples Submitted: September 12, 2024
Laboratory Reference: 2409-153
Project: 4082-072-00

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FL209-MW1-40-41**					
Laboratory ID:	09-153-01					
Diesel Fuel #2	**240**	28	NWTPH-Dx	9-16-24	9-16-24	
Lube Oil Range Organics	**ND**	55	NWTPH-Dx	9-16-24	9-16-24	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*75*	*50-150*				
Client ID:	**FL209-MW1-50-51**					
Laboratory ID:	09-153-02					
Diesel Range Organics	**ND**	27	NWTPH-Dx	9-16-24	9-16-24	
Lube Oil Range Organics	**ND**	53	NWTPH-Dx	9-16-24	9-16-24	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*75*	*50-150*				
Client ID:	**FL209-MW1-59-60**					
Laboratory ID:	09-153-03					
Diesel Range Organics	**ND**	28	NWTPH-Dx	9-16-24	9-16-24	
Lube Oil Range Organics	**ND**	56	NWTPH-Dx	9-16-24	9-16-24	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*67*	*50-150*				
Client ID:	**FL209-MW1-64-65**					
Laboratory ID:	09-153-04					
Diesel Range Organics	**ND**	26	NWTPH-Dx	9-16-24	9-16-24	
Lube Oil Range Organics	**ND**	52	NWTPH-Dx	9-16-24	9-16-24	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*81*	*50-150*				

Date of Report: September 19, 2024
Samples Submitted: September 12, 2024
Laboratory Reference: 2409-153
Project: 4082-072-00

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0916S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	9-16-24	9-16-24	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	9-16-24	9-16-24	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*74*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-176-02										
	ORIG	DUP									
Diesel Range Organics	**56.9**	**45.4**	NA	NA		NA		NA	22	40	
Lube Oil Range Organics	**578**	**511**	NA	NA		NA		NA	12	40	
Surrogate:											
o-Terphenyl						*75*	*71*	*50-150*			

Date of Report: September 19, 2024
Samples Submitted: September 12, 2024
Laboratory Reference: 2409-153
Project: 4082-072-00

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
FL209-MW1-40-41	09-153-01	**9**	9-13-24
FL209-MW1-50-51	09-153-02	**6**	9-13-24
FL209-MW1-59-60	09-153-03	**10**	9-13-24
FL209-MW1-64-65	09-153-04	**5**	9-13-24

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

X2 - Sample extract treated with a silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 4082-072-00
Project Name: Sound Transit Kent Des Moines
Project Manager: John Deeds
Sampled by: Max-Henry Nelson

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ■ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 09-153

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Project VOCs (1)	VOCs by 8260C + TICs	VOCs by 8260C	Alkalinity by EPA 310.2	TOC by SM 5310B	COD by EPA 410.4 (2)	Total Fe by EPA 6010D	Total and Dis Mn by EPA 6000 series (3)	Nitrate by EPA 353.2 (4)	Sulfate by ASTM D516-07	Sulfide by SM4500S2D (2)	Methane, Ethane, Ethene by RSK 175	Chloride by SM4500-Cl E			NWTPH-Dx						% Moisture
1	FL209-MW1-40-41	9/11/2024	1124	S	1																X						X
2	FL209-MW1-50-51	9/11/2024	1202	S	1																X						X
3	FL209-MW1-59-60	9/11/2024	1215	S	1																X						X
4	FL209-MW1-64-65	9/11/2024	1306	S	1																X						X

	Signature	Company	Date	Time
Relinquished	Max-Henry Nelson	GEI	9/12/24	1403
Received	Nichelle Bohm	OSE	9/12/24	1403
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐

Appendix C
Report Limitations and Guidelines for Use

Appendix C
Report Limitations and Guidelines for Use[1]

This appendix provides information to help you manage your risks with respect to the use of this report. Please confer with GeoEngineers if you need to know more about how these "Report Limitations and Guidelines for Use" apply to your project or property.

Read These Provisions Closely

It is important to recognize that environmental engineering and geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce the risk of misunderstandings or unrealistic expectations that lead to disappointments, claims and disputes.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

GeoEngineers has performed this Post-Remediation Groundwater Compliance Monitoring of the property at 23428 Pacific Highway South in Kent, Washington, King County Tax Parcel 2500600480, identified by Ecology as the Former Southgate Oil Site, and by Sound Transit as Federal Way Link Extension (FWLE) project parcel FL209, in general accordance with the scope and limitations of our On-Call for Environmental Due Diligence Studies, Contract No. RTA/01 0287-19 authorized under Task Order 012-00. This report has been prepared for the exclusive use of Sound Transit and their authorized agents. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

GeoEngineers structures its services to meet the specific needs of its clients. For example, an ESA study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. Use of this report is not recommended for any purpose or project other than as expressly stated in this report.

This Environmental Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the property at 23428 Pacific Highway South in Kent, Washington, King County Tax Parcel 2500600480. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this Project. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- Not prepared for you,
- Not prepared for your Project,
- Not prepared for the specific site explored, or
- Completed before Project changes were made.

1 Developed based on material provided by GBA, GeoProfessional Business Association; www.geoprofessional.org.

If changes to the Project or property occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity to review our interpretations and recommendations in the context of such changes. Based on that review, we can provide written modifications or confirmation, as appropriate.

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of Sound Transit and their authorized agents. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. Within the limitations of the agreed Project scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

Understand That Geotechnical Issues Have Not Been Addressed

Unless geotechnical engineering was specifically included in our scope of service, this report does not provide any geotechnical findings, conclusions, or recommendations, including but not limited to, the suitability of subsurface materials for construction purposes.

Do Not Separate Documentation from the Report

Environmental reports often include supplemental documentation, such as maps, figures and tables. Do not separate such documentation from the report. Further, do not, and do not permit any other party, to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.

Environmental Regulations Change and Evolve

Some substances may be present in the vicinity of the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or if more stringent environmental standards are developed in the future.

Uncertainty May Remain Even After This ESA is Completed

Performance of a ESA is intended to reduce uncertainty regarding the potential for contamination in connection with a property, but no ESA can wholly eliminate that uncertainty. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

Information Provided by Others

GeoEngineers has relied upon certain data or information provided or compiled by others in the performance of our services. Although we use sources that we reasonably believe to be trustworthy, GeoEngineers cannot warrant or guarantee the accuracy or completeness of information provided or compiled by others.

Subsurface Conditions Can Change

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the subject property, by new releases of hazardous substances, new information or technology that become available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

Soil and Groundwater End Use

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject property or reuse of the affected soil or groundwater on-site to evaluate the potential for associated environmental liabilities. GeoEngineers will not assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject property to another location, or the reuse of such soil and/or groundwater on-site in any instances that we did not recommend, know of, or control.

Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the subject property. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted and/or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ significantly from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final exploration logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions by others, the logs included in an environmental report should never be redrawn for inclusion in other design documents. Only photographic or electronic reproduction that preserves the entire original exploration log is acceptable, but separating logs from the report can increase the risk of potential misinterpretation.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this Project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.