Remedial Action Completion Report

A-1 Towing Facility

King County Tax Parcel No. 3223049048
18459 Des Moines Memorial Drive South
SeaTac, Washington



Prepared for:

Washington State Department of Transportation

September 10, 2025
Apex Project 40757.028

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Site:
SR 509 Completion, Stage 2
A-1 Towing Facility
18459 Des Moines Memorial Drive South
SeaTac, Washington

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Acronyms and Abbreviations

ARAR	Applicable, relevant, and appropriate requirements
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene and total xylenes
CFR	code of federal regulations
COCs	constituents of concern
cPAHs	carcinogenic polycyclic aromatic hydrocarbons
CUL	MTCA Method A cleanup level for unrestricted land use
Ecology	Washington State Department of Ecology
HASP	health and safety plan
IC	institutional controls
ID	Identification
mg/kg	milligrams per kilogram
MTCA	(Washington State) Model Toxics Control Act
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyls
PCS	petroleum contaminated soil
RAP	Remedial Action Plan
RACR	Remedial Action Completion Report
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
Site	Poulsbo RV
SR	State Route
TEE	Terrestrial Ecological Evaluation
TESC	Temporary Erosion and Sediment Control
TPH	total petroleum hydrocarbons
TPH-G	gasoline range total petroleum hydrocarbons
TPH-D	diesel range total petroleum hydrocarbons
UST	underground storage tank
VCP	Voluntary Cleanup Program
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
µg/L	micrograms per liter

1 INTRODUCTION

Apex Companies, LLC, by and through its wholly owned subsidiary PBS Engineering and Environmental LLC (Apex), has prepared this Remedial Action Completion Report (RACR) for the A-1 Towing Facility (Site) to document shallow subsurface remedial actions, including the excavation and removal of petroleum-impacted soil and soil impacted by the Tacoma Smelter Plume, conducted in April and May 2025. The work was performed in accordance with the Washington State Department of Ecology's (Ecology) Model Toxics Control Act (MTCA) cleanup regulations (Washington Administrative Code [WAC] Chapter 173-340).

During the initial subsurface investigation, Apex collected in-situ confirmation soil samples on an approximately 20-feet by 20-feet grid pattern in accordance with the Petroleum-Contaminated Soil Excavation & Removal Oversight and Confirmation Soil Sampling Plan (SAP), prepared by Apex in July 2024, and the Remedial Action Plan (RAP) for the Site, prepared in February 2025 to address the general requirements of Ecology's Cleanup Action Plan Checklist (Ecology, 2016a) (Appendix A).

The Site is registered with Ecology with the following information:

Site Name:	WA DOT Foreman also known as A-1 Towing
Site Address:	18459 Des Moines Memorial Drive South SeaTac, Washington 98148
Property Owner:	Washington State Department of Transportation
Ecology Facility Site Identification (ID):	90042
Ecology Cleanup Site ID:	15064
Ecology Voluntary Cleanup Program ID:	NW3362
Ecology Site Manager:	Christopher Maurer, PE
Site Cleanup Status:	Cleanup Started (No Further Action Request)

1.1 Background

The Site has been owned by Washington State Department of Transportation (WSDOT) since at least 2000 but was leased to several private parties over time. Reportedly, a tenant conducted industrial activities, including welding, at the Site between 2000 and 2016. In 2016, the Washington State Patrol (WSP) used a portion of the Site to dismantle seized vehicles. Additionally, A-1 Towing leased the Site as a towing yard, which involved vehicle storage throughout the property and vehicle repairs within a garage structure (former shop), which was demolished in July 2024 (see Figure 2).

1.2 Historical Remedial Action Activities

The objective of the remedial activities described in this report is to remove all potentially impacted soil until conditions are verified to comply with Ecology's MTCA and its implementing regulations, as defined in the Revised Code of Washington (RCW) Chapter 70.105D and the WAC Chapter 173-340, and to achieve No Further Action (NFA) status for the site from Ecology, signifying regulatory closure.

The following bullets summarize the historical subsurface investigations and remedial actions conducted at this Site. Comprehensive documentation of these investigations, remedial actions, and soil sampling results is provided in GeoEngineers' 2021/2022 Phase II Environmental Site Assessment (Appendix B), as well as in Apex's 2024 Tables 1 and 2, with analytical results included in Appendix C.

- In 2016 WSDOT conducted a Phase II Subsurface Investigation following the lease termination of the former welding tenant (Mr. Foreman, 2000 through 2016). The WSDOT Phase II investigation included soil sampling of areas with observed suspect petroleum impacted soil (Figure 2, areas identified as Area A, B, C and D). Analytical results indicated elevated concentrations of lube oil and arsenic in soil exceeding the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Cleanup Levels (CULs) in Area B and C, respectively.

- In 2017, WSDOT contracted Marine Vacuum Service Inc. to remediate areas of the Site with trash, debris and some soils with concentrations below MTCA Method A CULs. GeoEngineers noted that "It is unclear from this statement as to what soils were actually removed and no additional details were provided."

- In 2018, A-1 Towing graded site soils, including some contaminated ones. These soils were displaced from previously sampled areas A and B, resulting in a new stockpile just north of Area D.

- In March 2018, WSDOT collected four additional soil samples from Areas A, B, and a new location to assess potential grading with known or suspected soil contamination, or where displaced/graded soils seemed to have been consolidated into a stockpile by the lessee. Because Areas C and D lacked these indicators, no additional sampling was conducted there. The sample results did not exceed the MTCA Method A CULs.

- In September 2018, WSDOT contracted Marine Vacuum Service Inc. to conduct excavation activities to remediate areas that previously detected lube oil concentrations exceeding the MTCA Method A CULs and an area to remediate suspected contaminated materials in Area C and D. During remedial activities by soil excavation, soils were field screened using visual observation, olfactory and a photoionization detector (PID). Subsequently, WSDOT collected two additional confirmation soil samples in locations where the soils were excavated. Laboratory analytical results were either not detected at the laboratory reporting limit or were detected at concentrations below MTCA Method A CULs. Reportedly, clean soil was used to backfill the excavated area.

- According to a Phase II Environmental Site Assessment conducted in 2019, approximately 8.4 cubic yards of petroleum-impacted and suspected contaminated soil were removed from the Site. The analytical results from follow-up confirmation samples indicated that no contamination remained on the Site. Subsequently, WSDOT requested a No Further Action (NFA) determination from Ecology.

- Ecology responded to the request for an NFA determination, indicating that additional information would be necessary. This includes the depth of samples, groundwater samples (if encountered), and more accurate sample location information, as the previous report had conflicting depictions (Appendix A).

- In 2021, GeoEngineers conducted additional sampling at three areas (B, C, and D) around the existing structure on the A-1 Towing site to further evaluate potential contaminants related to past Site uses. The analytical results did not identify concentrations of gasoline (Gx), diesel and oil (Dx), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), or the eight Resource Conservation and Recovery Act (RCRA) metals exceeding the MTCA Method A CULs. Out of the nine soil samples analyzed, only two showed low concentrations of diesel, oil, and/or PAHs, which were below CULs. All other sample results were not detected above the laboratory reporting limits.

Groundwater was not encountered at the maximum depth explored, which was 15 to 20 feet below ground surface (bgs).

1.3 Current Remedial Action Activities

From July through September 2024, Apex conducted additional soil sampling across the entire Site, including Areas A, B, C, and D, as detailed in this report, to evaluate the conditions of the upper 18 inches of soil. According to project documentation, as part of the SR 509 development, WSDOT planned to excavate, remove, and dispose of the top 18 inches of soil from the northern, northeastern, and southwestern portions of the former on-site structure footprint, where contaminated soil had previously been identified. This excavation was intended to remove any remaining metals- or petroleum-impacted soil. Supplemental confirmation soil samples were also collected during this period to further evaluate shallow soil conditions. As part of SR 509 Stage 2 Completion Project, the Site will be permanently covered with at least 15 feet of embankment material.

2 SITE DESCRIPTION AND PHYSICAL SETTING

This section describes the physical characteristics of the Site and vicinity. Descriptions are derived from historical documents and explorations conducted for the WSDOT by APEX and others.

2.1 Location and Legal Description

The Site is located in the northeast quarter of Section 32, Township 23 North, Range 4 East of the Willamette Base and Meridian. The boundaries of the Site are described in Section 1.2. The Site is situated on the west side of King County Tax Parcel 3223049048, beyond the WSDOT right-of-way (ROW), and is commonly referred to by the address 18459 Des Moines Memorial Drive South. The Site is owned by WSDOT.

The Site encompasses approximately 0.7 acres and has an irregular shape, as shown in Figure 2.

2.2 Current and Future Use

Since the early 1960s, the Site has been utilized as a warehouse and vehicle maintenance shop facility. Currently, the Site is unoccupied and consists of vacant land. WSDOT acquired the property in 2000, and the majority of the Site will be incorporated into the expansion of SR 509 Completion.

2.3 Geologic Setting and Soil Descriptions

The Site is located within the Puget Sound Basin, which lies between the Cascade Range to the east and the Olympic Mountains to the west. The landscape configuration of the Puget Sound Basin was a consequence of multiple Pleistocene glaciations resulting in a series of north-trending, elongated ridges separated by deep troughs, the latter now occupied by marine waters or freshwater lakes or streams.

Review of available records indicated that during explorations, the soil observed at the Site generally included the following sequence of soil stratum layers (or horizons), listed as encountered from shallowest to deepest (interpreted from boring logs, GeoEngineers, 2021/2022):

Surface conditions at the Site primarily consist of fill gravel (approximately 3 to 4 inches thick). Subsurface exploration encountered soils composed of sand, silt, and varying gradations of sand and silt with occasional gravel, extending to the maximum explored depth of 15 to 20 feet bgs.

2.4 Hydrogeology

The Site is situated on a rise between the Green River valley to the east and Puget Sound to the west. Based on inference from site and local topography, shallow groundwater may locally flow in southeasterly or southwesterly directions. During 2021/2022 Geoengineers Phase II Environmental Site Assessment no groundwater was encountered to the maximum depth explored (15 to 20 feet bgs). However, according to

WSDOT 2016 subsurface investigation, groundwater depth varied across the Site; although, groundwater was encountered as shallow as 3 feet bgs in select locations. However, groundwater samples were not collected, as only limited shallow perched water was present at the time of investigation.

3 CONTAMINANTS OF CONCERN (COCS) AND REGULATORY CRITERIA

3.1 Contaminants of Concern (COCs)

Based on the known previous uses of the Site and the frequency at which contaminants were detected during environmental investigations, the following constituents have been established as COCs in soil at the Site:

- Gasoline-range petroleum hydrocarbons
- Diesel-range petroleum compounds
- Volatile Organic Compounds (VOCs), including benzene, toluene, ethylbenzene, and total xylene
- RCRA 8 Metals including arsenic, lead, and cadmium
- Apex notes that as part of the investigation, soil samples were collected throughout the Site to evaluate potential impacts from metals. Many of these samples were analyzed for the full suite of RCRA 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) to provide a comprehensive assessment of potential metals-related impacts. However, at select locations, only arsenic and lead analyses were performed to satisfy regulatory requirements specific to the Tacoma Smelter Plume cleanup program, as these two metals are the primary contaminants of concern for that program and are included within the RCRA 8 suite. Consequently, some samples were analyzed for the full RCRA 8 panel, while others were analyzed for a subset (e.g., arsenic and lead) or other analytical combinations, depending on the specific objectives and regulatory requirements of each sampling area.

3.2 Regulatory Criteria

This section discusses the selection of applicable or relevant and appropriate screening levels to evaluate the extent of contamination and potential risks to human health and the environment from Site contaminants. Cleanup levels (CULs) have been developed based on Site history and detections.

Ecology's MTCA specifies that CULs must be set in consideration of the reasonable maximum exposure that is expected to occur at the property. Reasonable maximum exposure is defined as "the highest exposure that can be expected to occur for a human or other living organism at a site under current and potential future site use" (WAC 173-340-200). In accordance with MTCA, CULs were developed based on the reasonable maximum exposure anticipated to occur for humans and ecological receptors exposed to soil and groundwater at the Site.

MTCA Method A CULS for Unrestricted Land Use for direct contact and protection of drinking water were selected as cleanup levels for the Site. The following table provides the CULs for COCs:

Chemicals of Concern	Soil CUL (mg/kg)
Total Petroleum Hydrocarbons (TPH)	
TPH-G (gasoline)	30/100*
Sum of TPH-D (diesel) and TPH-HO (heavy oil)	2,000
Volatile Organic Compounds (VOCs)	
Benzene	0.03
Toluene	7

Ethylbenzene	6
Total Xylene	9
Total Metals	
Arsenic	20
Lead	250
Cadmium	2

* 100 mg/kg cleanup level for gasoline mixtures without benzene or BTEX concentration less than 1% of gasoline mixture; 30 mg/kg for all other gasoline mixtures. For the purposes of this report, a lower detection limit of 30 mg/kg was applied, even though benzene has not been historically detected at this site.

Per the Smelter Plume Guidance *"if arsenic or lead levels are elevated for any decision unit on the property, that decision unit needs cleanup."* Per the Smelter Plume Guidance, elevated is defined as:

- Average arsenic > 20 parts per million (parts per million [ppm], equivalent to milligrams per kilogram [mg/kg]) or average lead > 250 ppm; or
- Maximum (any one sample) arsenic >40 ppm or maximum lead > 500 ppm.

4 SITE CHARACTERIZATION AND INTERIM REMEDIAL ACTION

This section describes site characterization and interim remedial action activities completed at the Site in accordance with the technical memorandum and PCS Excavation, Removal Oversight, and Confirmation SAP remediation evaluation and recommendations.

Between July 31 and August 2, 2024, a total of 115 soil borings were advanced by an Apex staff geologist using hand tools or mechanical equipment (e.g., a small excavator) operated by Atkinson's subcontractor. The borings were advanced in an approximate 20-foot by 20-foot grid pattern across the Site to depths of approximately 0 to 18 inches bgs (see Figure 2). Discrete soil samples were collected from each boring at two depth intervals: 0 to 9 inches and 9 to 18 inches bgs, with samples obtained at the end of each interval, for the purposes described in the sections below. The ground surface at the Site generally consists of approximately 3 to 4 inches of gravel mixed with underlying soil.

4.1 Shallow Soil Sampling for Tacoma Smelter Plume Characterization (July through August 2024)

The Asarco Company operated a copper smelter in Tacoma from 1890 to 1985. Smelter operations emitted an airborne plume of particulates with arsenic, lead, and other heavy metals that were distributed over a wide region of the Puget Sound. As a result, these metals have been found near surface soils at concentrations which may pose a threat to human health and/or the environment.

Ecology's Tacoma Smelter Plume Model Remedies Guidance (Smelter Plume Guidance) recommends soil sampling at properties in areas with estimated arsenic levels above the state cleanup level of 20 ppm. Ecology's "Everett and Tacoma Smelter Search" web page https://fortress.wa.gov/ecy/smeltersearch/ maps the Site within a zone of potential arsenic concentrations ranging from 40 mg/kg to 100 mg/kg. Thus, the 40 mg/kg to 100 mg/kg range can be considered the "baseline" for arsenic concentrations in near surface soils expected on Site.

The Tacoma Smelter Plume sampling Shallow soil testing was completed at the Site from July 31 through August 3, 2024, in general accordance with the Tacoma Smelter Plume Model Remedies Guidance, Ecology Publication number 19-09-101 dated July 2019 (Ecology, 2019). According to the guidance requirements, based on the size of the Site, approximately 0.7-acre, soil samples were collected at a depth of zero to 9 inches (avoiding the surface gravel) from 15 (SS15, SS21, SS24, SS27, SS36, SS39, SS50, SS53, SS59, SS76, SS79,

SS82, SS99, SS102, and SS105) of the advanced 115 soil borings. Additionally, a deeper sample was collected at a depth of nine (9) to 18 inches from four (4) out of the 15 locations. In accordance with the Tacoma Smelter Plume Model Remedies Guidance, discrete soil samples were collected from each boring at two depth intervals (0 to 9 inches and 9 to 18 inches bgs), with samples obtained within each interval near its end.

Non-disposable sampling equipment such as a shovel or hand auger was employed and decontamination occurred between each sample location as follows: equipment was scrubbed using a laboratory-grade detergent (such as Alconox®), followed by rinses in tap water and distilled water. After decontamination, the equipment was allowed to dry before collecting subsequent samples. Samples then were collected directly into laboratory-provided containers, labeled and transported on ice under chain of custody documentation to Friedman and Bruya, Inc. in Seattle, an Ecology-accredited analytical laboratory.

Laboratory Analysis of Confirmation Soil Samples

As established in the Ecology's Tacoma Smelter Plume Model Remedies Guidance, selected initial confirmation soil samples (SS15, SS21, SS24, SS27, SS36, SS39, SS50, SS53, SS59, SS76, SS79, SS82, SS99, SS102, and SS105) were submitted to laboratory for the following analyses:

- RCRA 8 Metals by Environmental Protection Agency (EPA) Method 6010D/7471B (including arsenic and lead)

Each soil sample was labeled using a Unique Sample ID.

- Location (Sample boring # [SS1]) and depth.

Analytical results of shallow soil sampling are summarized in Table 2. The sample locations are presented in Figure 3. Laboratory reports are included as Appendix D.

4.2 Initial/Pre-Remedial Action Petroleum Contaminated Soil Investigation and Sampling (July to September 2024)

From July 31 through August 3, 2024, 115 soil borings designated as SS1 through SS115, were advanced by an Apex staff geologist using hand tools or mechanical equipment operated by Atkinson's contractor onsite, in a general grid pattern (approximately 20-feet by 20-feet) across the Site to an approximate depth of zero to 18 inches. The initial PCS investigation and sampling activities were conducted in accordance with Apex's PCS Soil Excavation and Removal Oversight, and Confirmation SAP. Initial confirmation soil samples were collected at a depth of zero to nine (9) inches and nine (9) inches to 18 inches at all the 115 advanced soil borings from the base of the excavation on the central portion of the grid.

Non-disposable sampling equipment such as a shovel or hand auger was employed and decontamination occurred between each sample location as follows: equipment was scrubbed using a laboratory-grade detergent (such as Alconox®), followed by rinses in tap water and distilled water. After decontamination, the equipment was allowed to dry before collecting subsequent samples. Samples then were collected directly into laboratory-provided containers, labeled and transported on ice under chain of custody documentation to Friedman and Bruya, Inc. in Seattle, an Ecology-accredited analytical laboratory.

Laboratory Analysis of Confirmation Soil Samples

As established in Apex's PCS Soil Excavation and Removal Oversight, and Confirmation SAP, initial confirmation soil samples were submitted to the laboratory for the following analyses:

- TPH-G by Method NWTPH-Gx
- TPH-D and TPH-HO by Method NWTPH-Dx
- VOCs Including BTEX EPA Method 8021B
- RCRA 8 Metals by EPA Method 6010D/7471B

Each soil sample was labeled using a Unique Sample ID:

- *Location (Sample boring # [SS1]) and depth.*

Analytical results of shallow soil sampling are summarized in Table 1 and Table 2. The sample locations are presented in Figure 2. Laboratory reports are included as Appendix D.

5 SUMMARY OF ANALYTICAL RESULTS

5.1 Shallow Soil Sampling for Smelter Plume Impacts (July to September 2024)

Apex evaluated the laboratory analytical results of the soil samples collected during the soil investigations to ascertain if any of the results could be considered elevated as per the July 2019 Tacoma Smelter Plume Model Remedies Guidance. Fifteen (15) soil samples (SS15, SS21, SS24, SS27, SS36, SS39, SS50, SS53, SS56, SS79, SS82, SS90, SS99, SS102, and SS105) were collected from ground surface to 9-inch from soil boring locations from the Site were submitted for analysis for total arsenic and lead. Based on the July 2019 Tacoma Smelter Plume Model Remedies Guidance, at least an additional 25% of soil samples were collected from 9-inch to 18-inch bgs and were also submitted for analysis for total arsenic and lead. Deeper soil samples submitted for analysis included samples collected from soil borings SS27, SS36, SS53, and SS90 (Figure 3, Table 2, Appendix D).

- Analytical results indicated that, with the exception of one soil sample (SS15), none of the shallow soil samples collected during the Tacoma Smelter Plume assessment had arsenic concentrations exceeding the applicable MTCA Method A CULs. Total arsenic concentrations ranged from 2.7 mg/kg (SS90) to 23 mg/kg (SS15), with an average arsenic concentration of 7.47 mg/kg in the 0- to 9-inch depth horizon. Per MTCA Method A, the CUL for arsenic in the Tacoma Smelter Plume area is an average concentration of 20 mg/kg (Table 2). Additionally, no individual sample exceeded the 40 mg/kg threshold.

  In addition, four soil samples were collected from the 9 to 18-inch depth horizon, with arsenic concentrations ranging from 3.3 mg/kg (SS27) to 8.9 mg/kg (SS36). None of the deeper soil samples collected during the Tacoma Smelter Plume assessment had arsenic concentrations exceeding the applicable MTCA Method A CULs. The average arsenic concentration in this depth horizon was 5.95 mg/kg. According to MTCA Method A for the Tacoma Smelter Plume area, the cleanup level for arsenic is an average concentration of 20 mg/kg, and no individual sample is permitted to exceed 40 mg/kg.

- Analytical results indicated that none of the shallow or deeper soil samples collected had lead concentrations above the applicable MTCA Method A CULs pf 250 mg/kg. The average lead concentration in the 0 to 9-inch depth horizon was 19.06 mg/kg and in the 9 to 18-inch depth horizon, it was 48.88 mg/kg

Analytical results from soil samples collected on site are summarized in Table 2. Figure 2 depicts the sample locations, and the laboratory report is provided in Appendix D.

5.2 Initial/Pre-Remedial Action Confirmation Soil Sampling (July to September 2024)

A total of 230 soil samples (two per soil boring location) were collected during the initial confirmation sampling activities for laboratory analysis. Select samples were submitted for analysis of total petroleum hydrocarbons as gasoline-range (TPH-G), diesel-range (TPH-D), and heavy oil-range (TPH-HO) organics; volatile organic compounds (VOCs); and Resource Conservation and Recovery Act (RCRA) 8 metals. For initial screening purposes, only the 115 soil samples collected from the 0- to 9-inch depth interval were analyzed. The corresponding deeper interval samples (9 to 18 inches) were retained at the laboratory under proper holding conditions for potential analysis, pending the results of the shallow soil data. Apex notes that not all samples collected were analyzed for the full suite of parameters. Samples were selectively analyzed based on their location within a reasonable proximity to potential impacts or where historical data indicated the presence of contaminants of concern.

The analytical results from the shallow samples indicated the following:

Petroleum Hydrocarbons

- Eighty-one soil samples were submitted for laboratory analysis for TPH as gasoline. TPH as gasoline concentrations were not detected above the MTCA Method A CUL of 30 mg/kg and laboratory method reporting limits (MRLs) in any of the select shallow soil samples.
- TPH as diesel concentrations were not detected above the MTCA Method A CUL of 2,000 mg/kg in any of the 115 shallow soil samples collected. However, TPH as diesel concentrations were detected above the MRLs in three (3) of the 115 samples, with concentrations ranging from 81 mg/kg (sample SS31-9) to 180 mg/kg (sample SS113-9). The remaining samples did not contain TPH-D concentrations above the MRLs.
- TPH as heavy oil concentrations were not detected above the MTCA Method A CUL of 2,000 mg/kg in any of the 115 shallow soil samples collected. However, TPH as heavy oil concentrations were detected above the MRLs in seven of the 115 samples, with concentrations ranging from 360 mg/kg (sample SS3-9) to 1,400 mg/kg (sample SS44-9). The remaining samples did not contain TPH-HO concentrations above the MRLs.

Volatile Organic Compounds

- VOCs were assessed in select three soil samples collected. Laboratory analytical results indicated that none of the samples analyzed for VOCs, including BTEX, exhibited concentrations above the MRLs.

RCRA 8 Metals

- Total metals were assessed in 143 soil samples submitted for analysis.
- Total arsenic exceeded the MTCA Method A CUL of 20 mg/kg in 12 of 143 soil samples: SS6-9 (27 mg/kg), SS6-18 (21 mg/kg), SS6-24 (22 mg/kg), SS9-9 (20 mg/kg), SS9-18 (31 mg/kg), SS9-24 (26 mg/kg), SS15-9 (23 mg/kg), SS15-18 (24 mg/kg), SS34-9 (21 mg/kg), SS69-9 (40 mg/kg), SS69-18 (38 mg/kg), and SS113-18 (28 mg/kg). In addition, total arsenic was detected above the MRL in all other 131 soil samples submitted for analysis and the concentrations ranged from 2.1 mg/kg (SS110-9) to 19 mg/kg (SS63-19) in these remaining 131 soil samples.
- Total lead was detected above the MTCA Method A CUL of 250 mg/kg in soil sample SS113-9 at concentration of 280 mg/kg. In addition, lead was detected above the MRLs in the remaining soil samples submitted for analysis. The detected concentrations of lead in the remaining soil samples range from 1.0 mg/kg (SS40-9) to 160 mg/kg (SS36-18).

- Barium was detected above the MRL in all soil samples submitted for analysis at concentrations ranging from 12 mg/kg (SS77-9) to 200 mg/kg (SS19-9). A MTCA Method A CUL has not been established for barium; however, the MTCA Method B CUL for barium is 16,000 mg/kg.
- Chromium was detected above the MRL in all 80 soil samples submitted for analysis at concentrations ranging from 10 mg/kg (SS92-9) to 63 mg/kg (SS113-9). No MTCA Method A or B CULs are established for total chromium, however the MTCA Method A CULs for total chromium (III) is 2,000 mg/kg and for chromium (VI) is 19 mg/kg. Select soil samples were further analyzed for chromium (VI), and analytical results indicated that chromium (VI) was not detected above the MRLs or MTCA CUL of 19 mg/kg.
- Cadmium was detected above the MTCA Method A CUL of 2 mg/kg in soil sample SS87-9 (2.8 mg/kg). In addition, cadmium was detected above the MRLs in six (6) soil samples at concentrations ranging from 1.0 mg/kg (SS11-9) to 2.0 mg/kg (SS113-9). The remaining soil samples' concentrations were not detected above the MRLs.

  To further delineate cadmium-impacted soil, step-back samples were collected approximately 5 feet from the initial sample location, both horizontally and vertically, in all four directions (north, east, south, and west). Analytical results indicated that cadmium concentrations in all step-back soil samples were below the MRLs.

- Selenium was not detected above the MRL in any of the soil samples analyzed.

- Silver was detected above the MRL in soil sample SS2-9 at a concentration of 1.9 mg/kg. Silver was not detected above the MRL in any of the remaining soil samples. While a MTCA Method A CUL for silver has not been established, the MTCA Method B CUL is 400 mg/kg.

- Mercury was detected above the MRL in soil sample SS2-9 at a concentration of 2.0 mg/kg. The MTCA Method A CUL of mercury is 2 mg/kg. Mercury was not detected above the MRL in any of the remaining soil samples.

Analytical results for initial confirmation soil samples are presented in Table 1 and Table 2.

Based on the analytical results from the initial confirmation soil sampling activities, Apex returned to the Site in May 2025 to oversee the implementation of the required remedial actions, as outlined in Apex's Remedial Action Plan prepared for the Site in February 2025 (Remedial Action Plan, A-1 Towing Facility, dated February 28, 2025). The remedial activities included excavation and removal of impacted soil, followed by post-remedial confirmation sampling, as described in the following sections.

6 REMEDIAL ACTION BY SOIL REMOVAL AND OFFSITE DISPOSAL

An Apex staff geologist was on Site on May 12, 2025, to oversee the removal of impacted soil by excavation and off-site disposal, and to perform associated field screening and confirmation soil sampling.

Soil was field screened for VOCs using a hand-held MiniRAE 2000 PID equipped with a 10.6 eV ultraviolet (UV) lamp. The PID is capable of detecting VOCs in the gasoline- and diesel-range hydrocarbon spectrum.

On May 12, 2025, the SR 509 Stage 2 Completion Design-Build Contractor, Atkinson, excavated and removed approximately 193 cubic yards of impacted soil from the areas shown on Figure 2, specifically at Grids 6, 9, 69, 87, and 113, where pre-remedial confirmation sampling had identified metals, primarily arsenic and cadmium, at concentrations exceeding applicable cleanup levels. Excavation continued at each location beyond the

depth of known impacted soil, as determined by analytical results and field indicators. These indicators included the absence of petroleum odors, visual staining, surface sheen, and detectable organic vapors (as measured using a PID), all of which suggested that residual contamination had been adequately removed.

The excavation at Grid 87 encompassed an area of approximately 10 by 20 feet (due to its location along the former A1-Towing structure), while the excavations at Grids 6, 9, 69, and 113 each covered areas of approximately 20 by 20 feet. Excavation depths at each location ranged from approximately 18 to 24 inches below ground surface. Impacted soil was directly loaded into trucks and transported off site for disposal at an approved landfill facility by KLB Construction, Inc., under an existing waste profile established for the Site.

Confirmation soil sampling documents that the cleanup action has attained cleanup levels. Performance monitoring for soil excavation included confirmation soil sampling of excavation base and boundaries at each respectful grid where remedial actions were completed (Grids 6, 9, 69, 87, and 113).

Based on field observations indicating that all contaminated soil had been removed, Apex proceeded with confirmation sampling of the vertical excavation to determine if additional excavation was required. Soil samples were collected in accordance with the procedures outlined in the Petroleum-Contaminated Soil Excavation & Removal Oversight and Confirmation Soil Sampling Plan (SAP), prepared by Apex in July 2024, and the RAP for the Site, prepared in February 2025. These documents were developed to address the general requirements of the Washington State Department of Ecology's Cleanup Action Plan Checklist (Ecology, 2016a), as further detailed below.

6.1.1 Confirmation Soil Sample Collection

Post remedial excavation, Apex's staff geologist collected a total of 25 confirmation soil samples. Apex collected samples from the base and the sidewalls of the excavation area. Soil confirmation soil samples were designated 'SS', followed by grid number, 'C' for confirmation sample, base 'B' or sidewall 'N', and then depth from, i.e., SS9C-B:32 (Table 3).

Soil from various depths at each sidewall sample location was collected using either a hand tool or the excavator bucket and screened in the field using a PID to guide sample collection. Confirmation soil samples were collected from the depth interval exhibiting the highest PID reading at each sidewall location. In the absence of elevated PID readings, samples were collected from the depth that corresponded to the area of greatest observed contamination, based on visual or olfactory evidence, in the adjacent excavation. Soil samples collected directly from the excavator bucket, ensuring that material adhered to the bucket was not sampled. Samples were placed directly into laboratory-provided containers and stored in a cooler on ice, accompanied by chain-of-custody documentation for transport to the analytical laboratory. Apex personnel wore new disposable nitrile gloves to prevent cross-contamination between samples. Figure 2 shows the confirmation sample IDs and locations.

6.1.2 Laboratory Analysis of Confirmation Soil Samples

As established in Apex's 2024 SAP and 2025 RAP, select confirmation soil samples were submitted for the following analyses:

- TPH-G by Method NWTPH-Gx
- TPH-D and TPH-HO by Method NWTPH-Dx
- VOCs Including BTEX EPA Method 8021B
- RCRA 8 Metals including arsenic and lead by EPA Method 6010D/7471B

See Section 3.1 for further discussion of COCs at the Site.

7 CONTAMINATED MEDIA MANAGEMENT AND WASTE DISPOSAL

7.1 Contaminated Soil

Remedial excavation at the Site generated approximately 260 tons of impacted soil for offsite disposal. Impacted soil was hauled from the Site to the Republic Services Transfer Station at 2733 3rd Avenue South in Seattle, Washington. The soil profile was generated based on analytical data from previous soil sampling activities. The soil profile and trucking receipts for disposal of impacted soil are presented in Appendix C.

8 SUMMARY OF ANALYTICAL RESULTS

8.1 Confirmation Soil Sampling

A total of 25 confirmation soil samples were collected from the remedial excavations at Grids 6, 9, 69, 87, and 113.

The analytical results indicated the following:

- Arsenic was detected in sample SS6C-B:32 at a concentration of 28 mg/kg, which exceeds the MTCA Method A cleanup level (CUL) of 20 mg/kg. Following an additional 6-inch remedial excavation, Apex staff returned to the Site on May 22, 2025, and collected a confirmation sample at SS6C-B:38. The arsenic concentration in this sample was 12.9 mg/kg, which is below the MTCA Method A CUL.
- TPH as gasoline were not detected in the post-remedial confirmation soil samples; all results were below the MTCA Method A CUL of 100 mg/kg.
- TPH as diesel and heavy oil were not detected in the post-remedial confirmation soil samples; all concentrations were below the MTCA Method A CUL of 2,000 mg/kg.

Analytical results for the post-remedial action confirmation soil samples are presented in Table 3.

9 CONCLUSIONS AND RECOMMENDATIONS

Based on review of data collected during and following completion of remedial action by contaminated soil removal, the following conclusions have been drawn regarding the Site:

1. Remedial excavation was successful in removing soil contaminated with COCs.
2. Based on the investigation area, the Site is in compliance with Method A CULs for all COCs in soil.
3. Shallow soil at the Site is not impacted by the Tacoma Smelter Plume as evidenced by results of shallow soil sampling.

No further remedial action is warranted for shallow soil at the Site. The cleanup actions performed are protective of human health and the environment and are consistent with the selected model remedies for shallow petroleum-contaminated soil and smelter plume-impacted soil, as outlined by the Washington State Department of Ecology.

10 REFERENCES

Apex, *Remedial Action Plan (RAP), A-1 Towing Facility, February 2025*.

Apex, Petroleum-Contaminated Soil Excavation & Removal Oversight and Confirmation Soil Sampling Plan (SAP), A-1 Towing Facility, July 2024.

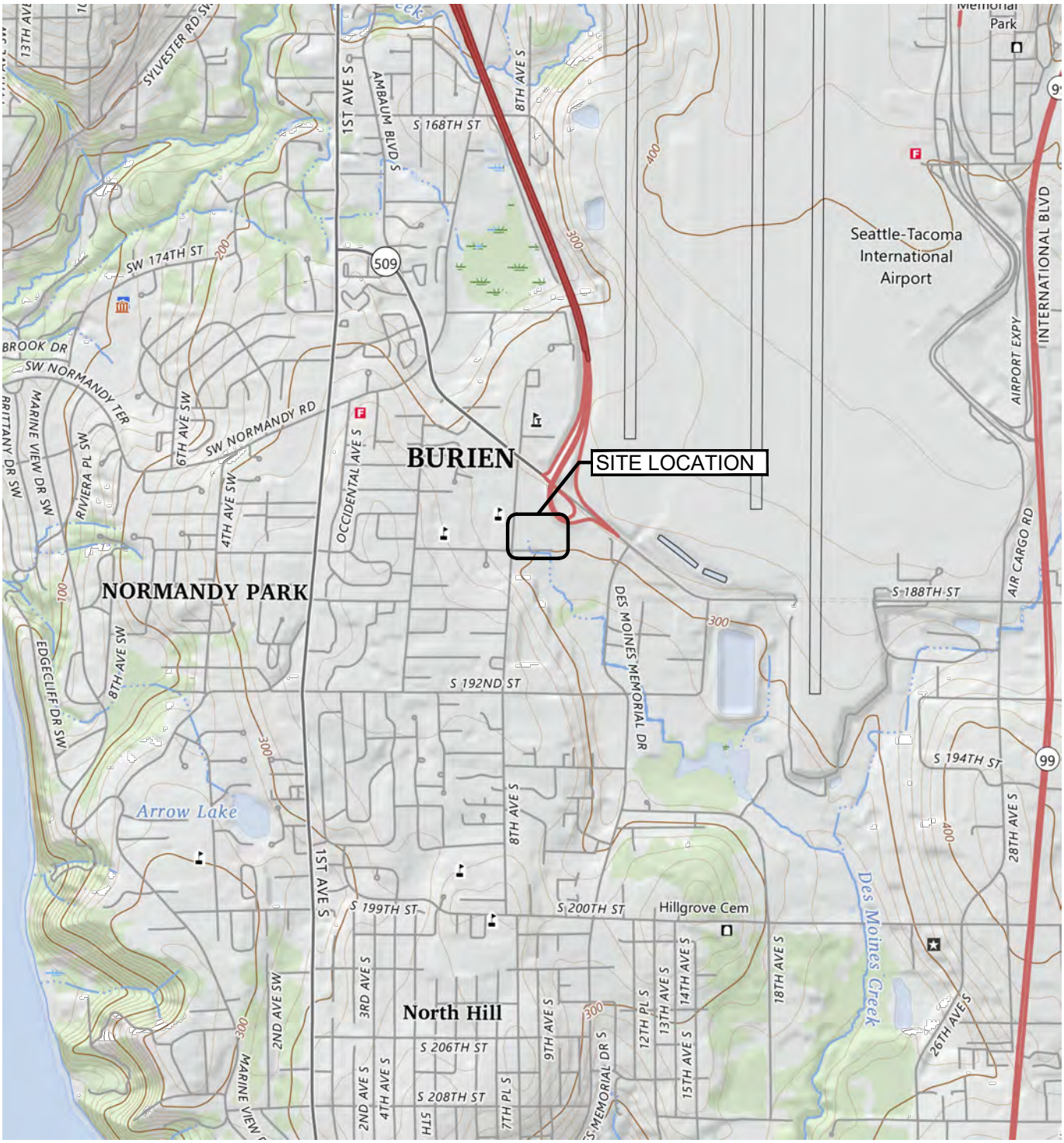
Washington State Department of Ecology (Ecology), 2019, Tacoma Smelter Plume Model Remedies Guidance, Sampling and cleanup of arsenic and lead contaminated soils, July 2019.

Ecology, 2016, *Guidance for Remediation of Petroleum Contaminated Sites, Toxics Cleanup Program, publication no. 10-09-057*, REVISED June 2016, available https://fortress.wa.gov/ecy/publications/documents/1009057.pdf

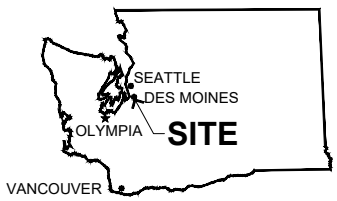
Ecology, 2022, *Guidance for Evaluating Vapor Intrusion in Washington State, publication no. 09-09-047*, REVISED March 2022, available https://apps.ecology.wa.gov/publications/SummaryPages/0909047.html

Figures

Figure 1. Site Vicinity Map
Figure 2. Site Plan - Post Remedial Excavation Sample Locations



SOURCE: USGS DES MOINES, WA QUADRANGLE 2023.



WASHINGTON

Scale 1" = 2000'

0' 1000' 2000' 4000'

PREPARED FOR: GUY ATKINSON CONSTRUCTION

APEX.

VICINITY MAP

SR 509 STAGE 2B - A1 TOWING

DES MOINES, WASHINGTON

SEPT 2025
40757.028

FIGURE
1

Filename: L:\Projects\40500\40757 Guy Atkinson Construction\40757.028 SR 509 24th Ave - Stage 2\DWG\40757.028_0002_FIG-1.dwg Layout Tab: VICINITY MAP User: James Blanco CAD Plot Date/Time: 9/9/2025 4:59:36 PM



LEGEND

- SS-2 — PREVIOUS WSDOT EXPLORATIONS (2016)
- MW-1 — MONITORING WELL NUMBER AND LOCATION (GEOENGINEERS, 2022)
- GEI-1 — BORING NUMBER AND LOCATION (GEOENGINEERS, 2022)
- SS1 — CONFIRMATION SOIL SAMPLES (2024)
- DUFF-1 — DUFF SAMPLE
- SMELTER PLUME SAMPLING (ARSENIC & LEAD)
- POST REMEDIAL EXCAVATION CONFIRMATION SOIL SAMPLES (2025)
- ASSESSMENT AREA (2022)
- AREA OF REMEDIAL EXCAVATION (2025)
- SMELTER PLUME SAMPLING GRID

SCALE: 1" = 20'

0 10' 20' 40'

PREPARED FOR: GUY ATKINSON CONSTRUCTION

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APEX

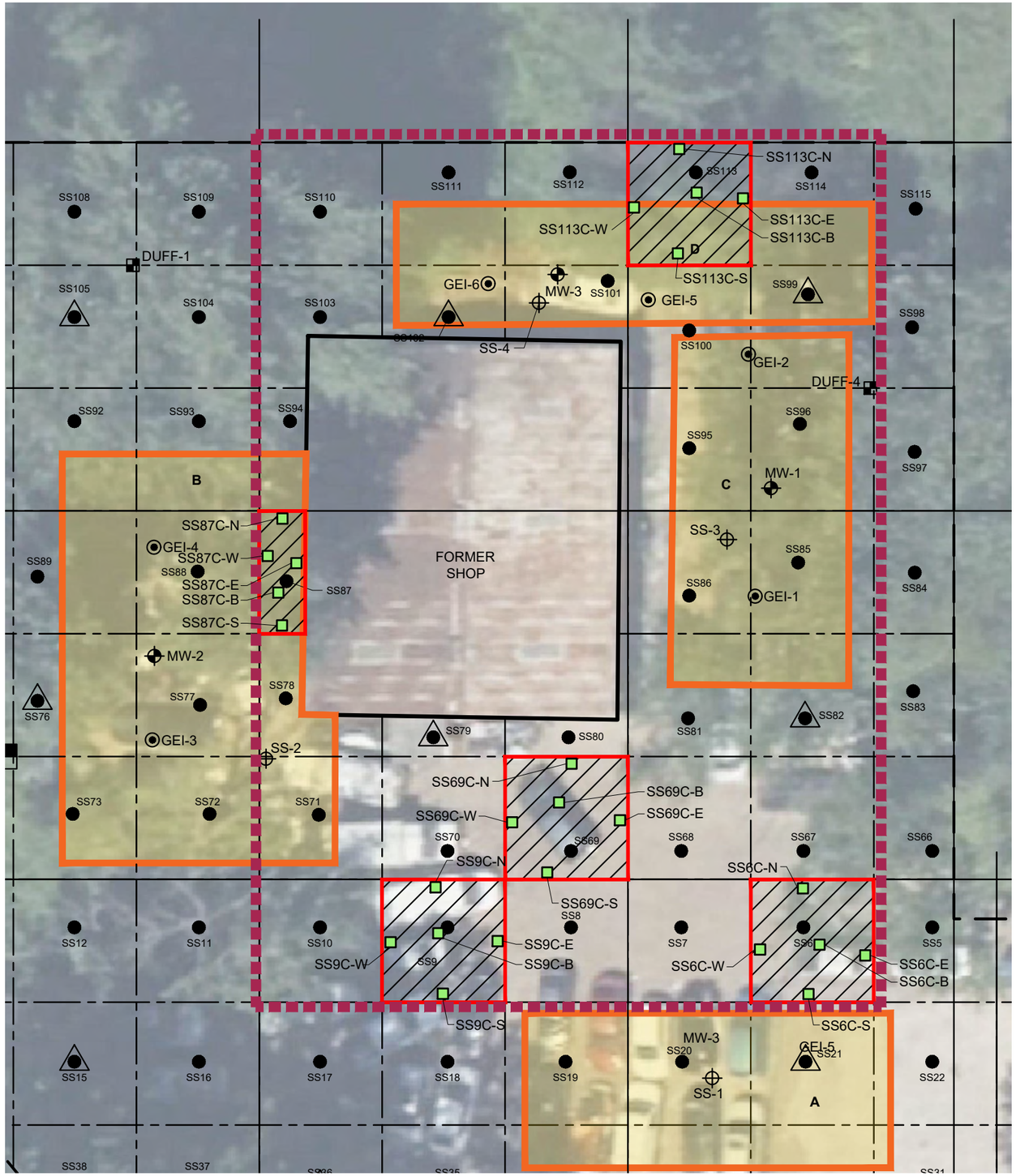
SITE PLAN - POST REMEDIAL EXCAVATION SAMPLING

SR 509 STAGE 2B - A1 TOWING

DES MOINES, WASHINGTON

PROJECT
40757.028
DATE
SEPT 2025
FIGURE:
2

FULL SIZE SHEET FORMAT IS 11X17; IF PRINTED SIZE IS NOT 11X17, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.



LEGEND

- SS-2 — PREVIOUS WSDOT EXPLORATIONS (2016)
- MW-1 — MONITORING WELL NUMBER AND LOCATION (GEOENGINEERS, 2022)
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- ASSESSMENT AREA (2022)
- AREA OF REMEDIAL EXCAVATION (2025)
- SMELTER PLUME SAMPLING GRID

SCALE: 1" = 20'

0 10' 20' 40'

PREPARED FOR: GUY ATKINSON CONSTRUCTION

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APEX

SITE PLAN - POST REMEDIAL EXCAVATION SAMPLING
SR 509 STAGE 2B - A1 TOWING
DES MOINES, WASHINGTON

PROJECT
40757.028
DATE
SEPT 2025
FIGURE:
3

FULL SIZE SHEET FORMAT IS 11X17; IF PRINTED SIZE IS NOT 11X17, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

Tables

Table 1. Initial Soil Analytical Results: TPH and BTEX
Table 2. Initial Soil Analytical Results: Total Metals
Table 3. Post Remedial Action Soil Analytical Results

TABLE 1
INITIAL SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS1	SS1-09	0.0 - 0.9	7/31/2024	<5	<50	420	--	--	--	--
	SS1-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS2	SS2-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS2-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS3	SS3-9	0.0 - 0.9	7/31/2024	<5	<50	360	--	--	--	--
	SS3-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS4	SS4-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS4-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS5	SS5-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS5-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS6	SS6-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS6-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS8	SS8-9	0.0 - 0.9	7/31/2024	<5	<50	380	--	--	--	--
	SS8-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS9	SS9-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS9-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS10	SS10-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS10-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS11	SS11-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS11-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS12	SS12-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS12-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--

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Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS13	SS13-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS13-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS14	SS14-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS14-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS15	SS15-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS15-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS16	SS15-9	0.0 - 0.9	7/31/2024	--	<50	390	--	--	--	--
	SS15-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS17	SS17-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS17-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS18	SS18-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS18-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS19	SS19-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS19-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS20	SS20-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS20-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS21	SS21-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS21-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS22	SS22-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS22-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS23	SS23-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS23-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS24	SS24-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS24-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--

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INITIAL SOIL ANALYTICAL RESULTS
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Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS25	SS25-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS25-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS26	SS26-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS26-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS27	SS27-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS27-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS28	SS28-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS28-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS29	SS29-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS29-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS30	SS30-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS30-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS31	SS31-9	0.0 - 0.9	7/31/2024	<5	81	<250	--	--	--	--
	SS31-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS32	SS32-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS32-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS33	SS33-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS33-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS34	SS34-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS34-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS35	SS35-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS35-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS36	SS36-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS36-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--

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Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS37	SS37-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS37-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS38	SS38-9	0.0 - 0.9	8/2/2024	--	<50	1100	--	--	--	--
	SS38-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS39	SS39-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS39-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS40	SS40-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS40-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS41	SS41-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS41-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS42	SS42-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS42-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS43	SS43-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS43-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS44	SS44-9	0.0 - 0.9	7/31/2024	<5	<50	1300	--	--	--	--
	SS44-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS45	SS45-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS45-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS46	SS46-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS46-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS47	SS47-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS47-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS48	SS48-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS48-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--

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				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS49	SS49-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS49-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS50	SS50-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS50-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS51	SS51-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS51-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS52	SS52-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS52-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS53	SS53-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS53-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS54	SS54-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS54-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS55	SS55-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS55-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS56	SS56-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS56-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS57	SS57-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS57-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS58	SS58-9	0.0 - 0.9	8/2/2024	--	140	740	--	--	--	--
	SS58-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS59	SS59-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS59-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS60	SS960-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS60-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--

TABLE 1
INITIAL SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS61	SS61-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS61-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS62	SS62-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS62-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS63	SS63-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS63-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS64	SS64-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS64-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS65	SS65-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS65-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS66	SS66-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS66-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS67	SS67-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS67-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS68	SS68-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS68-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS69	SS69-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS69-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS70	SS70-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS70-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS71	SS71-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS71-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS72	SS72-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS72-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--

TABLE 1
INITIAL SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS73	SS73-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS73-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS74	SS74-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS74-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS75	SS75-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS75-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS76	SS76-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS76-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS77	SS77-9	0.0 - 0.9	7/31/2024	<5	<50	1100	--	--	--	--
	SS77-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS78	SS78-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS78-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS79	SS79-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS79-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS80	SS80-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS80-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS81	SS81-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS81-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS82	SS82-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS82-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS83	SS83-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS83-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS84	SS84-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS84-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--

TABLE 1
INITIAL SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS85	SS85-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS85-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS86	SS86-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS86-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS87	SS87-9	0.0 - 0.9	8/2/2024	<5	--	--	--	--	--	--
	SS87-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS88	SS88-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS88-18	0.9-18.0	7/31/2024	--	--	--	<0.02	<0.02	<0.02	<0.06
SS89	SS89-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS89-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS90	SS90-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS90-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS91	SS91-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS91-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS92	SS92-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS92-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS93	SS93-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS93-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS94	SS94-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS94-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS95	SS95-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS95-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS96	SS96-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS96-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--

TABLE 1
INITIAL SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS97	SS96-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS96-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS98	SS98-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS98-18	0.9-18.0	8/2/2024	--	--	--	<0.02	<0.02	<0.02	<0.06
SS99	SS99-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS99-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS100	SS100-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS100-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS101	SS101-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS98-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS102	SS102-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS102-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS103	SS103-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS103-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS104	SS104-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS104-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS105	SS105-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS105-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS106	SS106-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS106-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS107	SS107-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS107-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS108	SS108-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS108-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--

TABLE 1
INITIAL SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS109	SS109-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS109-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS110	SS110-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS110-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS111	SS111-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS111-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS112	SS112-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS112-18	0.9-18.0	8/2/2024	--	--	--	<0.02	<0.02	<0.02	<0.06
SS113	SS113-9	0.0 - 0.9	8/2/2024	<5	180	1100	--	--	--	--
	SS113-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS114	SS114-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS114-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS115	SS115-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS115-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
MTCA Method A Cleanup Levels				**30**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**

Notes:
< indicates analyte not detected at or above given laboratory reporting limit
bold indicates detected concentration exceeds adopted criteria
Abbreviations & Acronyms:
mg/kg - milligrams per kilogram
in bgs - inche(s) below ground surface
-- = Not Analyzed
NE = MTCA Cleanup Level not established for the listed constituent.
TPH - total petroleum hydrocarbons
Gx - gasoline range hydrocarbons

TABLE 1
INITIAL SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				

Dx - diesel range hydrocarbons
MTCA Method A Cleanups - Washington State Department of Ecology Model Toxics Control Act Method A Cleanup Level for Unrestricted Land Use as established in WAC 173-340-900
Footnotes:
[a] Analyzed by Northwest Total Petroleum Hydrocarbon Method - Volatile Petroleum Products (Extended) (NWTPH-Gx)
[b] Analyzed by Northwest Total Petroleum Hydrocarbon Method - Semi-volatile Petroleum Products (Extended) (NWTPH-Dx)

TABLE 2
SOIL ANALYTICAL RESULTS - TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead
SS1	SS1-09	0.0 - 0.9	7/31/2024	3.2	38	<1	12	--	8.4	<1	<1	<1	--
	SS1-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS2	SS2-9	0.0 - 0.9	7/31/2024	8.7	75	<1	23	--	44	**2.0**	<1	1.9	--
	SS2-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS3	SS3-9	0.0 - 0.9	7/31/2024	7.3	69	<1	16	--	38	<1	<1	<1	--
	SS3-18	0.9-18.0	7/31/2024	11	--	--	--	--	11	--	--	--	--
SS4	SS4-9	0.0 - 0.9	7/31/2024	12	78	<1	18	--	52	<1	<1	<1	--
	SS4-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS5	SS5-9	0.0 - 0.9	7/31/2024	8.7	54	<1	15	--	94	<1	<1	<1	--
	SS5-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS6	SS6-9	0.0 - 0.9	7/31/2024	**27**	91	1.2	19	--	85	<1	<1	<1	--
	SS6-18	0.9-18.0	7/31/2024	**21**	--	--	--	--	--	--	--	--	--
	SS6-24	18.0-24.0	9/11/2024	**22**	--	--	--	--	65	--	--	--	--
SS7	SS7-27	0.0 - 0.9	7/31/2024	13	--	--	--	--	98	--	--	--	--
	SS7-36	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS8	SS8-9	0.0 - 0.9	7/31/2024	5.0	54	<1	15	--	20	<1	<1	<1	--
	SS8-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS9	SS9-9	0.0 - 0.9	7/31/2024	**20**	73	1.2	20	--	57	<1	<1	<1	--
	SS9-18	0.9-18.0	7/31/2024	**31**	--	--	--	--	--	--	--	--	--
	SS9-24	18.0-24.0	9/11/2024	**26**	--	--	--	--	46	--	--	--	--
SS10	SS10-9	0.0 - 0.9	7/31/2024	2.3	21	<1	7.2	--	7.9	<1	<1	<1	--
	SS10-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS11	SS11-9	0.0 - 0.9	7/31/2024	14	110	1.0	57	--	40	<1	<1	<1	--
	SS11-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS - TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead
SS12	SS12-9	0.0 - 0.9	7/31/2024	9.2	56	<1	40	--	44	<1	<1	<1	--
	SS12-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS13	SS13-9	0.0 - 0.9	7/31/2024	3.5	21	<1	14	--	18	<1	<1	<1	--
	SS13-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS14	SS14-9	0.0 - 0.9	7/31/2024	4.4	--	--	--	--	14	--	--	--	--
	SS14-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS15	SS15-9	0.0 - 0.9	7/31/2024	**23**	--	--	--	--	11	--	--	--	--
	SS15-18	0.9-18.0	7/31/2024	**24**	--	--	--	--	--	--	--	--	--
	SS15-24	18.0 - 24.0	7/31/2024	13	--	--	--	--	35	--	--	--	--
SS16	SS16-9	0.0 - 0.9	7/31/2024	7.6	--	--	--	--	29	--	--	--	--
	SS15-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS17	SS17-9	0.0 - 0.9	7/31/2024	17	140	<1	24	--	76	<1	<1	<1	--
	SS17-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS18	SS18-9	0.0 - 0.9	7/31/2024	8.3	94	<1	19	--	25	<1	<1	<1	--
	SS18-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS19	SS19-9	0.0 - 0.9	7/31/2024	12	200	<1	22	--	25	<1	<1	<1	--
	SS19-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS20	SS20-9	0.0 - 0.9	7/31/2024	11	130	<1	22	--	31	<1	<1	<1	--
	SS20-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS21	SS21-9	0.0 - 0.9	7/31/2024	5.6	85	<1	21	--	18	<1	<1	<1	--
	SS21-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS22	SS22-9	0.0 - 0.9	7/31/2024	6.8	72	<1	22	--	16	<1	<1	<1	--
	SS22-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS23	SS23-9	0.0 - 0.9	7/31/2024	14	81	<1	21	--	27	<1	<1	<1	--
	SS23-18	0.9-18.0	7/31/2024	11	--	--	--	--	11	--	--	--	--
SS24	SS24-9	0.0 - 0.9	7/31/2024	4.3	82	<1	35	--	6.6	<1	<1	<1	--
	SS24-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS25	SS25-9	0.0 - 0.9	7/31/2024	4.9	54	<1	15	--	41	<1	<1	<1	--
	SS25-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS - TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead
SS26	SS26-9	0.0 - 0.9	8/2/2024	4.1	71	<1	29	--	12	<1	<1	<1	--
	SS26-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS27	SS27-9	0.0 - 0.9	8/2/2024	4.5	80	<1	28	--	11	<1	<1	<1	--
	SS27-18	0.9-18.0	8/2/2024	3.3	--	--	--	--	7.4	--	--	--	--
SS28	SS28-9	0.0 - 0.9	7/31/2024	6.7	75	<1	30	<0.546	15	<1	<1	<1	--
	SS28-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS29	SS29-9	0.0 - 0.9	7/31/2024	4.0	--	--	--	--	8.6	--	--	--	--
	SS29-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS30	SS30-9	0.0 - 0.9	7/31/2024	3.9	48	<1	13	--	13	<1	<1	<1	--
	SS30-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS31	SS31-9	0.0 - 0.9	7/31/2024	3.2	47	<1	14	--	9.6	<1	<1	<1	--
	SS31-18	0.9-18.0	7/31/2024	5.7	--	--	--	--	13	--	--	--	--
SS32	SS32-9	0.0 - 0.9	7/31/2024	4.1	79	<1	38	--	6.4	<1	<1	<1	--
	SS32-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS33	SS33-9	0.0 - 0.9	7/31/2024	4.3	89	<1	36	--	7.1	<1	<1	<1	--
	SS33-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS34	SS34-9	0.0 - 0.9	7/31/2024	**21**	91	<1	30	--	30	<1	<1	<1	--
	SS34-18	0.9-18.0	7/31/2024	15	--	--	--	--	--	--	--	--	--
SS35	SS35-9	0.0 - 0.9	7/31/2024	5.0	80	<1	25	--	39	<1	<1	<1	--
	SS35-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS36	SS36-9	0.0 - 0.9	8/2/2024	11	--	--	--	--	130	--	--	--	<1
	SS36-18	0.9-18.0	8/2/2024	8.9	--	--	--	--	160	--	--	--	--
SS37	SS37-9	0.0 - 0.9	8/2/2024	6.2	--	--	--	--	23	--	--	--	--
	SS37-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS38	SS38-9	0.0 - 0.9	8/2/2024	6.9	--	--	--	--	36	--	--	--	--
	SS38-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS - TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead
SS39	SS39-9	0.0 - 0.9	8/2/2024	9.1	--	--	--	--	18	--	--	--	--
	SS39-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS40	SS40-9	0.0 - 0.9	8/2/2024	4.4	--	--	--	--	1.0	--	--	--	--
	SS40-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS41	SS41-9	0.0 - 0.9	7/31/2024	4.4	65	<1	26	--	93	<1	<1	<1	--
	SS41-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS42	SS42-9	0.0 - 0.9	7/31/2024	3.9	78	<1	30	--	5.7	<1	<1	<1	--
	SS42-18	0.9-18.0	7/31/2024	3.8	--	--	--	--	6.5	--	--	--	--
SS43	SS43-9	0.0 - 0.9	7/31/2024	4.1	--	--	--	--	7.2	--	--	--	--
	SS43-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS44	SS44-9	0.0 - 0.9	7/31/2024	1.7	25	<1	10	--	4.8	<1	<1	<1	--
	SS44-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS45	SS45-9	0.0 - 0.9	7/31/2024	3.9	84	<1	37	--	5.4	<1	<1	<1	--
	SS45-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS46	SS46-9	0.0 - 0.9	7/31/2024	12	--	--	--	--	39	--	--	--	--
	SS46-18	0.9-18.0	7/31/2024	14	--	--	--	--	43	--	--	--	--
SS47	SS47-9	0.0 - 0.9	7/31/2024	4.4	74	<1	31	--	6.2	<1	<1	<1	--
	SS47-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS48	SS48-9	0.0 - 0.9	8/2/2024	3.8	79	<1	31	--	7.6	<1	<1	<1	--
	SS48-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS49	SS49-9	0.0 - 0.9	8/2/2024	5.0	--	--	--	--	8.5	--	--	--	--
	SS49-18	0.9-18.0	8/2/2024	3.4	--	--	--	--	7.4	--	--	--	--
SS50	SS50-9	0.0 - 0.9	7/31/2024	5.1	86	<1	32	--	11	<1	<1	<1	--
	SS50-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS51	SS51-9	0.0 - 0.9	7/31/2024	5.6	89	<1	39	0.890	5.3	<1	<1	<1	--
	SS51-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS - TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead
SS52	SS52-9	0.0 - 0.9	7/31/2024	4.3	--	--	--	--	9.2	--	--	--	--
	SS52-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS53	SS53-9	0.0 - 0.9	7/31/2024	4.1	83	<1	33	--	9.8	<1	<1	<1	--
	SS53-18	0.9-18.0	7/31/2024	4.3	--	--	--	--	7.9	--	--	--	--
SS54	SS54-9	0.0 - 0.9	7/31/2024	3.9	81	<1	36	--	4.9	<1	<1	<1	--
	SS54-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS55	SS55-9	0.0 - 0.9	7/31/2024	5.4	90	<1	36	<0.525	8.1	<1	<1	<1	--
	SS55-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS56	SS56-9	0.0 - 0.9	8/2/2024	4.5	--	--	--	--	16	--	--	--	--
	SS56-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS57	SS57-9	0.0 - 0.9	8/2/2024	9.7	--	--	--	--	9.0	--	--	--	--
	SS57-18	0.9-18.0	8/2/2024	8.4	--	--	--	--	6.7	--	--	--	--
SS58	SS58-9	0.0 - 0.9	8/2/2024	4.9	--	--	--	--	18	--	--	--	--
	SS58-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS59	SS59-9	0.0 - 0.9	7/31/2024	5.1	110	<1	35	--	11	<1	<1	<1	--
	SS59-18	0.9-18.0	7/31/2024	5.8	--	--	--	--	16	--	--	--	--
SS60	SS60-9	0.0 - 0.9	7/31/2024	5.1	--	--	--	--	12	--	--	--	--
	SS60-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS61	SS61-9	0.0 - 0.9	7/31/2024	5.1	--	--	--	--	12	--	--	--	--
	SS61-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS62	SS62-9	0.0 - 0.9	7/31/2024	3.8	80	<1	16	--	18	<1	<1	<1	--
	SS62-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS63	SS63-9	0.0 - 0.9	7/31/2024	3.8	--	--	--	--	7.8	--	--	--	--
	SS63-18	0.9-18.0	7/31/2024	19	--	--	--	--	87	--	--	--	--
SS64	SS64-9	0.0 - 0.9	7/31/2024	5.1	81	<1	30	--	14	<1	<1	<1	--
	SS64-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS65	SS65-9	0.0 - 0.9	7/31/2024	13	--	--	--	--	18	--	--	--	--
	SS65-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS - TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead
SS66	SS66-9	0.0 - 0.9	7/31/2024	18	--	--	--	--	28	--	--	--	--
	SS66-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS67	SS67-9	0.0 - 0.9	7/31/2024	12	57	<1	15	--	21	<1	<1	<1	--
	SS67-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS68	SS68-9	0.0 - 0.9	7/31/2024	15	64	<1	13	--	31	<1	<1	<1	--
	SS68-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS69	SS69-9	0.0 - 0.9	7/31/2024	**40**	71	1.3	14	--	84	<1	<1	<1	--
	SS69-18	0.9-18.0	7/31/2024	**38**	--	--	--	--	--	--	--	--	--
	SS69-24	18.0 - 24.0	7/31/2024	9.8	--	--	--	--	25	--	--	--	--
SS70	SS70-9	0.0 - 0.9	7/31/2024	9.6	76	<1	16	--	17	<1	<1	<1	--
	SS70-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS71	SS71-9	0.0 - 0.9	7/31/2024	11	62	<1	14	--	20	<1	<1	<1	--
	SS71-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS72	SS72-9	0.0 - 0.9	7/31/2024	9.3	62	<1	15	--	38	<1	<1	<1	--
	SS72-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS73	SS73-9	0.0 - 0.9	7/31/2024	17	65	<1	19	--	68	<1	<1	<1	--
	SS73-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS74	SS74-9	0.0 - 0.9	7/31/2024	17	85	<1	13	--	29	<1	<1	<1	--
	SS74-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS75	SS75-9	0.0 - 0.9	7/31/2024	12	--	--	--	--	26	--	--	--	--
	SS75-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS76	SS76-9	0.0 - 0.9	7/31/2024	3.5	49	<1	14	--	11	<1	<1	<1	--
	SS76-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS77	SS77-9	0.0 - 0.9	7/31/2024	15	12	<1	27	--	99	<1	<1	<1	--
	SS77-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS78	SS78-9	0.0 - 0.9	7/31/2024	7.0	63	<1	16	--	71	<1	<1	<1	--
	SS78-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS79	SS79-9	0.0 - 0.9	7/31/2024	8.5	76	<1	17	--	18	<1	<1	<1	--
	SS79-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS - TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead
SS80	SS80-9	0.0 - 0.9	7/31/2024	4.6	53	<1	16	--	5.5	<1	<1	<1	--
	SS80-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS81	SS81-9	0.0 - 0.9	7/31/2024	8.1	58	<1	16	--	13	<1	<1	<1	--
	SS81-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS82	SS82-9	0.0 - 0.9	7/31/2024	17	51	<1	21	--	4.2	<1	<1	<1	--
	SS82-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS83	SS83-9	0.0 - 0.9	7/31/2024	14	79	<1	22	--	7.5	<1	<1	<1	--
	SS83-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS84	SS84-9	0.0 - 0.9	7/31/2024	8.8	--	--	--	--	39	--	--	--	--
	SS84-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS85	SS85-9	0.0 - 0.9	7/31/2024	2.8	60	<1	16	--	4.8	<1	<1	<1	--
	SS85-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS86	SS86-9	0.0 - 0.9	7/31/2024	3.5	52	<1	14	--	4.1	<1	<1	<1	--
	SS86-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS87	SS87-9	0.0 - 0.9	8/2/2024	14	76	**2.8**	36	--	120	<1	<1	<1	--
	SS87-18	0.9-18.0	8/2/2024	14	--	1.9	--	--	94	--	--	--	--
	SS87A-9	0.0 - 0.9	9/11/2024	--	--	<1	--	--	--	--	--	--	--
	SS87A-18	0.9-18.0	9/11/2024	--	--	--	--	--	--	--	--	--	--
	SS87B-9	0.0 - 0.9	9/11/2024	--	--	<1	--	--	--	--	--	--	--
	SS87B-18	0.9-18.0	9/11/2024	--	--	--	--	--	--	--	--	--	--
	SS87C-9	0.0 - 0.9	9/11/2024	--	--	<1	--	--	--	--	--	--	--
	SS87C-18	0.9-18.0	9/11/2024	--	--	--	--	--	--	--	--	--	--
	SS87D-9	0.0 - 0.9	9/11/2024	--	--	<1	--	--	--	--	--	--	--
	SS87D-18	0.9-18.0	9/11/2024	--	--	--	--	--	--	--	--	--	--
SS88	SS88-9	0.0 - 0.9	7/31/2024	4.6	52	<1	18	--	18	<1	<1	<1	--
	SS88-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS89	SS89-9	0.0 - 0.9	7/31/2024	6.8	76	1.7	31	--	55	<1	<1	<1	--
	SS89-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS - TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead
SS90	SS90-9	0.0 - 0.9	7/31/2024	2.7	--	--	--	--	4.9	--	--	--	--
	SS90-18	0.9-18.0	7/31/2024	7.3	--	--	--	--	18	--	--	--	--
SS91	SS91-9	0.0 - 0.9	8/2/2024	3.5	--	--	--	--	5.6	--	--	--	--
	SS91-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS92	SS92-9	0.0 - 0.9	8/2/2024	4.0	64	<1	10	--	6.8	<1	<1	<1	--
	SS92-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS93	SS93-9	0.0 - 0.9	8/2/2024	7.0	62	<1	16	--	14	<1	<1	<1	--
	SS93-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS94	SS94-9	0.0 - 0.9	8/2/2024	3.8	63	<1	24	--	9.5	<1	<1	<1	--
	SS94-18	0.9-18.0	8/2/2024	3.3	--	--	--	--	4.6	--	--	--	--
SS95	SS95-9	0.0 - 0.9	8/2/2024	2.6	33	<1	16	--	6.0	<1	<1	<1	--
	SS95-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS96	SS96-9	0.0 - 0.9	8/2/2024	2.9	34	<1	20	--	3.4	<1	<1	<1	--
	SS96-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS97	SS96-9	0.0 - 0.9	8/2/2024	4.0	51	<1	15	--	3.7	<1	<1	<1	--
	SS96-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS98	SS98-9	0.0 - 0.9	8/2/2024	4.3	--	--	--	--	5.8	--	--	--	--
	SS98-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS99	SS99-9	0.0 - 0.9	8/2/2024	3.2	70	<1	19	--	6.7	<1	<1	<1	--
	SS99-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS100	SS100-9	0.0 - 0.9	8/2/2024	4.6	80	<1	19	--	5.1	<1	<1	<1	--
	SS100-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS101	SS101-9	0.0 - 0.9	7/31/2024	4.2	41	<1	20	--	8.4	<1	<1	<1	--
	SS101-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS102	SS102-9	0.0 - 0.9	7/31/2024	4.3	58	<1	28	--	13	<1	<1	<1	--
	SS102-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--	--
SS103	SS103-9	0.0 - 0.9	8/2/2024	3.5	63	<1	28	--	6.6	<1	<1	<1	--
	SS103-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS - TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead
SS104	SS104-9	0.0 - 0.9	8/2/2024	2.3	--	--	--	--	3.6	--	--	--	--
	SS104-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS105	SS105-9	0.0 - 0.9	8/2/2024	5.0	--	--	--	--	7.8	--	--	--	--
	SS105-18	0.9-18.0	8/2/2024	11	--	--	--	--	18	--	--	--	--
SS106	SS106-9	0.0 - 0.9	8/2/2024	8.0	--	--	--	--	13	--	--	--	--
	SS106-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS107	SS107-9	0.0 - 0.9	8/2/2024	4.3	--	--	--	--	5.6	--	--	--	--
	SS107-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS108	SS108-9	0.0 - 0.9	8/2/2024	2.6	--	--	--	--	3.1	--	--	--	--
	SS108-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS109	SS109-9	0.0 - 0.9	8/2/2024	5.8	--	--	--	--	9.7	--	--	--	--
	SS109-18	0.9-18.0	8/2/2024	6.7	--	--	--	--	11	--	--	--	--
SS110	SS110-9	0.0 - 0.9	8/2/2024	2.1	--	--	--	--	3.0	--	--	--	--
	SS110-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS111	SS111-9	0.0 - 0.9	8/2/2024	2.8	48	<1	14	--	24	<1	<1	<1	--
	SS111-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS112	SS112-9	0.0 - 0.9	8/2/2024	10	--	--	--	--	40	--	--	--	--
	SS112-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS113	SS113-9	0.0 - 0.9	8/2/2024	13	62	2.0	63	--	**280**	<1	<1	<1	<1
	SS113-18	0.9-18.0	8/2/2024	**28**	--	--	--	--	76	--	--	--	--
SS114	SS114-9	0.0 - 0.9	8/2/2024	7.4	51	<1	14	--	39	<1	<1	<1	--
	SS114-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--	--
SS115	SS115-9	0.0 - 0.9	8/2/2024	5.5	87	<1	18	--	9.8	<1	<1	<1	--
	SS115-18	0.9-18.0	8/2/2024	4.0	--	--	--	--	5.0	--	--	--	--
Duff Samples													
	Duff-1	Surface	9/11/2024	10	--	--	--	--	21	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS - TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead
Duff	Duff-2	Surface	9/11/2024	1.0	--	--	--	--	6.3	--	--	--	--
	Duff-3	Surface	9/11/2024	<2	--	--	--	--	1.5	--	--	--	--
	Duff-4	Surface	9/11/2024	2.4	--	--	--	--	15	--	--	--	--
MTCA Method A Cleanup Levels				**20**	**NE**	**2**	**2,000/19[c]**	**19**	**250**	**2**	**NE**	**NE**	**NA**
RCRA TCLP Toxicity Limit (Lead)				**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**5**
Select Samples - Average Concentration for the Site (0- to 9-inch depth)[d]				**7.46**					**19.06**				
Select Samples - Average Concentration for the Site (9- to 18-inch depth)[d]				**5.95**					**48.33**				

Notes:
< indicates analyte not detected at or above given laboratory reporting limit
bold indicates detected concentration exceeds adopted criteria
Selected shallow arsenic and lead samples for Tacoma Smelter Plume assessment (0 to 9 inches)
Selected deeper arsenic and lead samples for Tacoma Smelter Plume assessment (9 to 18 inches)
Abbreviations & Acronyms:
mg/kg - milligrams per kilogram
mg/L - milligrams per liter
in bgs - inche(s) below ground surface
NE = MTCA Cleanup Level not established for the listed constituent.
NA = Not Applicable
-- = Not Analyzed
MTCA Method A Cleanups - Washington State Department of Ecology Model Toxics Control Act Method A Cleanup Level for Unrestricted Land Use as established in WAC 173-340-900
TCLP = Toxicity Characteristic Leaching Procedure by the U.S. Environmental Protection Agency (EPA Methods 6020B and 1311
Footnotes:
[a] Analyzed by Environmental Protection Agency Method 6020B and 1311
[b] Washington State Department of Ecology Model Toxics Control Act Method A Cleanup Level for Unrestricted Land Use as established in WAC 173-340-900

TABLE 2

SOIL ANALYTICAL RESULTS - TOTAL METALS

A1- Towing Facility

18459 Des Moines Memorial Drive South

Des Moines, Washington

APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)									TCLP Metals (mg/L)
				Total Metals[a]									
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver	Lead

[c] 2,000 mg/kg cleanup level for Chromium III and 19 mg/kg cleanup level for Chromium VI

[d] Washington State Department of Ecology Tacoma Smelter Plume Model Remedies Guidance, Sampling and cleanup of arsenic and lead contaminated soils,Publication Number 19-09-101, July 2019.

[A,B,C,D] Five-foot (5') step-out delineation samples were collected to the north, east, south, and west, respectively, from the SS87 soil boring location.

TABLE 3
POST REMEDIAL EXCAVATION SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
APEX Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)															
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes	Total Metals[a]								
				Gx[a]	Dx[b]	Oil[b]					Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
SS6	SS6C-B:32	32	5/12/2025	<5	<50	<200	<0.02	<0.02	<0.02	<0.06	**28**	59	<1	22	2.5	<1	<1	<1
	SS6C-B:38	38	5/22/2025	--	--	--	--	--	--	--	12.9	--	--	--	--	--	--	--
	SS6C-N:29	29	5/12/2025	--	--	--	--	--	--	--	13	--	--	--	--	--	--	--
	SS6C-E:29	29	5/12/2025	--	--	--	--	--	--	--	16	--	--	--	--	--	--	--
	SS6C-S:29	29	5/12/2025	--	--	--	--	--	--	--	12	--	--	--	--	--	--	--
	SS6C-W:29	29	5/12/2025	--	--	--	--	--	--	--	10	--	--	--	65	--	--	--
SS9	SS9C-B:32	32	5/12/2025	<5	<50	<200	<0.02	<0.02	<0.02	<0.06	5.6	50	<1	17	5.7	<1	<1	<1
	SS9C-N:29	29	5/12/2025	--	--	--	--	--	--	--	6.3	--	--	--	--	--	--	--
	SS9C-E:29	29	5/12/2025	--	--	--	--	--	--	--	8.4	--	--	--	--	--	--	--
	SS9C-S:29	29	5/12/2025	--	--	--	--	--	--	--	16	--	--	--	--	--	--	--
	SS9C-W:29	29	5/12/2025	--	--	--	--	--	--	--	13	--	--	--	--	--	--	--
SS69	SS69C-B:24	24	5/12/2025	<5	<50	<200	<0.02	<0.02	<0.02	<0.06	4	51	<1	14	2.2	<1	<1	<1
	SS69C-N:20	20	5/12/2025	--	--	--	--	--	--	--	9.1	--	--	--	--	--	--	--
	SS69C-E:20	20	5/12/2025	--	--	--	--	--	--	--	6.5	--	--	--	--	--	--	--
	SS69C-S:20	20	5/12/2025	--	<50	<200	--	--	--	--	9.7	--	--	--	--	--	--	--
	SS69C-W:20	20	5/12/2025	--	--	--	--	--	--	--	4.2	--	--	--		--	--	--
SS87	SS87C-B:15	15	5/12/2025	<5	<50	<200	<0.02	<0.02	<0.02	<0.06	2.9	66	<1	23	2.9	<1	<1	<1
	SS87C-N:12	12	5/12/2025	--	<50	<200	--	--	--	--	--	--	<1	--		--	--	--
	SS87C-E:12	12	5/12/2025	--	<50	<200	--	--	--	--	--	--	<1	--	--	--	--	--
	SS87C-S:12	12	5/12/2025	--	<50	<200	--	--	--	--	--	--	<1	--	--	--	--	--
	SS87C-W:12	12	5/12/2025	--	<50	<200	--	--	--	--	--	--	<1	--	--	--	--	--
SS113	SS113C-B:24	24	5/12/2025	<5	<50	<200	<0.02	<0.02	<0.02	<0.06	14	60	<1	23	7.1	<1	<1	<1
	SS113C-N:20	20	5/12/2025	--	<50	<200	--	--	--	--	9.1	--	--	--	4.1	--	--	--
	SS113C-E:20	20	5/12/2025	--	<50	<200	--	--	--	--	5.7	--	--	--	9.8	--	--	--
	SS113C-S:20	20	5/12/2025	--	<50	<200	--	--	--	--	3	--	--	--	2.4	--	--	--
	SS113C-W:20	20	5/12/2025	--	<50	<200	--	--	--	--	3.1	--	--	--	8.5	--	--	--
MTCA Method A Cleanup Levels				**30**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**20**	**NE**	**2**	**2,000/19[c]**	**250**	**2**	**NE**	**NE**

Notes:
< indicates analyte not detected at or above given laboratory reporting limit
bold indicates detected concentration exceeds adopted criteria
Abbreviations & Acronyms:
mg/kg - milligrams per kilogram
in bgs - inche(s) below ground surface
NE = MTCA Cleanup Level not established for the listed constituent.
-- = Not Analyzed
MTCA Method A Cleanups - Washington State Department of Ecology Model Toxics Control Act Method A Cleanup Level for Unrestricted Land Use as established in WAC 173-340-900
Footnotes:
[a] Analyzed by Northwest Total Petroleum Hydrocarbon Method - Volatile Petroleum Products (Extended) (NWTPH-Gx)
[b] Analyzed by Northwest Total Petroleum Hydrocarbon Method - Semi-volatile Petroleum Products (Extended) (NWTPH-Dx)
[c] Analyzed by Environmental Protection Agency Method 6020B
[d] 2,000 mg/kg cleanup level for Chromium III and 19 mg/kg cleanup level for Chromium VI

Appendix A

Petroleum Contaminated Soil Excavation, Removal Oversight, and Confirmation Soil Sampling Plan (PBS, July 2024)

Remedial Action Plan

A-1 Towing Facility

King County Tax Parcel No. 3223049048
18459 Des Moines Memorial Dr. S
SeaTac, Washington



Prepared for:

Washington State Department of Transportation

February 28, 2025
PBS Project 40757.028

ATKINSON CONSTRUCTION

PBS
AN APEX COMPANY
214 E GALER STREET, SUITE 300
SEATTLE, WA 98102
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Remedial Action Plan

Site:
SR 509 Completion, Stage 2
A-1 Towing Facility
18459 Des Moines Memorial Dr. S
SeaTac, Washington

Prepared for:
Washington State Department of Transportation

PBS Project 40757.028

Prepared by:

Nasrin Bastami Date
Environmental Practice Lead

Reviewed by:

Melanie Young, PE Date
Senior Environmental Engineer

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APPENDICES

Appendix A: Voluntary Cleanup Program (VCP) - WA DOT Foreman Towing

- *VCP NW3362 - Addendum to Phase II*
- *VCP Acceptance Letter*
- *VCP Application*

Appendix B: Previous Subsurface Investigations

- *GeoEngineers, Phase II Environmental Site Assessment, November 2022.*
- *WSDOT Headquarters Hazardous Materials and Solid Waste Program, Phase II Environmental Site Assessment, Soil Sampling Report, January 2019.*
- *WSDOT A-1 Towing Site Figure, SR 509/24th Avenue South to South 188th Street – New Expressway Project.*

Appendix C: SAP and PBS's 2024 Remedial Investigation Laboratory Reports

- *PBS, Petroleum Contaminated Soil Excavation Oversight and Confirmation Sampling Plan , July 2024.*
- *PBS's 2024 Remedial Investigation – Laboratory Reports*

Appendix D: Soil and Groundwater Management Plan

- *PBS, Soil and Groundwater Management Plan, WSDOT SR 509 Stage 2, 24th Avenue South to South 188th Street – New Expressway Project, Contract no. 9905, King County, Washington, January 2025.*

Appendix E: Certifications

- *PBS Personnel HAZWOPER Certifications; Michael Andrews, Nasrin Bastami, Josh Trierweiler, Kevin Hood*

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Acronyms and Abbreviations

ARAR	Applicable, relevant, and appropriate requirements
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene and total xylenes
CFR	code of federal regulations
COCs	contaminants of concern
cPAHs	carcinogenic polycyclic aromatic hydrocarbons
CUL	cleanup level
Ecology	Washington State Department of Ecology
EHSI	EHSI International, Inc.
Eh/ORP	oxidation-reduction potential
EM	Electromagnetic
ESA	environmental site assessment
ESO	Environmental Services Office
ft/sec	feet per second
GPR	ground-penetrating radar
HASP	health and safety plan
IC	institutional controls
ID	Identification
mg/kg	milligrams per kilogram
MTCA	(Washington State) Model Toxics Control Act
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyls
PCS	petroleum contaminated soils
PID	Photo Ionization Detector
PTAP	Petroleum Technical Assistance Program
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
SGMP	Soil and Groundwater Management Plan
Site	Poulsbo RV Site
SR	State Route
TEE	Terrestrial Ecological Evaluation
TPH	total petroleum hydrocarbon
UST	underground storage tank
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
µg/L	micrograms per liter

1 INTRODUCTION

This Remedial Action Plan (RAP) for A-1 Towing Facility (Site) was prepared to meet the general requirements of the Cleanup Action Plan Checklist (Ecology, 2016a) which follows the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) cleanup regulations (Washington Administrative Code (WAC) Chapter 173-340). The Site is defined as the area in which contaminants in soil exceed their respective cleanup levels. The Site is registered with Ecology with the following information:

Site Name:	WA DOT Foreman also known as A-1 Towing
Site Address:	18459 Des Moines Memorial Drive South SeaTac, Washington 98148
Property Owner:	Washington State Department of Transportation
Ecology Facility Site Identification (ID):	90042
Ecology Cleanup Site ID:	15064
Ecology Voluntary Cleanup Program ID:	NW3362
Ecology Site Manager:	Christopher Maurer, PE
Site Cleanup Status:	Cleanup Started (No Further Action Request)

1.1 Purpose

The purpose of this RAP is to establish cleanup standards for the Site based on the findings of the initial remedial investigation and subsequent site characterization. This RAP outlines the cleanup methodologies required to meet these standards and provides the rationale for the selected approach. Additional site characterization activities may be conducted following Ecology's approval of this RAP and prior to the start of remedial excavation at the Site.

The objective of the activities described in this plan is to remove all potentially impacted soil until conditions are verified to comply with Ecology's MTCA and its implementing regulations, as defined in the Revised Code of Washington (RCW) Chapter 70.105D and the WAC Chapter 173-340, and to achieve No Further Action (NFA) status for the site from Ecology, signifying regulatory closure.

1.2 General Site Information and Background

The Site is located on the west side of the King County Tax Parcel 3223049048, beyond Washington Department of Transportation (WSDOT)'s Right of Way (ROW) and is part of the expansion of State Route (SR)-509 (Figure 1). The Site has been owned by WSDOT since at least 2000 but was leased to several private parties over time. Reportedly, a tenant conducted industrial activities, including welding, at the Site between 2000 and 2016. In 2016, the Washington State Patrol (WSP) used a portion of the Site to dismantle seized vehicles. Additionally, A-1 Towing leased the Site as a towing yard, which involved vehicle storage throughout the property and vehicle repairs within a garage structure (former shop), which was demolished in July 2024 (see Figure 2).

The following bullets summarize the historical subsurface investigations and remedial actions conducted at this Site. Comprehensive documentation of these investigations, remedial actions, and soil sampling results is provided in GeoEngineers' 2021/2022 Phase II Environmental Site Assessment (Appendix B), as well as in PBS's 2024 Tables 1 and 2, with analytical results included in Appendix C.

- In 2016 WSDOT conducted a Phase II Subsurface Investigation following the lease termination of the former welding tenant (Mr. Foreman, 2000 through 2016). The WSDOT Phase II investigation included soil sampling of areas with observed suspect petroleum impacted soil (areas identified as Area A, B, C and D). Analytical results indicated elevated concentrations of lube oil and arsenic in soil exceeding the MTCA Cleanup Levels (CULs) in Area B and C, respectively.

- In 2017, WSDOT contracted Marine Vacuum Service Inc. to remediate areas of the Site with trash, debris and some soils with concentrations below MTCA Method A CULs. GeoEngineers noted that "It is unclear from this statement as to what soils were actually removed and no additional details were provided."

- In 2018, A-1 Towing graded site soils, including some contaminated ones. These soils were displaced from previously sampled areas A and B, resulting in a new stockpile just north of Area D.

- In March 2018, WSDOT collected four additional soil samples from Areas A, B, and a new location to assess potential grading with known or suspected soil contamination, or where displaced/graded soils seemed to have been consolidated into a stockpile by the lessee. Because Areas C and D lacked these indicators, no additional sampling was conducted there. The sample results did not exceed the MTCA Method A CULs.

- In September 2018, WSDOT contracted Marine Vacuum Service Inc. to conduct excavation activities to remediate areas that previously detected lube oil concentrations exceeding the MTCA Method A CULs and an area to remediate suspected contaminated materials in Area C and D. During remedial activities by soil excavation, soils were field screened using visual observation, olfactory and a photoionization detector (PID). Subsequently, WSDOT collected two additional confirmation soil samples in locations where the soils were excavated. Laboratory analytical results were either not detected at the laboratory reporting limit or were detected at concentrations below MTCA Method A CULs. Reportedly, clean soil was used to backfill the excavated area.

- According to a Phase II Environmental Site Assessment conducted in 2019, approximately 8.4 cubic yards of petroleum-impacted and suspected contaminated soil were removed from the Site. The analytical results from follow-up confirmation samples indicated that no contamination remained on the Site. Subsequently, WSDOT requested a NFA determination from the Washington State Department of Ecology.

- Ecology responded to the request for a NFA determination, indicating that additional information would be necessary. This includes the depth of samples, groundwater samples (if encountered), and more accurate sample location information, as the previous report had conflicting depictions (Appendix A).

- In 2021, GeoEngineers conducted additional sampling at three areas (B, C, and D) around the existing structure on the A-1 Towing site to further evaluate potential contaminants related to past Site uses. The analytical results did not identify concentrations of gasoline (Gx), diesel and oil (Dx), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), or the eight Resource Conservation and Recovery Act (RCRA) metals exceeding the MTCA Method A CULs. Out of the nine soil samples analyzed, only two showed low concentrations of diesel, oil, and/or PAHs, which were below CULs. All other sample results were not detected above the laboratory reporting limits.

Groundwater was not encountered at the maximum depth explored, which was 15 to 20 feet below ground surface (bgs).

- From July through September 2024, PBS conducted additional soil sampling across the entire Site, including Areas A, B, C, and D, as detailed in this document, to evaluate the conditions of the upper 18 inches of soil. Based on PBS' understanding, as part of the planned future development of SR 509, WSDOT plans to excavate, remove, and dispose of the top 18 inches of soil from the northern, northeastern, and southwestern sides of the former on-site structure, where contaminated soil had previously been identified. This excavation aims to address any remaining metals- or petroleum-impacted soil. Supplemental confirmation soil samples will be collected to further evaluate shallow soil conditions. Following the removal of impacted soil, clean fill material will be imported as needed to backfill the excavated areas. The Site will then be either covered with embankment material or landscaped with native vegetation.

2 SITE DESCRIPTION AND PHYSICAL SETTING

This section describes the physical characteristics of the Site and vicinity. Descriptions are derived from historical documents and explorations conducted for the WSDOT by PBS and others.

2.1 Location and Legal Description

The Site is located in the northeast quarter of Section 32, Township 23 North, Range 4 East of the Willamette Base and Meridian. The boundaries of the Site are described in Section 1.2. The Site is situated on the west side of King County Tax Parcel 3223049048, beyond the WSDOT right-of-way (ROW), and is commonly referred to by the address 18459 Des Moines Memorial Drive South. The Site is owned by WSDOT.

The Site encompasses approximately 0.7 acres and has an irregular shape, as shown in Figure 2.

2.2 Current and Future Use

Since the early 1960s, the Site has been utilized as a warehouse and maintenance shop facility. Currently, the Site is unoccupied and consists of vacant land. WSDOT acquired the property in 2000, and the majority of the Site will be incorporated into the expansion of SR 509 Completion.

2.3 Geologic Setting and Soil Descriptions

The Site is located within the Puget Sound Basin, which lies between the Cascade Range to the east and the Olympic Mountains to the west. The landscape configuration of the Puget Sound Basin was a consequence of multiple Pleistocene glaciations resulting in a series of north-trending, elongated ridges separated by deep troughs, the latter now occupied by marine waters or freshwater lakes or streams.

Review of available records indicated that during explorations, the soil observed at the Site generally included the following sequence of soil stratum layers (or horizons), listed as encountered from shallowest to deepest (interpreted from boring logs, GeoEngineers, 2021/2022):

- Surface conditions at the Site consist primarily of fill gravel (from several inches up to 2 feet). Soils encountered during exploration activities consisted of sand, silt and varying gradations of sand and silt with occasional gravel to the maximum depth explored, 15 to 20 feet bgs.

2.4 Hydrogeology

The Site is situated on a rise between the Green River valley to the east and Puget Sound to the west. Based on inference from site and local topography, shallow groundwater may locally flow in southeasterly or southwesterly directions. During 2021/2022 Geoengineers Phase II Environmental Site Assessment no

groundwater was encountered to the maximum depth explored (15 to 20 feet bgs). However, according to WSDOT 2016 subsurface investigation, groundwater depth varied across the Site; although, groundwater was encountered as shallow as 3 feet bgs in select locations.

3 CONTAMINANTS OF CONCERN AND CLEANUP STANDARDS

3.1 Contaminants of Concern (COCs)

Based on the known previous uses of the Site and the frequency at which contaminants were detected during environmental investigations, the following constituents have been established as COCs in soil at the Site:

- Gasoline-range petroleum hydrocarbons
- Diesel-range petroleum compounds
- Volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene and total xylene
- RCRA 8 Metals including arsenic and lead

Investigations have historically identified high concentrations (compared to CULs) of total petroleum hydrocarbons as heavy oil/lube oil and associated VOCs (benzene, ethylbenzene, and xylenes), as well as arsenic in soil at the vicinity of the former onsite structure location on the northern portion of the Site. As such, those contaminants are considered the primary pollutants for the Site and will drive the remediation effort.

During previous subsurface investigations, groundwater was reportedly not encountered at the maximum explored depth of 15 to 20 feet bgs. Additionally, no evidence of impacted soil was observed in the soil borings during attempts to install groundwater monitoring wells. Consequently, no COCs were identified in groundwater at the Site. Moreover, future development plans for the Site do not involve significant excavation or construction activities.

3.2 Cleanup Levels

This section discusses the selection of applicable or relevant and appropriate screening levels to evaluate the extent of contamination and potential risks to human health and the environment from Site contaminants. CULs have been developed based on site history and detections.

Washington State MTCA regulations specify that CULs must be set in consideration of the reasonable maximum exposure that is expected to occur at the property. Reasonable maximum exposure is defined as "the highest exposure that can be expected to occur for a human or other living organism at a site under current and potential future site use" (WAC 173-340-200). In accordance with MTCA, CULs were developed based on the reasonable maximum exposure anticipated to occur for human and ecological receptors exposed to soil and groundwater at the Site.

MTCA Method A CULS for Unrestricted Land Use for direct contact and protection of drinking water were selected as cleanup levels for the Site. The following table provides the CULs for COCs:

Contaminants of Concern	Soil CUL (mg/kg)
Total Petroleum Hydrocarbons (TPH)	
TPH-G (gasoline)	30/100*
Sum of TPH-D (diesel) and TPH-HO (heavy oil)	2,000
Volatile Organic Compounds (VOCs)	
Benzene	0.03

Toluene	7
Ethylbenzene	6
Total Xylene	9
Total Metals	
Arsenic	20
Lead	250

* 100 mg/kg cleanup level for gasoline mixtures without benzene or BTEX concentration less than 1% of gasoline mixture; 30 mg/kg for all other gasoline mixtures. For the purposes of this report, a lower detection limit of 30 mg/kg was applied, even though benzene has not been historically detected at this site.

Per the Smelter Plume Guidance *"if arsenic or lead levels are elevated for any decision unit on the property, that decision unit needs cleanup."* Per the Smelter Plume Guidance, elevated is defined as:

- Average arsenic > 20 parts per million (ppm, equivalent to mg/kg) or average lead > 250 ppm; or
- Maximum (any one sample) arsenic >40 ppm or maximum lead > 500 ppm.

3.3 Points of Compliance

The point of compliance for human direct contact with soil based on a reasonable maximum depth of excavation and the assumption that excavated soil may be placed at the surface where contact occurs is 15 to 20 feet bgs throughout the Site (WAC 173-340-740(6)(d)).

4 SITE CHARACTERIZATION AND INTERIM REMEDIAL ACTION

This section describes site characterization and interim remedial action activities completed at the Site in accordance with the Petroleum Contaminated Soil Excavation Oversight and Confirmation Sampling Plan (SAP) remediation evaluation and recommendations.

From July 31 through August 3, 2024, 115 soil borings were advanced by a PBS staff geologist using hand tools or mechanical equipment operated by Atkinson's contractor onsite, such as a small excavator, in a general grid pattern across the Site to an approximate depth of 0 to 18 inches (see Figure 2). Soil samples were collected from each boring at intervals of zero to nine (9) inches and nine (9) to 18 inches for the purposes described in detail below. The Site surface includes approximately three (3) to four (4) inches of gravel mixed/fill throughout.

4.1 Shallow Soil Sampling for Tacoma Smelter Plume Characterization

The Asarco Company operated a copper smelter in Tacoma from 1890 to 1985. Smelter operations emitted an airborne plume of particulates with arsenic, lead, and other heavy metals that were distributed over a wide region of the Puget Sound. As a result, these metals have been found near surface soils at concentrations which may pose a threat to human health and/or the environment.

Ecology's Tacoma Smelter Plume Model Remedies Guidance (Smelter Plume Guidance) recommends soil sampling at properties in areas with estimated arsenic levels above the state cleanup level of 20 ppm. Ecology's "Everett and Tacoma Smelter Search" web page https://fortress.wa.gov/ecy/smeltersearch/ maps the Site within a zone of potential arsenic concentrations ranging from 40 milligrams per kilogram (mg/kg) to 100 mg/kg. Thus, the 40 mg/kg to 100 mg/kg range can be considered the "baseline" for arsenic concentrations in near surface soils expected on Site.

The Tacoma Smelter Plume sampling Shallow soil testing was completed at the Site from July 31 through August 3, 2024, in general accordance with the Tacoma Smelter Plume Model Remedies Guidance, Ecology Publication number 19-09-101 dated July 2019 (Ecology, 2019). According to the guidance requirements, based on the size of the Site, approximately 0.7-acer, soil samples were collected at a depth of zero to 9 inches (avoiding the surface gravel/fill) from 15 (SS15, SS21, SS24, SS27, SS36, SS39, SS50, SS53, SS59, SS76, SS79, SS82, SS99, SS102, and SS105) of the advanced 115 soil borings. Additionally, a deeper sample was collected at a depth of nine (9) to 18 inches from four (4) out of the 15 locations.

Additionally, On September 11, 2024, four (4) composite duff samples were collected from areas with leaf debris along the northern and western boundaries of the Site, within wooded areas. Each composite duff sample was created by combining material from at least six (6) distinct sample locations.

PBS notes that, in general, RCRA 8 metals (including arsenic and lead) were assessed in 143 soil samples submitted for analysis. However, only 15 soil sample locations were specifically selected in advance for the purpose of the smelter plume assessment. The remaining soil samples analyzed for total metals were collected as part of the general soil characterization at the Site, which is further discussed in Sections 4.2 and 5.2.

Non-disposable sampling equipment such as a shovel or hand auger was employed and decontamination occurred between each sample location as follows: equipment was scrubbed using a laboratory-grade detergent (such as Alconox®), followed by rinses in tap water and distilled water. After decontamination, the equipment was allowed to dry before collecting subsequent samples. Samples then were collected directly into laboratory-provided containers, labeled and transported on ice under chain of custody documentation to Friedman and Bruya, Inc. in Seattle, an Ecology-accredited analytical laboratory.

4.1.1 Laboratory Analysis of Confirmation Soil Samples

As established in the Ecology's Tacoma Smelter Plume Model Remedies Guidance, selected initial confirmation soil samples (SS15, SS21, SS24, SS27, SS36, SS39, SS50, SS53, SS59, SS76, SS79, SS82, SS99, SS102, and SS105) were submitted to laboratory for the following analyses:

- RCRA 8 Metals by Environmental protection Agency (EPA) Method 6010D/7471B (including arsenic and lead).

Each soil sample was labeled using a Unique Sample ID.

- Location (Sample boring # [SS1]) and depth.

Analytical results of shallow soil sampling are summarized in Table 2. The sample locations are presented in Figure 3. Laboratory reports are included as Appendix C.

4.2 Initial/Pre-Remedial Action Soil Investigation and Sampling (July to September 2024)

From July 31 through August 3, 2024, 115 soil borings, designated as SS1 through SS115, were advanced by a PBS staff geologist using hand tools or mechanical equipment operated by Atkinson's contractor onsite, in a general grid pattern across the Site to an approximate depth of zero to 18 inches. The initial remedial investigation and sampling activities were conducted in accordance with the PBS' PCS Soil Excavation and Removal Oversight, and Confirmation SAP (Appendix C). Initial confirmation soil samples were collected at a depth of zero to 9-inch and 9-inch to 18-inch at all the 115 advanced soil borings from the base of the excavation on the central portion of the grid.

Non-disposable sampling equipment such as a shovel or hand auger was employed and decontamination was conducted between each sample location as follows: equipment was scrubbed using a laboratory-grade detergent (such as Alconox®), followed by rinses in tap water and distilled water. After decontamination, the equipment was allowed to dry before collecting subsequent samples. Samples then were collected directly into laboratory-provided containers, labeled and transported on ice under chain of custody documentation to Friedman and Bruya, Inc. in Seattle, an Ecology-accredited analytical laboratory.

4.2.1 Laboratory Analysis of Confirmation Soil Samples

As established in the PBS' PCS Soil Excavation and Removal Oversight, and Confirmation SAP, initial confirmation soil samples were submitted to laboratory for the select following analyses:

- TPH-G by Method NWTPH-Gx
- TPH-D and TPH-HO by Method NWTPH-Dx
- VOCs Including BTEX EPA Method 8021B
- RCRA 8 Metals by EPA Method 6010D/7471B

Each soil sample was labeled using a Unique Sample ID:

- *Location (Sample boring # [SS1]) and depth.*

Analytical results of shallow soil sampling are summarized in Table 1. The sample locations are presented in Figure 2. Laboratory reports are included as Appendix C.

5 SUMMARY OF ANALYTICAL RESULTS

5.1 Shallow Soil Sampling for Smelter Plume Impacts (July to September 2024)

PBS evaluated the laboratory analytical results of the soil samples collected during the soil investigations to ascertain if any of the results could be considered elevated as per the July 2019 Tacoma Smelter Plume Model Remedies Guidance. Fifteen (15) of 115 soil samples (SS15, SS21, SS24, SS27, SS36, SS39, SS50, SS53, SS56, SS79, SS82, SS90, SS99, SS102, and SS105) were collected from ground surface to 9-inch from soil boring locations from the Site were submitted for analysis for total arsenic and lead. As per the July 2019 Tacoma Smelter Plume Model Remedies Guidance at least an additional 25% of soil samples were collected from 9-inch to 18-inch bgs and were also submitted for analysis for total arsenic and lead. Deeper soil samples submitted for analysis included samples collected from soil borings SS27, SS36, SS53, and SS90 (Figure 3, Table 1, Appendix C).

- Analytical results indicated that, with the exception of one soil sample (SS15), none of the shallow soil samples collected during the Tacoma Smelter Plume assessment had arsenic concentrations exceeding the applicable MTCA Method A CULs. Total arsenic concentrations ranged from 2.7 mg/kg (SS90) to 23 mg/kg (SS15), with an average arsenic concentration of 7.47 mg/kg in the 0- to 9-inch depth horizon. Per MTCA Method A, the CUL for arsenic in the Tacoma Smelter Plume area is an average concentration of 20 mg/kg (Table 1). Additionally, no individual sample exceeded the 40 mg/kg threshold.

  In addition, four soil samples were collected from the 9- to 18-inch depth horizon, with arsenic concentrations ranging from 3.3 mg/kg (SS27) to 8.9 mg/kg (SS36). None of the deeper soil samples collected during the Tacoma Smelter Plume assessment had arsenic concentrations exceeding the applicable MTCA Method A CULs. The average arsenic concentration in this depth horizon was 5.95

mg/kg. According to MTCA Method A for the Tacoma Smelter Plume area, the cleanup level for arsenic is an average concentration of 20 mg/kg, and no individual sample is permitted to exceed 40 mg/kg.

- Analytical results indicated that none of the shallow or deeper soil samples collected had lead concentrations above the applicable MTCA Method A CULs of 250 mg/kg. Total lead concentrations ranged from 4.2 mg/kg (SS82) to 160 mg/kg (SS36), with an average lead concentration of 19.06 mg/kg in the 0- to 9-inch depth horizon and 48.44 mg/kg and in the 9 to 18-inch depth horizon. Additionally, no individual sample exceeded the 500 mg/kg threshold.

- Analytical results indicated that none of the duff samples (Duff-1 through Duff-4) collected had lead or arsenic concentrations above the applicable MTCA Methos A CULs.

The initial subsurface investigation also included an assessment of soil in respect with RCRA 8 Metals throughout the Site, which is further detailed in Section 4.2 and 5.2.

Analytical results from soil samples collected on Site are summarized in Table 1. Figure 3 depicts the sample locations, and the laboratory report is provided in Appendix C.

5.2 Initial/Pre-Remedial Action Confirmation Soil Sampling (July - September 2024)

A total of 230 soil samples (two per soil boring location) were collected during the initial confirmation sampling activities for laboratory analysis. These samples were submitted for testing for TPH as TPH-G, TPH-D, and TPH-HO, VOCs, and RCRA 8 Metals. For initial screening, only 115 of the 230 soil samples, those collected from the 0- to 9-inch interval, were analyzed. The deeper samples (9- to 18-inch depth) were held at the laboratory for potential further analysis, contingent on the results of the shallow samples. The analytical results indicated the following:

Petroleum Hydrocarbons

- Eighty-one soil samples were submitted for laboratory analysis for TPH as gasoline. TPH as gasoline concentrations were not detected above the MTCA Method A CUL of 30 mg/kg and laboratory method reporting limits (MRLs) in any of the select shallow soil samples.
- TPH as diesel concentrations were not detected above the MTCA Method A CUL of 2,000 mg/kg in any of the 115 shallow soil samples collected. However, TPH as diesel concentrations were detected above the MRLs in three (3) of the 115 samples, with concentrations ranging from 81 mg/kg (sample SS31-9) to 180 mg/kg (sample SS113-9). The remaining samples did not contain TPH-D concentrations above the MRLs.
- TPH as heavy oil concentrations were not detected above the MTCA Method A CUL of 2,000 mg/kg in any of the 115 shallow soil samples collected. However, TPH as heavy oil concentrations were detected above the MRLs in seven of the 115 samples, with concentrations ranging from 360 mg/kg (sample SS3-9) to 1,400 mg/kg (sample SS44-9). The remaining samples did not contain TPH-HO concentrations above the MRLs.

Volatile Organic Compounds

- VOCs were assessed in select three soil samples collected. Laboratory analytical results indicated that none of the samples analyzed for VOCs, including BTEX, exhibited concentrations above the MRLs.

RCRA 8 Metals

- Total metals were assessed in 143 soil samples submitted for analysis.

- Total arsenic exceeded the MTCA Method A CUL of 20 mg/kg in 12 of 143 soil samples: SS6-9 (27 mg/kg), SS6-18 (21 mg/kg), SS6-24 (22 mg/kg), SS9-9 (20 mg/kg), SS9-18 (31 mg/kg), SS9-24 (26 mg/kg), SS15-9 (23 mg/kg), SS15-18 (24 mg/kg), SS34-9 (21 mg/kg), SS69-9 (40 mg/kg), SS69-18 (38 mg/kg), and SS113-18 (28 mg/kg). In addition, total arsenic was detected above the MRL in all other 131 soil samples submitted for analysis and the concentrations ranged from 2.1 mg/kg (SS110-9) to 19 mg/kg (SS63-19) in these remaining 131 soil samples.
- Total lead was detected above the MTCA Method A CUL of 250 mg/kg in soil sample SS113-9 at concentration of 280 mg/kg. In addition, lead was detected above the MRLs in the remaining soil samples submitted for analysis. The detected concentrations of lead in the remaining soil samples range from 1.0 mg/kg (SS40-9) to 160 mg/kg (SS36-18).
- Barium was detected above the MRL in all soil samples submitted for analysis at concentrations ranging from 12 mg/kg (SS77-9) to 200 mg/kg (SS19-9). A MTCA Method A CUL has not been established for barium; The MTCA Method B CUL for barium is 16,000 mg/kg.
- Chromium was detected above the MRL in all 80 soil samples submitted for analysis at concentrations ranging from 10 mg/kg (SS92-9) to 63 mg/kg (SS113-9). No MTCA Method A or B CULs are established for total chromium, however the MTCA Method A CULs for chromium (III) is 2,000 mg/kg and for chromium (VI) is 19 mg/kg. Select soil samples were further analyzed for chromium (VI), and analytical results indicated that chromium (VI) was not detected above the MRLs or MTCA CUL of 19 mg/kg.
- Cadmium was detected above the MTCA Method A CUL of 2 mg/kg in soil sample SS87-9 (2.8 mg/kg). In addition, cadmium was detected above the MRLs in six (6) soil samples at concentrations ranging from 1.0 mg/kg (SS11-9) to 2.0 mg/kg (SS113-9). The remaining soil samples' concentrations were not detected above the MRLs.

  To further delineate cadmium-impacted soil, step-back samples were collected approximately 5 feet from the initial sample location, both horizontally and vertically, in all four directions (north, east, south, and west). Analytical results indicated that cadmium concentrations in all step-back soil samples were below the MRLs.

- Selenium was not detected above the MRL in any of the soil samples analyzed.

- Silver was detected above the MRL in soil sample SS2-9 at a concentration of 1.9 mg/kg. Silver was not detected above the MRL in any of the remaining soil samples. While a MTCA Method A CUL for silver has not been established, the MTCA Method B CUL is 400 mg/kg.

- Mercury was detected above the MRL in soil sample SS2-9 at a concentration of 2.0 mg/kg. The MTCA Method A CUL of mercury is 2 mg/kg. Mercury was not detected above the MRL in any of the remaining soil samples.

Analytical results for initial confirmation soil samples are presented in Tables 1 and 2. Figure 2 depicts the sample locations, and the laboratory report is provided in Appendix C.

6 SITE CHARACTERIZATION PLAN

This section includes a plan for additional site characterization to complete assessment of the potential human health and environmental concerns resulting from the contamination at the Site.

6.1 Soil Characterization

Previous investigations, along with PBS's 2024 shallow soil sampling, appear to have delineated the areal extent of limited impacted soil to the north, northeast, south, and southwest of the former shop structure at the Site. During the previous subsurface investigations, the vertical extent of contamination is defined by relatively shallow soil samples (SS-2, SS-3, and SS-4), which correspond to petroleum hydrocarbon staining observed in Areas B, C, and D, respectively (Phase II ESA, WSDOT 2016). Additionally, shallow soil samples with arsenic, lead, or cadmium concentrations exceeding MTCA Method A CULs were identified at locations SS6, SS9, SS69, SS87, and SS113, to a maximum depth of 9 to 24 inches (PBS's 2024 investigation).

Based on the results of previous subsurface investigations, which revealed no evidence of impacted soil in the deeper soil sampling and the absence of groundwater at the maximum depth explored (15 to 20 feet bgs), no additional soil characterization is proposed at this time. However, confirmation soil samples will be collected during the remedial action to verify compliance with regulatory requirements, as established under RCW 70.105D and WAC 173-340.

7 SITE REMEDIATION

7.1 Description of the Cleanup Action

Based on prior environmental investigation conducted at the Site, it is anticipated that the site will be remediated by removal of arsenic, lead, cadmium, and stained petroleum impacted soil (if any) by excavation and offsite disposal. Toxicity Characteristic Leaching Procedure (TCLP) and confirmation soil samples will be collected during the remedial action to verify compliance with regulatory requirements, as established under RCW 70.105D and WAC 173-340.

PBS notes that, based on field observations and stockpile sampling results, the excavated soil may be re-used onsite if it meets Ecology's Chapter 173-350 WAC Solid Waste Handling Standards. See Section 2.2 for further discussions regarding the criteria for re-using soil onsite.

Certified HAZWOPER personnel will oversee and conduct sampling activities for the remedial excavation, under the supervision of a licensed geologist or professional engineer. Certifications are included as Appendix E.

A site-specific health and safety plan will be prepared and reviewed with field personnel prior to beginning work and will be maintained on site during field operations.

7.2 Site Preparation

Before initiating the remedial excavation, Atkinson is responsible for securing the site by installing a fence with a lockable gate and high-visibility (hi-vis) barriers to restrict public and employee access to equipment and contaminated materials. On-site personnel and traffic control measures will further minimize public exposure to equipment or contaminants during working hours. Open excavations will be secured outside of working hours until backfill activities are complete.

7.3 Segregation of Overburden Soil for Waste Profiling

If both of the following conditions are met, portions of the overburden soil may be segregated and stored on site for use as backfill material:

- Field observations indicate the potential for portions of the overburden soil to meet criteria for reuse on site as established in the Soil and Groundwater Management Plan (SGMP) (Appendix D), and

- Adequate space exists on site for the temporary stockpiling of overburden soil pending sampling, sample analysis and possible use as backfill.

Should potentially clean overburden soil be segregated and stockpiled on site, waste samples will be collected of the stockpiled soil as established in the SGMP (Appendix D). Stockpile soil samples, if collected, will be analyzed for the following:

- Total Petroleum Hydrocarbon as gasoline (TPH-G) by Method NWTPH-Gx;
- TPH as diesel and heavy oil (TPH-D and TPH-HO) by Method NWTPH-Dx; and
- RCRA 8 Metals by EPA Method 6010D/7471B

Analytical results of stockpile samples will be used to determine the suitability of the soil for reuse as backfill material as established in the SGMP (Appendix D). Should segregated material be deemed unsuitable for reuse as backfill, it will be disposed of offsite as established in Sections 3.0 and 5.0 of the SGMP.

7.4 Soil Excavation

During excavation, soils will be monitored for visual and olfactory evidence of contamination, including changes in color, texture, and odor. Additionally, field instruments such as a PID can be used to qualitatively assess the presence of VOCs and indicate contamination.

Soil excavation will be conducted by Atkinson's HAZWOPER-certified subcontractor using a track-mounted excavator. The excavation will proceed in 9-inch increments by systematically stripping the surface. Upon completion of the planned excavation (see Figure 3) to the proposed depth of 18 to 24 inches (depending on initial sampling and the known depth of impacts), confirmation soil sampling will be conducted, provided there are no field indications of contamination, such as soil staining, petroleum odor, or elevated PID readings.

If soil sampling confirms that no COCs remain within the excavation area, the excavation will be backfilled with clean material to a depth determined at Atkinson's discretion, in order to meet the project design goals.

7.5 Soil Stockpile and Loading

Excavated soil may be temporarily stockpiled onsite and staged for load and haul out. The stockpiled soil will be located adjacent to the excavation areas, with specific site logistics controlled by Atkinson. Atkinson will manage contaminated soil stockpiles in accordance with the procedures established in the PBS' 2025 SGMP, Section 5.4 (Appendix D).

General requirements for the temporary stockpile include:

a. Preventing intermixing of stockpiled materials with underlying soils or materials from other sources, or with other contaminants.
b. Preventing influx of rainwater.
c. Preventing erosion of stockpiled materials.
d. Applying stormwater BMPs as appropriate for stockpile construction and maintenance.
e. Maintaining daily inventory of stockpile areas and providing information to the Project Engineer, as requested.
f. Implementing appropriate site security measures such as signage and fences to alleviate hazards to the public.

7.6 Performance Soil Sampling and Analysis Plan

Performance monitoring for soil excavation will include confirmation soil sampling of the excavation on an approximate 15-foot grid centers. The sampling method and procedures are presented below.

7.6.1 Sample Locations

Upon completion of the excavation to the total depth, soil samples will be collected from the sidewalls and base of the excavation, focusing on the PCS or grids corresponding to areas where impacted metals-contaminated soil has been removed, for laboratory analysis. PBS will collect confirmation samples from the base and sidewalls of the excavation at prescribed intervals (approximately every 15 feet) to verify compliance with regulatory cleanup criteria. The proposed impacted grids are shown in Figure 3.

7.6.2 Sample Methods

Soil sampling will adhere to the procedures outlined in Section 5.5 of the PBS's 2025 SGMP (Appendix D). Whenever feasible, disposable sampling equipment will be utilized, directly depositing samples into laboratory-provided containers. The sampler will use new disposable gloves for the collection of each sample. If non-disposable sampling equipment is employed, decontamination will occur as follows: equipment will be scrubbed using a laboratory-grade detergent (such as Alconox®), followed by rinses in tap water and distilled water. After decontamination, the equipment will be allowed to dry before collecting subsequent samples. Samples will then be collected directly into laboratory-provided containers and stored in a cooler on ice, with chain-of-custody documentation, for transport to the analytical laboratory.

Confirmation soil samples will be submitted for the following analyses:

- TPH-G by Method NWTPH-Gx;
- TPH-D and TPH-HO by Method NWTPH-Dx;
- RCRA 8 Metals by EPA Method 6010D/7471B

Each soil sample should be labeled using a Unique Sample ID.

- Location (Sample boring #)_Depth_Time_Date

7.7 Dewatering

Although the WSDOT 2016 subsurface investigation indicated that groundwater was encountered as shallow as 3 feet bgs in select locations, the 2021/2022 GeoEngineers subsurface investigations did not encounter groundwater at the maximum explored depth of 15 to 20 feet bgs. Additionally, no evidence of impacted soil was observed in the soil borings during attempts to install groundwater monitoring wells.

If groundwater seeps are encountered, dewatering will be performed using a sump pump placed in the deeper portions of the excavation. Water generated from dewatering will be containerized on site in an adjacent frac tank (or similar). As the tank reaches its capacity, a wastewater sample will be collected from the tank for the purposes of waste profiling. Based on the sample results, wastewater will be disposed of in accordance with the procedures established in the SGMP. If additional dewatering is required following sampling and disposal of the initial tank, the tank will be replaced with an empty tank. The procedures established above will be reiterated for additional tanks until total depth of excavation is reached, confirmation samples are collected, backfill is complete, and dewatering is no longer required.
In addition to groundwater, the potential exists for stormwater to enter the excavation via surface runoff. Berms, straw waddles, and other stormwater best management practices (BMPs) will be employed as necessary to minimize the amount of stormwater that may come in contact with the excavation. Stormwater that has entered the excavation and come into contact with contaminated materials will be managed the same as groundwater removed from the excavation as established above in this section. Discharge of any type

of water (groundwater or storm water) removed from the excavation or that has otherwise come into contact with contaminated material to the sanitary or storm sewer, or any nearby surface water bodies is prohibited and will not be permitted. Wastewater generated during remedial actions will be containerized and removed from the Site for offsite disposal.

7.8 Groundwater Sampling

Sampling of groundwater which may accumulate in the excavation is not anticipated or proposed.

7.9 Waste Profiling and Disposal

Waste soil generated from remedial actions will be profiled for offsite disposal using analytical data from previous soil sampling activities, as well as proposed sampling activities. The waste soil is expected to be characterized as non-dangerous solid waste for disposal at a Subtitle D Landfill. Material may be temporarily staged on site in stockpiles pending transport to the disposal facility, following stockpiling procedures established and described in Section 6.1 of the SGMP (PBS, 2025).

Contaminated groundwater is not anticipated to be generated during this remedial excavation.

A waste profile and weight tickets documenting receipt and tonnage of PCS from the disposal facility will be included in the Remedial Action Report. Weight/volume tickets will be tallied, and total tonnage/volume of exported waste will be reported.

7.10 Schedule for Implementation

The remedial action implementation schedule outlined here identifies key elements and milestones of the cleanup action as they are understood at this time. It is noted that the schedule for implementation may be affected by the general construction schedule for the project and is subject to change.

DATE	ACTIVITY
4/1/2025	Projected start date for beginning remedial excavation
4/11/2025	Projected completion of remedial actions
5/15/2025	Projected submittal of Remedial Action Report to Ecology
Fall 2025	Projected year of regulatory closure

8 REMEDIAL ACTION REPORT

Following completion of cleanup actions and receipt of laboratory data and disposal documentation, a Remedial Action Report will be prepared. The Remedial Action Report will:

- Summarize cleanup actions conducted at the Site.
- Provide tabulated laboratory results of confirmation soil samples and waste soil.
- Provide disposal documentation and total tonnage/volume for waste soil and water exported from the Site.
- Describe the on-site reuse of overburden soil removed from the excavation if applicable, including estimated volumes.
- Present a plan for additional remedial actions as necessary based on the results of these cleanup actions.

9 ENVIRONMENTAL SITE CLOSURE – NO FURTHER ACTION REQUEST

The objective of the activities described in this plan is to remove all potentially impacted soil until conditions are verified to be in accordance with MTCA and its implementing regulations defined in Revised Code of Washington (RCW) Chapter 70.105D and Washington Administrative Code (WAC) Chapter 173-340.

In July 2023, WSDOT received a VCP acceptance letter (VCP #NW3362) from Ecology, which assigned a VCP Site Manager to the project. As part of this process, Atkinson and/or WSDOT is expected to notify the assigned Site Manager of plans and schedules for any work at the Site.
The next step, as outlined in WSDOT's letter, is for Atkinson to submit a site-specific remedial action work plan to Ecology for approval. This plan must address landscaping and any other construction activities associated with the expansion of SR-509 in the Site area. The work plan should also be provided to the assigned VCP Site Manager as soon as possible to allow sufficient time for review, feedback, potential revisions, and final approval prior to commencing work at the Site.

Upon completion of remedial action by excavation, a Remedial Action Report will be submitted. This report will include confirmation soil sampling analytical results demonstrating that no contamination remains at the Site. Additionally, WSDOT will request a formal NFA determination from Ecology.

10 REFERENCES

PBS, Petroleum Contaminated Soil Excavation Oversight and Confirmation Sampling Plan, July 2024.

GeoEngineers, Phase II Environmental Site Assessment, November 2022.

WSDOT Headquarters Hazardous Materials and Solid Waste Program, Phase II Environmental Site Assessment, Soil Sampling Report, January 2019.

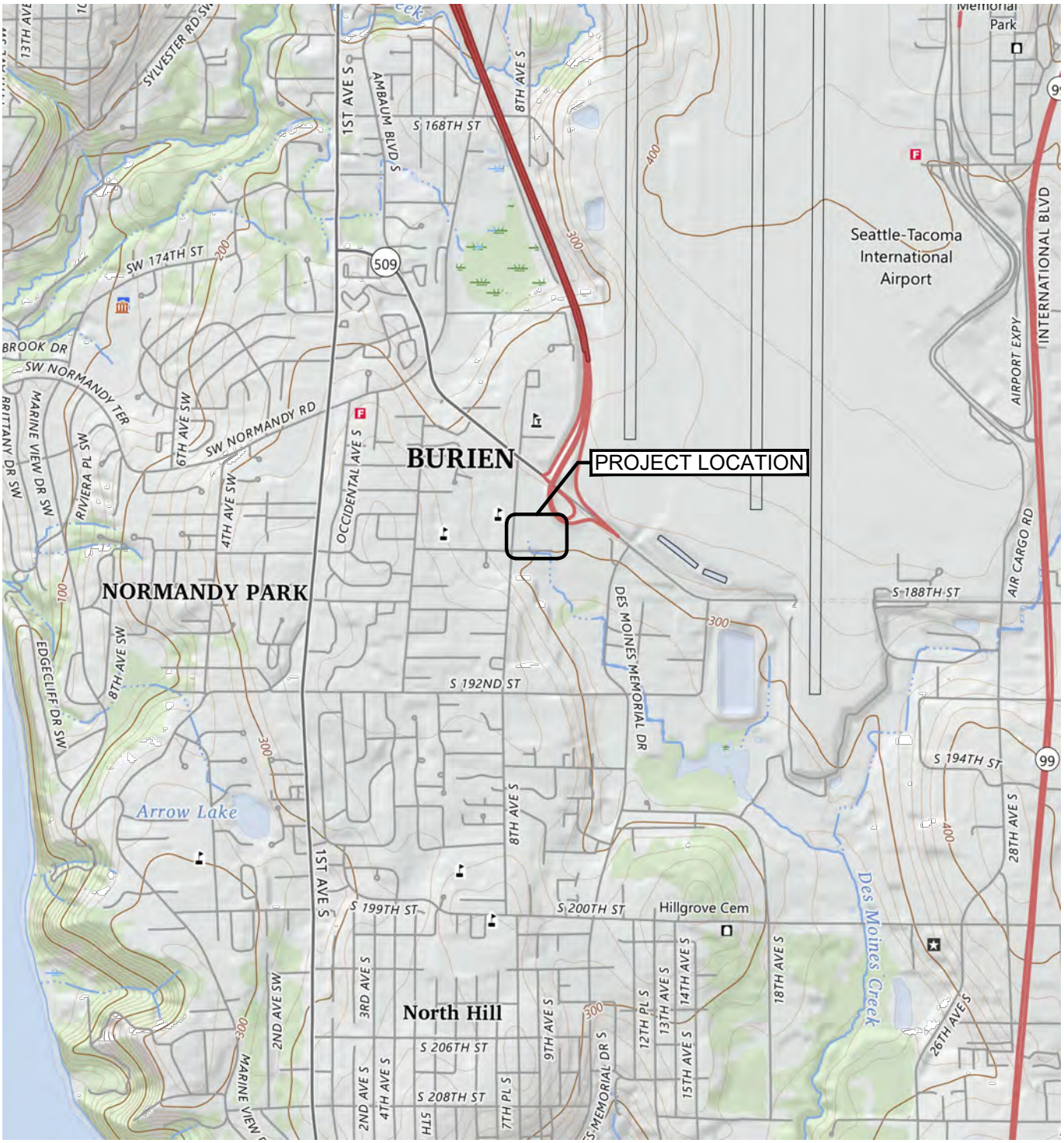
WSDOT A-1 Towing Site Figure, SR 509/24th Avenue South to South 188th Street – New Expressway Project

Sound Environmental Consulting, 1998, *Underground Storage Tank Closure Site Assessment – Valley I-5 Motor Home, Kent, Washington*; December 14, 1998.

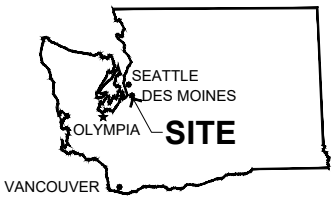
Washington State Department of Ecology (Ecology), 2016b, *Guidance for Remediation of Petroleum Contaminated Sites, Toxics Cleanup Program, publication no. 10-09-057*, REVISED June 2016, available https://fortress.wa.gov/ecy/publications/documents/1009057.pdf

Washington State Department of Ecology (Ecology), 2017, *Model Remedies for Sites with Petroleum Impacts to Groundwater, Toxics Cleanup Program, publication no. 16-09-057*, REVISED December 2017, available https://fortress.wa.gov/ecy/publications/documents/1609057.pdf.

Figures



SOURCE: USGS DES MOINES, WA QUADRANGLE 2023.



WASHINGTON

Scale 1" = 2000'

0' 1000' 2000' 4000'

PREPARED FOR: GUY ATKINSON CONSTRUCTION

VICINITY MAP

SR 509 STAGE 2B - A1 TOWING

DES MOINES, WASHINGTON

DEC 2024
40757.028

FIGURE
1

Filename: L:\Projects\40500\40757 Guy Atkinson Construction\40757.028 SR 509 24th Ave - Stage 2\DWG\40757.028_Fig_1.dwg Layout Tab: VICINITY MAP User: Katie Breyman CAD Plot Date/Time: 12/23/2024 5:33:13 PM



LEGEND

- SS-2 — PREVIOUS WSDOT EXPLORATIONS (2016)
- MW-1 — MONITORING WELL NUMBER AND LOCATION (GEOENGINEERS, 2022)
- GEI-1 — BORING NUMBER AND LOCATION (GEOENGINEERS, 2022)
- SS1 — CONFIRMATION SOIL SAMPLES
- ASSESSMENT AREA (2022)
- AREA OF EXCAVATION (2024)
- GRID LINES (APPROX 20' INTERVALS)

Scale 1" = 40'

0' 20' 40' 80'

PREPARED FOR: GUY ATKINSON CONSTRUCTION

PBS Engineering and Environmental Inc.
214 East Galer Street, Ste 300
Seattle, WA 98102
206.233.9639
pbsusa.com

SITE PLAN - REMEDIAL INVESTIGATION SAMPLING
SR 509 STAGE 2B - A1 TOWING
DES MOINES, WASHINGTON

PROJECT
40757.028
DATE
DEC 2024
SHEET ID
2

Full Size Sheet Format Is 11x17; If Printed Size Is Not 11x17, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

Filename: L:\Projects\40500\40757 Guy Atkinson Construction\40757.028 SR 509 24th Ave - Stage 2\DWG\40757.022_Fig_1_NEW.dwg Layout Tab: SITE PLAN - A1 TOWING FACILITY User: Katie Breyman CAD Plot Date/Time: 1/13/2025 4:37:18 PM



LEGEND

- SS-2 — PREVIOUS WSDOT EXPLORATIONS (2016)
- MW-1 — MONITORING WELL NUMBER AND LOCATION (GEOENGINEERS, 2022)
- GEI-1 — BORING NUMBER AND LOCATION (GEOENGINEERS, 2022)
- SS1 — CONFIRMATION SOIL SAMPLES
- DUFF-1 — DUFF SAMPLE
- SMELTER PLUME SAMPLING (ARSENIC & LEAD)
- ASSESSMENT AREA (2022)
- PROPOSED AREA OF EXCAVATION (2024)
- SMELTER PLUME SAMPLING GRID

Scale 1" = 40'

0' 20' 40' 80'

PREPARED FOR: GUY ATKINSON CONSTRUCTION

PBS Engineering and Environmental Inc.
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Seattle, WA 98102
206.233.9639
pbsusa.com

PBS

SMELTER PLUME AREA REMEDIAL INVESTIGATION SAMPLING
SR 509 STAGE 2B - A1 TOWING
DES MOINES, WASHINGTON

PROJECT
40757.028
DATE
DEC 2024
SHEET ID
3

Full Size Sheet Format Is 11x17; If Printed Size Is Not 11x17, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

Filename: L:\Projects\40500\40757 Guy Atkinson Construction\40757.028 SR 509 24th Ave - Stage 2\DWG\40757.022_Fig_1_NEW.dwg Layout Tab: TACOMA SMELTER PLUME SOIL ASSESSMENT User: Katie Breyman CAD Plot Date/Time: 1/13/2025 5:10:44 PM

Tables

TABLE 1
SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS1	SS1-09	0.0 - 0.9	7/31/2024	<5	<50	420	--	--	--	--
	SS1-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS2	SS2-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS2-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS3	SS3-9	0.0 - 0.9	7/31/2024	<5	<50	360	--	--	--	--
	SS3-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS4	SS4-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS4-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS5	SS5-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS5-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS6	SS6-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS6-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS8	SS8-9	0.0 - 0.9	7/31/2024	<5	<50	380	--	--	--	--
	SS8-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS9	SS9-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS9-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS10	SS10-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS10-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS11	SS11-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS11-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS12	SS12-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS12-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--

TABLE 1
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Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS13	SS13-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS13-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS14	SS14-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS14-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS15	SS15-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS15-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS16	SS15-9	0.0 - 0.9	7/31/2024	--	<50	390	--	--	--	--
	SS15-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS17	SS17-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS17-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS18	SS18-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS18-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS19	SS19-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS19-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS20	SS20-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS20-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS21	SS21-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS21-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS22	SS22-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS22-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS23	SS23-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS23-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS24	SS24-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS24-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--

TABLE 1
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Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS25	SS25-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS25-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS26	SS26-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS26-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS27	SS27-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS27-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS28	SS28-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS28-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS29	SS29-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS29-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS30	SS30-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS30-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS31	SS31-9	0.0 - 0.9	7/31/2024	<5	81	<250	--	--	--	--
	SS31-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS32	SS32-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS32-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS33	SS33-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS33-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS34	SS34-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS34-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS35	SS35-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS35-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS36	SS36-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS36-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--

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18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS37	SS37-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS37-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS38	SS38-9	0.0 - 0.9	8/2/2024	--	<50	1100	--	--	--	--
	SS38-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS39	SS39-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS39-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS40	SS40-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS40-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS41	SS41-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS41-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS42	SS42-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS42-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS43	SS43-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS43-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS44	SS44-9	0.0 - 0.9	7/31/2024	<5	<50	1300	--	--	--	--
	SS44-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS45	SS45-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS45-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS46	SS46-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS46-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS47	SS47-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS47-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS48	SS48-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS48-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--

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PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS49	SS49-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS49-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS50	SS50-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS50-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS51	SS51-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS51-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS52	SS52-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS52-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS53	SS53-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS53-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS54	SS54-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS54-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS55	SS55-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS55-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS56	SS56-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS56-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS57	SS57-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS57-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS58	SS58-9	0.0 - 0.9	8/2/2024	--	140	740	--	--	--	--
	SS58-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS59	SS59-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS59-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS60	SS960-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS60-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--

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Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS61	SS61-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS61-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS62	SS62-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS62-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS63	SS63-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS63-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS64	SS64-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS64-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS65	SS65-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS65-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS66	SS66-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS66-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS67	SS67-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS67-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS68	SS68-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS68-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS69	SS69-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS69-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS70	SS70-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS70-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS71	SS71-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS71-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS72	SS72-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS72-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--

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Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS73	SS73-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS73-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS74	SS74-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS74-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS75	SS75-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS75-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS76	SS76-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS76-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS77	SS77-9	0.0 - 0.9	7/31/2024	<5	<50	1100	--	--	--	--
	SS77-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS78	SS78-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS78-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS79	SS79-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS79-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS80	SS80-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS80-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS81	SS81-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS81-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS82	SS82-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS82-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS83	SS83-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS83-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS84	SS84-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS84-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--

TABLE 1
SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS85	SS85-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS85-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS86	SS86-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS86-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS87	SS87-9	0.0 - 0.9	8/2/2024	<5	--	--	--	--	--	--
	SS87-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS88	SS88-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS88-18	0.9-18.0	7/31/2024	--	--	--	<0.02	<0.02	<0.02	<0.06
SS89	SS89-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS89-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS90	SS90-9	0.0 - 0.9	7/31/2024	--	<50	<250	--	--	--	--
	SS90-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS91	SS91-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS91-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS92	SS92-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS92-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS93	SS93-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS93-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS94	SS94-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS94-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS95	SS95-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS95-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS96	SS96-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS96-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--

TABLE 1
SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS97	SS96-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS96-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS98	SS98-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS98-18	0.9-18.0	8/2/2024	--	--	--	<0.02	<0.02	<0.02	<0.06
SS99	SS99-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS99-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS100	SS100-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS100-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS101	SS101-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS98-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS102	SS102-9	0.0 - 0.9	7/31/2024	<5	<50	<250	--	--	--	--
	SS102-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--
SS103	SS103-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS103-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS104	SS104-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS104-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS105	SS105-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS105-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS106	SS106-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS106-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS107	SS107-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS107-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS108	SS108-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS108-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--

TABLE 1
SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				
SS109	SS109-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS109-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS110	SS110-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS110-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS111	SS111-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS111-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS112	SS112-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS112-18	0.9-18.0	8/2/2024	--	--	--	<0.02	<0.02	<0.02	<0.06
SS113	SS113-9	0.0 - 0.9	8/2/2024	<5	180	1100	--	--	--	--
	SS113-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS114	SS114-9	0.0 - 0.9	8/2/2024	--	<50	<250	--	--	--	--
	SS114-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
SS115	SS115-9	0.0 - 0.9	8/2/2024	<5	<50	<250	--	--	--	--
	SS115-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--
MTCA Method A Cleanup Levels				**30**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**

Notes:
< indicates analyte not detected at or above given laboratory reporting limit
bold indicates detected concentration exceeds adopted criteria
Abbreviations & Acronyms:
mg/kg - milligrams per kilogram
in bgs - inche(s) below ground surface
-- = Not Analyzed
NE = MTCA Cleanup Level not established for the listed constituent.
TPH - total petroleum hydrocarbons
Gx - gasoline range hydrocarbons

TABLE 1
SOIL ANALYTICAL RESULTS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)						
				TPH			Benzene	Toluene	Ethyl benzene	Xylenes
				Gx[a]	Dx[b]	Oil[b]				

Dx - diesel range hydrocarbons
MTCA Method A Cleanups - Washington State Department of Ecology Model Toxics Control Act Method A Cleanup Level for Unrestricted Land Use as established in WAC 173-340-900
Footnotes:
[a] Analyzed by Northwest Total Petroleum Hydrocarbon Method - Volatile Petroleum Products (Extended) (NWTPH-Gx)
[b] Analyzed by Northwest Total Petroleum Hydrocarbon Method - Semi-volatile Petroleum Products (Extended) (NWTPH-Dx)

TABLE 2
SOIL ANALYTICAL RESULTS
TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver
SS1	SS1-09	0.0 - 0.9	7/31/2024	3.2	38	<1	12	--	8.4	<1	<1	<1
	SS1-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS2	SS2-9	0.0 - 0.9	7/31/2024	8.7	75	<1	23	--	44	2.0	<1	1.9
	SS2-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS3	SS3-9	0.0 - 0.9	7/31/2024	7.3	69	<1	16	--	38	<1	<1	<1
	SS3-18	0.9-18.0	7/31/2024	11	--	--	--	--	11	--	--	--
SS4	SS4-9	0.0 - 0.9	7/31/2024	12	78	<1	18	--	52	<1	<1	<1
	SS4-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS5	SS5-9	0.0 - 0.9	7/31/2024	8.7	54	<1	15	--	94	<1	<1	<1
	SS5-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS6	SS6-9	0.0 - 0.9	7/31/2024	**27**	91	1.2	19	--	85	<1	<1	<1
	SS6-18	0.9-18.0	7/31/2024	**21**	--	--	--	--	--	--	--	--
	SS6-24	18.0-24.0	9/11/2024	**22**	--	--	--	--	65	--	--	--
SS7	SS7-27	0.0 - 0.9	7/31/2024	13	--	--	--	--	98	--	--	--
	SS7-36	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS8	SS8-9	0.0 - 0.9	7/31/2024	5.0	54	<1	15	--	20	<1	<1	<1
	SS8-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS9	SS9-9	0.0 - 0.9	7/31/2024	**20**	73	1.2	20	--	57	<1	<1	<1
	SS9-18	0.9-18.0	7/31/2024	**31**	--	--	--	--	--	--	--	--
	SS9-24	18.0-24.0	9/11/2024	**26**	--	--	--	--	46	--	--	--
SS10	SS10-9	0.0 - 0.9	7/31/2024	2.3	21	<1	7.2	--	7.9	<1	<1	<1
	SS10-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS11	SS11-9	0.0 - 0.9	7/31/2024	14	110	1.0	57	--	40	<1	<1	<1
	SS11-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS12	SS12-9	0.0 - 0.9	7/31/2024	9.2	56	<1	40	--	44	<1	<1	<1
	SS12-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver
SS13	SS13-9	0.0 - 0.9	7/31/2024	3.5	21	<1	14	--	18	<1	<1	<1
	SS13-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS14	SS14-9	0.0 - 0.9	7/31/2024	4.4	--	--	--	--	14	--	--	--
	SS14-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS15	SS15-9	0.0 - 0.9	7/31/2024	**23**	--	--	--	--	11	--	--	--
	SS15-18	0.9-18.0	7/31/2024	**24**	--	--	--	--	--	--	--	--
	SS15-24	18.0 - 24.0	7/31/2024	13	--	--	--	--	35	--	--	--
SS16	SS15-9	0.0 - 0.9	7/31/2024	7.6	--	--	--	--	29	--	--	--
	SS15-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS17	SS17-9	0.0 - 0.9	7/31/2024	17	140	<1	24	--	76	<1	<1	<1
	SS17-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS18	SS18-9	0.0 - 0.9	7/31/2024	8.3	94	<1	19	--	25	<1	<1	<1
	SS18-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS19	SS19-9	0.0 - 0.9	7/31/2024	12	200	<1	22	--	25	<1	<1	<1
	SS19-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS20	SS20-9	0.0 - 0.9	7/31/2024	11	130	<1	22	--	31	<1	<1	<1
	SS20-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS21	SS21-9	0.0 - 0.9	7/31/2024	5.6	85	<1	21	--	18	<1	<1	<1
	SS21-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS22	SS22-9	0.0 - 0.9	7/31/2024	6.8	72	<1	22	--	16	<1	<1	<1
	SS22-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS23	SS23-9	0.0 - 0.9	7/31/2024	14	81	<1	21	--	27	<1	<1	<1
	SS23-18	0.9-18.0	7/31/2024	11	--	--	--	--	11	--	--	--
SS24	SS24-9	0.0 - 0.9	7/31/2024	4.3	82	<1	35	--	6.6	<1	<1	<1
	SS24-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS25	SS25-9	0.0 - 0.9	7/31/2024	4.9	54	<1	15	--	41	<1	<1	<1
	SS25-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver
SS26	SS26-9	0.0 - 0.9	8/2/2024	4.1	71	<1	29	--	12	<1	<1	<1
	SS26-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS27	SS27-9	0.0 - 0.9	8/2/2024	4.5	80	<1	28	--	11	<1	<1	<1
	SS27-18	0.9-18.0	8/2/2024	3.3	--	--	--	--	7.4	--	--	--
SS28	SS28-9	0.0 - 0.9	7/31/2024	6.7	75	<1	30	<0.546	15	<1	<1	<1
	SS28-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS29	SS29-9	0.0 - 0.9	7/31/2024	4.0	--	--	--	--	8.6	--	--	--
	SS29-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS30	SS30-9	0.0 - 0.9	7/31/2024	3.9	48	<1	13	--	13	<1	<1	<1
	SS30-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS31	SS31-9	0.0 - 0.9	7/31/2024	3.2	47	<1	14	--	9.6	<1	<1	<1
	SS31-18	0.9-18.0	7/31/2024	5.7	--	--	--	--	13	--	--	--
SS32	SS32-9	0.0 - 0.9	7/31/2024	4.1	79	<1	38	--	6.4	<1	<1	<1
	SS32-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS33	SS33-9	0.0 - 0.9	7/31/2024	4.3	89	<1	36	--	7.1	<1	<1	<1
	SS33-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS34	SS34-9	0.0 - 0.9	7/31/2024	**21**	91	<1	30	--	30	<1	<1	<1
	SS34-18	0.9-18.0	7/31/2024	15	--	--	--	--	--	--	--	--
SS35	SS35-9	0.0 - 0.9	7/31/2024	5.0	80	<1	25	--	39	<1	<1	<1
	SS35-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS36	SS36-9	0.0 - 0.9	8/2/2024	11	--	--	--	--	130	--	--	--
	SS36-18	0.9-18.0	8/2/2024	8.9	--	--	--	--	160	--	--	--
SS37	SS37-9	0.0 - 0.9	8/2/2024	6.2	--	--	--	--	23	--	--	--
	SS37-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS38	SS38-9	0.0 - 0.9	8/2/2024	6.9	--	--	--	--	36	--	--	--
	SS38-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
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Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver
SS39	SS39-9	0.0 - 0.9	8/2/2024	9.1	--	--	--	--	18	--	--	--
	SS39-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS40	SS40-9	0.0 - 0.9	8/2/2024	4.4	--	--	--	--	1.0	--	--	--
	SS40-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS41	SS41-9	0.0 - 0.9	7/31/2024	4.4	65	<1	26	--	93	<1	<1	<1
	SS41-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS42	SS42-9	0.0 - 0.9	7/31/2024	3.9	78	<1	30	--	5.7	<1	<1	<1
	SS42-18	0.9-18.0	7/31/2024	3.8	--	--	--	--	6.5	--	--	--
SS43	SS43-9	0.0 - 0.9	7/31/2024	4.1	--	--	--	--	7.2	--	--	--
	SS43-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS44	SS44-9	0.0 - 0.9	7/31/2024	1.7	25	<1	10	--	4.8	<1	<1	<1
	SS44-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS45	SS45-9	0.0 - 0.9	7/31/2024	3.9	84	<1	37	--	5.4	<1	<1	<1
	SS45-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS46	SS46-9	0.0 - 0.9	7/31/2024	12	--	--	--	--	39	--	--	--
	SS46-18	0.9-18.0	7/31/2024	14	--	--	--	--	43	--	--	--
SS47	SS47-9	0.0 - 0.9	7/31/2024	4.4	74	<1	31	--	6.2	<1	<1	<1
	SS47-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS48	SS48-9	0.0 - 0.9	8/2/2024	3.8	79	<1	31	--	7.9	<1	<1	<1
	SS48-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS49	SS49-9	0.0 - 0.9	8/2/2024	5.0	--	--	--	--	8.5	--	--	--
	SS49-18	0.9-18.0	8/2/2024	3.4	--	--	--	--	7.4	--	--	--
SS50	SS50-9	0.0 - 0.9	7/31/2024	5.1	86	<1	32	--	11	<1	<1	<1
	SS50-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS51	SS51-9	0.0 - 0.9	7/31/2024	5.6	89	<1	39	0.890	5.3	<1	<1	<1
	SS51-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver
SS52	SS52-9	0.0 - 0.9	7/31/2024	4.3	--	--	--	--	9.2	--	--	--
	SS52-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS53	SS53-9	0.0 - 0.9	7/31/2024	4.1	83	<1	33	--	9.8	<1	<1	<1
	SS53-18	0.9-18.0	7/31/2024	4.3	--	--	--	--	7.9	--	--	--
SS54	SS54-9	0.0 - 0.9	7/31/2024	3.9	81	<1	36	--	4.9	<1	<1	<1
	SS54-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS55	SS55-9	0.0 - 0.9	7/31/2024	5.4	90	<1	36	<0.525	8.1	<1	<1	<1
	SS55-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS56	SS56-9	0.0 - 0.9	8/2/2024	4.5	--	--	--	--	16	--	--	--
	SS56-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS57	SS57-9	0.0 - 0.9	8/2/2024	9.7	--	--	--	--	9.0	--	--	--
	SS57-18	0.9-18.0	8/2/2024	8.4	--	--	--	--	6.7	--	--	--
SS58	SS58-9	0.0 - 0.9	8/2/2024	4.9	--	--	--	--	18	--	--	--
	SS58-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS59	SS59-9	0.0 - 0.9	7/31/2024	5.1	110	<1	35	--	11	<1	<1	<1
	SS59-18	0.9-18.0	7/31/2024	5.8	--	--	--	--	16	--	--	--
SS60	SS60-9	0.0 - 0.9	7/31/2024	5.1	--	--	--	--	12	--	--	--
	SS60-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS61	SS61-9	0.0 - 0.9	7/31/2024	5.1	--	--	--	--	12	--	--	--
	SS61-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS62	SS62-9	0.0 - 0.9	7/31/2024	3.8	80	<1	16	--	18	<1	<1	<1
	SS62-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS63	SS63-9	0.0 - 0.9	7/31/2024	3.8	--	--	--	--	7.8	--	--	--
	SS63-18	0.9-18.0	7/31/2024	19	--	--	--	--	87	--	--	--
SS64	SS64-9	0.0 - 0.9	7/31/2024	5.1	81	<1	30	--	14	<1	<1	<1
	SS64-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--

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TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver
SS65	SS65-9	0.0 - 0.9	7/31/2024	13	--	--	--	--	18	--	--	--
	SS65-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS66	SS66-9	0.0 - 0.9	7/31/2024	18	--	--	--	--	28	--	--	--
	SS66-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS67	SS67-9	0.0 - 0.9	7/31/2024	12	57	<1	15	--	21	<1	<1	<1
	SS67-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS68	SS68-9	0.0 - 0.9	7/31/2024	15	64	<1	13	--	31	<1	<1	<1
	SS68-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS69	SS69-9	0.0 - 0.9	7/31/2024	**40**	71	1.3	14	--	84	<1	<1	<1
	SS69-18	0.9-18.0	7/31/2024	**38**	--	--	--	--	--	--	--	--
	SS69-24	18.0 - 24.0	7/31/2024	9.8	--	--	--	--	25	--	--	--
SS70	SS70-9	0.0 - 0.9	7/31/2024	9.6	76	<1	16	--	17	<1	<1	<1
	SS70-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS71	SS71-9	0.0 - 0.9	7/31/2024	11	62	<1	14	--	20	<1	<1	<1
	SS71-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS72	SS72-9	0.0 - 0.9	7/31/2024	9.3	62	<1	15	--	38	<1	<1	<1
	SS72-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS73	SS73-9	0.0 - 0.9	7/31/2024	17	65	<1	19	--	68	<1	<1	<1
	SS73-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS74	SS74-9	0.0 - 0.9	7/31/2024	17	85	<1	13	--	29	<1	<1	<1
	SS74-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS75	SS75-9	0.0 - 0.9	7/31/2024	12	--	--	--	--	26	--	--	--
	SS75-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS76	SS76-9	0.0 - 0.9	7/31/2024	3.5	49	<1	14	--	11	<1	<1	<1
	SS76-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--

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SOIL ANALYTICAL RESULTS
TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
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Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver
SS77	SS77-9	0.0 - 0.9	7/31/2024	15	12	<1	27	--	99	<1	<1	<1
	SS77-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS78	SS78-9	0.0 - 0.9	7/31/2024	7.0	63	<1	16	--	71	<1	<1	<1
	SS78-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS79	SS79-9	0.0 - 0.9	7/31/2024	8.5	76	<1	17	--	18	<1	<1	<1
	SS79-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS80	SS80-9	0.0 - 0.9	7/31/2024	4.6	53	<1	16	--	5.5	<1	<1	<1
	SS80-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS81	SS81-9	0.0 - 0.9	7/31/2024	8.1	58	<1	16	--	13	<1	<1	<1
	SS81-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS82	SS82-9	0.0 - 0.9	7/31/2024	17	51	<1	21	--	4.2	<1	<1	<1
	SS82-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS83	SS83-9	0.0 - 0.9	7/31/2024	14	79	<1	22	--	7.5	<1	<1	<1
	SS83-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS84	SS84-9	0.0 - 0.9	7/31/2024	8.8	--	--	--	--	39	--	--	--
	SS84-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS85	SS85-9	0.0 - 0.9	7/31/2024	2.8	60	<1	16	--	4.8	<1	<1	<1
	SS85-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS86	SS86-9	0.0 - 0.9	7/31/2024	3.5	52	<1	14	--	4.1	<1	<1	<1
	SS86-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS87	SS87-9	0.0 - 0.9	8/2/2024	14	76	**2.8**	36	--	120	<1	<1	<1
	SS87-18	0.9-18.0	8/2/2024	14	--	1.9	--	--	94	--	--	--
	SS87A-9	0.0 - 0.9	9/11/2024	--	--	<1	--	--	--	--	--	--
	SS87A-18	0.9-18.0	9/11/2024	--	--	--	--	--	--	--	--	--
	SS87B-9	0.0 - 0.9	9/11/2024	--	--	<1	--	--	--	--	--	--
	SS87B-18	0.9-18.0	9/11/2024	--	--	--	--	--	--	--	--	--
	SS87C-9	0.0 - 0.9	9/11/2024	--	--	<1	--	--	--	--	--	--

TABLE 2
SOIL ANALYTICAL RESULTS
TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver
	SS87C-18	0.9-18.0	9/11/2024	--	--	--	--	--	--	--	--	--
	SS87D-9	0.0 - 0.9	9/11/2024	--	--	<1	--	--	--	--	--	--
	SS87D-18	0.9-18.0	9/11/2024	--	--	--	--	--	--	--	--	--
SS88	SS88-9	0.0 - 0.9	7/31/2024	4.6	52	<1	18	--	18	<1	<1	<1
	SS88-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS89	SS89-9	0.0 - 0.9	7/31/2024	6.8	76	1.7	31	--	55	<1	<1	<1
	SS89-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS90	SS90-9	0.0 - 0.9	7/31/2024	2.7	--	--	--	--	4.9	--	--	--
	SS90-18	0.9-18.0	7/31/2024	7.3	--	--	--	--	18	--	--	--
SS91	SS91-9	0.0 - 0.9	8/2/2024	3.5	--	--	--	--	5.6	--	--	--
	SS91-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS92	SS92-9	0.0 - 0.9	8/2/2024	4.0	64	<1	10	--	6.8	<1	<1	<1
	SS92-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS93	SS93-9	0.0 - 0.9	8/2/2024	7.0	62	<1	16	--	14	<1	<1	<1
	SS93-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS94	SS94-9	0.0 - 0.9	8/2/2024	3.8	63	<1	24	--	9.5	<1	<1	<1
	SS94-18	0.9-18.0	8/2/2024	3.3	--	--	--	--	4.6	--	--	--
SS95	SS95-9	0.0 - 0.9	8/2/2024	2.6	33	<1	16	--	6.0	<1	<1	<1
	SS95-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS96	SS96-9	0.0 - 0.9	8/2/2024	2.9	34	<1	20	--	3.4	<1	<1	<1
	SS96-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS97	SS96-9	0.0 - 0.9	8/2/2024	4.0	51	<1	15	--	3.7	<1	<1	<1
	SS96-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS98	SS98-9	0.0 - 0.9	8/2/2024	4.3	--	--	--	--	5.8	--	--	--
	SS98-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS99	SS99-9	0.0 - 0.9	8/2/2024	3.2	70	<1	19	--	6.7	<1	<1	<1
	SS99-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--

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A1- Towing Facility
18459 Des Moines Memorial Drive South
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Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver
SS100	SS100-9	0.0 - 0.9	8/2/2024	4.6	80	<1	19	--	5.1	<1	<1	<1
	SS100-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS101	SS101-9	0.0 - 0.9	7/31/2024	4.2	41	<1	20	--	8.4	<1	<1	<1
	SS101-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS102	SS102-9	0.0 - 0.9	7/31/2024	4.3	58	<1	28	--	13	<1	<1	<1
	SS102-18	0.9-18.0	7/31/2024	--	--	--	--	--	--	--	--	--
SS103	SS103-9	0.0 - 0.9	8/2/2024	3.5	63	<1	28	--	6.6	<1	<1	<1
	SS103-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS104	SS104-9	0.0 - 0.9	8/2/2024	2.3	--	--	--	--	3.3	--	--	--
	SS104-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS105	SS105-9	0.0 - 0.9	8/2/2024	5.0	--	--	--	--	7.8	--	--	--
	SS105-18	0.9-18.0	8/2/2024	11	--	--	--	--	18	--	--	--
SS106	SS106-9	0.0 - 0.9	8/2/2024	8.0	--	--	--	--	13	--	--	--
	SS106-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS107	SS107-9	0.0 - 0.9	8/2/2024	4.3	--	--	--	--	5.6	--	--	--
	SS107-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS108	SS108-9	0.0 - 0.9	8/2/2024	2.6	--	--	--	--	3.1	--	--	--
	SS108-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS109	SS109-9	0.0 - 0.9	8/2/2024	5.8	--	--	--	--	9.7	--	--	--
	SS109-18	0.9-18.0	8/2/2024	6.7	--	--	--	--	11	--	--	--
SS110	SS110-9	0.0 - 0.9	8/2/2024	2.1	--	--	--	--	3.0	--	--	--
	SS110-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS111	SS111-9	0.0 - 0.9	8/2/2024	2.8	48	<1	14	--	24	<1	<1	<1
	SS111-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS112	SS112-9	0.0 - 0.9	8/2/2024	10	--	--	--	--	40	--	--	--
	SS112-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--

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A1- Towing Facility
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Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver
SS113	SS113-9	0.0 - 0.9	8/2/2024	13	62	2.0	63	--	**280**	<1	<1	<1
	SS113-18	0.9-18.0	8/2/2024	**28**	--	--	--	--	76	--	--	--
SS114	SS114-9	0.0 - 0.9	8/2/2024	7.4	51	<1	14	--	39	<1	<1	<1
	SS114-18	0.9-18.0	8/2/2024	--	--	--	--	--	--	--	--	--
SS115	SS115-9	0.0 - 0.9	8/2/2024	5.5	87	<1	18	--	9.8	<1	<1	<1
	SS115-18	0.9-18.0	8/2/2024	4.0	--	--	--	--	5.0	--	--	--
Duff Samples												
Duff	Duff-1	Surface	9/11/2024	10	--	--	--	--	21	--	--	--
	Duff-2	Surface	9/11/2024	1.0	--	--	--	--	6.3	--	--	--
	Duff-3	Surface	9/11/2024	<2	--	--	--	--	1.5	--	--	--
	Duff-4	Surface	9/11/2024	2.4	--	--	--	--	15	--	--	--
MTCA Method A Cleanup Levels				**20**	**NE**	**2**	**2,000/19[c]**	**19**	**250**	**2**	**NE**	**NE**

Select Samples - Average Concentration for the Site (0- to 9-inch depth)[d]	**7.46**	**19.06**
Select Samples - Average Concentration for the Site (9- to 18-inch depth)[d]	**5.95**	**48.33**

Notes:
< indicates analyte not detected at or above given laboratory reporting limit
bold indicates detected concentration exceeds adopted criteria
Selected shallow arsenic and lead samples for Tacoma Smelter Plume assessment (0 to 9 inches)
Selected deeper arsenic and lead samples for Tacoma Smelter Plume assessment (9 to 18 inches)
Abbreviations & Acronyms:
mg/kg - milligrams per kilogram
in bgs - inche(s) below ground surface
NE = MTCA Cleanup Level not established for the listed constituent.
-- = Not Analyzed

TABLE 2
SOIL ANALYTICAL RESULTS
TOTAL METALS
A1- Towing Facility
18459 Des Moines Memorial Drive South
Des Moines, Washington
PBS Project No. 40757.028

Soil Boring	Sample ID	Depth (in bgs)	Date	Results (mg/kg)								
				Total Metals[a]								
				Arsenic	Barium	Cadmium	Chromium	hexavalent chromium	Lead	Mercury	Selenium	Silver

MTCA Method A Cleanups - Washington State Department of Ecology Model Toxics Control Act Method A Cleanup Level for Unrestricted Land Use as established in WAC 173-340-900

Footnotes:

[a] Analyzed by Environmental Protection Agency Method 6020B

[b] Washington State Department of Ecology Model Toxics Control Act Method A Cleanup Level for Unrestricted Land Use as established in WAC 173-340-900

[c] 2,000 mg/kg cleanup level for Chromium III and 19 mg/kg cleanup level for Chromium VI

[d] Washington State Department of Ecology Tacoma Smelter Plume Model Remedies Guidance, Sampling and cleanup of arsenic and lead contaminated soils,Publication Number 19-09-101, July 2019.

[A,B,C,D] Five-foot (5') step-out delineation samples were collected to the north, east, south, and west, respectively, from the SS87 soil boring location.

Appendix A

Voluntary Cleanup Program (VCP) - WA DOT Foreman, aka A-1 Towing

VCP NW3362 - Addendum to Phase II (May 2023)
VCP Acceptance Letter (July 2023)
VCP Application (December 2022)

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, Washington 98504-7600 • 360-407-6300

July 28, 2023

Patrick Svoboda
Haz-Mat and Solid Waste Program Manager
WSDOT
2214 RW Johnson Blvd SW
Tumwater, WA 98512
SvobodP@wsdot.wa.gov

Re: Application acceptance – Voluntary Cleanup Program

Site name:	WA DOT Foreman *a.k.a.* A-1 Towing
Site address:	18459 Des Moines Memorial Dr S, SeaTac, King County, WA 98148
Facility/Site ID:	90042
Cleanup Site ID:	15064
VCP Project ID:	NW3362

Dear Patrick Svoboda:

The Department of Ecology (Ecology) accepted your application to the Standard process of the Voluntary Cleanup Program (VCP) for the WA DOT Foreman a.k.a. A-1 Towing facility (Site). We applaud your initiative and welcome your interest in the VCP. This letter provides important information on how we will review your VCP cleanup project (project) at the Site.

Agreement

We completed and signed your Standard VCP agreement for the project on **July 27, 2023**. This date is the effective date of the agreement. A copy or your signed agreement is enclosed.

Identification numbers

We have assigned a unique name and number to your Site. This information is listed on the first page of your Standard VCP agreement (enclosed). When contacting us, please reference this information to identify your project.

Communications

Unless otherwise requested, we will communicate directly with you, the project manager, as listed on your VCP application form. If you replace your project manager, or their contact information changes, please submit a completed change of contact form.[1]

We have assigned the following site manager as our point of contact for your project:

Christopher Maurer, P.E.
Toxics Cleanup Program
Headquarters Cleanup Section
PO Box 47600
Olympia, WA 98504-7600
Phone: 360-407-7223
E-mail: christopher.maurer@ecy.wa.gov

Request for written opinion

In your application, you requested a written opinion on the sufficiency of your Phase II Environmental Site Assessments. We will review your submitted document(s) and expect to provide a written response within approximately 90 days.

Reporting requirements

When requesting written opinions, you must comply with the following reporting requirements to avoid unnecessary delays in the VCP process:

- **Licensing.** You must submit documents containing geologic and hydrogeologic work and engineering work under the seal of an appropriately licensed professional, as required in chapters 18.220[2] and 18.43[3] RCW, respectively.

- **Data submittal**. You must submit environmental data to our Environmental Information Management (EIM) system.[4] The Toxics Cleanup Program Policy 840[5] describes data submittal requirements. Please visit the EIM Submit Data webpage for data submittal instructions.

[1] https://apps.ecology.wa.gov/publications/summarypages/ECY070218.html
[2] https://apps.leg.wa.gov/RCW/default.aspx?cite=18.220
[3] https://apps.leg.wa.gov/RCW/default.aspx?cite=18.43
[4] https://ecology.wa.gov/eim
[5] https://apps.ecology.wa.gov/publications/SummaryPages/1609050.html

Payment

We will send monthly invoices to the billing contact listed in your VCP application form. Payment is due within 30 calendar days from the date of each invoice. Our invoices include a summary of costs incurred, payments received, names of staff billing to the project, and the time spent on the project during the previous month.

If you replace your billing contact, or their contact information changes, you must submit a completed change of contact form.

Contact information

We are committed to working with you to reach the prompt and effective Site cleanup. If you have any questions, please contact Christopher Maurer, P.E. at christopher.maurer@ecy.wa.gov or 360-407-7223.

Sincerely,

Treasure A Mitchell

Treasure A. Mitchell
VCP Coordinator
Toxics Cleanup Program
Headquarters Cleanup Section

Enclosure: Copy of signed Standard VCP Agreement

cc by email: Christopher Maurer, P.E., Ecology, christopher.maurer@ecy.wa.gov
Amy Hargrove, Ecology, amy.hargrove@ecy.wa.gov
Sonia Fernandez, Ecology, sonia.fernandez@ecy.wa.gov
Ecology Fiscal Office – VCP Budget Analyst, ecyrevcp@ecy.wa.gov
Ecology Site File

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Enclosure

Copy of Signed Standard VCP Agreement

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Voluntary Cleanup Program Agreement

Washington State Department of Ecology
Toxics Cleanup Program

For completion by Ecology only		
	Facility/Site Name:	**WA DOT Foreman A1 Towing**
	Facility/Site No.:	**90042**
	VCP Project No.:	**NW3362**

Instructions

Submit this Agreement (original) to Ecology as part of your Application. Before submitting, enter the Customer's name and the Site's address on the first page, and sign the Agreement on the second page. If your Application is accepted, then Ecology will do the following: 1) identify the Site and VCP project in the box below; 2) sign the Agreement; and 3) send you a copy of the completed Agreement.

This document constitutes an Agreement between the State of Washington Department of Ecology (Ecology) and Washington State Department of Transportation (Customer) to provide informal site-specific technical consultations under the Voluntary Cleanup Program (VCP) for the Site identified below and associated with the following address: 18459 Des Moines Memorial Dr., SeaTac, WA 98148.

The purpose of this Agreement is to facilitate independent remedial action at the Site. Ecology is entering into this Agreement under the authority of the Model Toxics Control Act (MTCA), chapter 70A.305 RCW, and its implementing regulations, chapter 173-340 WAC. If a term in this Agreement is defined in MTCA or chapter 173-340 WAC, then that definition shall govern.

Services Provided by Ecology

Upon request, Ecology agrees to provide the Customer informal site-specific technical consultations on the independent remedial actions proposed for or performed at the Site consistent with WAC 173-340-515(5). Those consultations may include assistance in identifying applicable regulatory requirements and opinions on whether the remedial actions proposed for or conducted at the Site meet those requirements.

Ecology may use any appropriate resource to provide the Customer with the requested consultative services. Those resources may include, but shall not be limited to, those of Ecology and the Office of the Attorney General. However, Ecology shall not use independent contractors unless the Customer provides Ecology with prior written authorization.

In accordance with RCW 70A.305.170, any opinions provided by Ecology under this Agreement are advisory only and not binding on Ecology. Ecology, the state, and officers and employees of the state are immune from all liability. Furthermore, no cause of action of any nature may arise from any act or omission in providing, or failing to provide, informal advice and assistance under the VCP.

Payment for Services by Customer

The Customer agrees to pay all costs incurred by Ecology in providing the informal site-specific technical consultations requested by the Customer consistent with WAC 173-340-515(6) and 173-340-550(6). Those costs may include the costs incurred by attorneys or independent contractors used by Ecology to provide the requested consultative services. Ecology's hourly costs shall be determined based on the method in WAC 173-340-550(2).

Ecology shall mail the Customer a monthly itemized statement of costs (invoice) by the tenth day of each month (invoice date) that there is a balance on the account. The invoice shall include a summary of the costs incurred, payments received, identity of staff involved, and amount of time staff spent on the project.

The Customer shall pay the required amount by the due date, which shall be thirty (30) calendar days after the invoice date. If payment has not been received by the due date, then Ecology shall withhold any requested opinions and notify the Customer by certified mail that the debt is past due.

If payment has not been received within sixty (60) calendar days of the invoice date, then Ecology shall stop all work under the Agreement and may, as appropriate, assign the debt to a collection agency under chapter 19.16 RCW. The Customer agrees to pay the collection agency fee incurred by Ecology in the course of debt collection.

Reservation of Rights / No Settlement

This Agreement does not constitute a settlement of liability to the state under MTCA. This Agreement also does not protect a liable person from contribution claims by third parties for matters addressed by the Agreement. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70A.305.040(4). Ecology's signature on this Agreement in no way constitutes a covenant not to sue or a compromise of any Ecology rights or authority.

Ecology reserves all rights under MTCA, including the right to require additional or different remedial actions at the Site should it deem such actions necessary to protect human health and the environment, and to issue orders requiring such remedial actions. Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Site.

Effective Date, Modifications, and Severability

The effective date of this Agreement shall be the date on which this Agreement is signed by the Toxics Cleanup Program's Section Manager or delegated representative. This Agreement may be amended by mutual agreement of Ecology and the Customer. Amendments shall be in writing and shall be effective when signed by the Toxics Cleanup Program's Section Manager or delegated representative. If any provision of this Agreement proves to be void, it shall in no way invalidate any other provision of this Agreement.

Termination of Agreement

Either party may terminate this Agreement without cause by sending written notice by U.S. mail to the other party. The effective date of termination shall be the date Ecology sends notice to the Customer or the date Ecology receives notice from the Customer, whichever occurs first. Unless otherwise directed, issuance of a No Further Action opinion, either for the Site as a whole or for a portion of the real property located within the Site, shall constitute notice of termination by Ecology.

Under this Agreement, the Customer is only responsible for costs incurred by Ecology before the effective date of termination. However, termination of this Agreement shall not affect any right Ecology may have to recover its costs under MTCA or any other provision of law.

Representations and Signatures

The undersigned representative of the Customer hereby certifies that he or she is fully authorized to enter into this Agreement and to execute and legally bind the Customer to comply with the Agreement.

Washington State Department of Ecology	Customer
	Patrick Svoboda
Signature	Signature
Erik G. Snyder	Patrick Svoboda
Printed Name	Printed Name of Signatory
Section Manager, Toxics Cleanup Program	Hazardous Materials and Solid Waste Program Manager Title of Signatory
07/27/2023	12/22/2022
Date	Date

If you need this publication in an alternative format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing impairment can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Washington State Department of Transportation

May 30, 2023

Department of Ecology
Toxic Cleanup Program – Northwest Regional Office
15700 Dayton Avenue North
Shoreline, Washington 98133

RE: A-1 Towing VCP Application – FS 90042

To whom it may concern,

With this letter, the Washington Department of Transportation (WSDOT) Environmental Services Office is submitting the requested additional information regarding the A-1 Towing VCP application. In addition to the attached information, WSDOT would like to state that after the demolition of the current structures at the site and before the start of construction for SR 509, the top 1.5 feet of soil where contamination was previously identified at the property will be removed, tested, and disposed of appropriately. After the removal of the soil, clean fill dirt will be imported to the site. The contamination remaining at the site, shown in the table attached, is for the most part below regulatory standards and WSDOT feels that removing the top part of the soil across the site will remediate any residual contamination remaining.

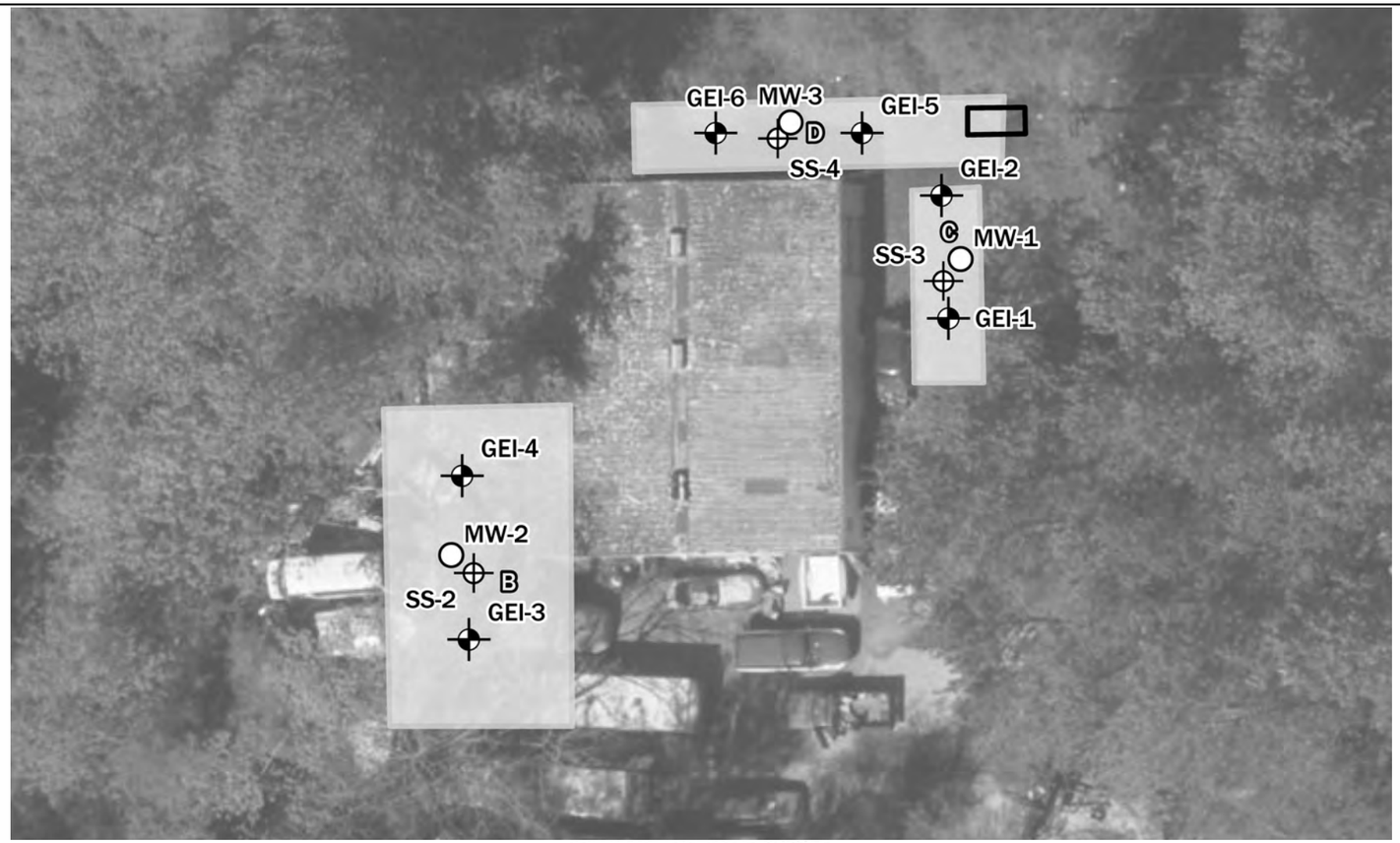
If you have any comments, questions, or concerns regarding the additional information provided or with the VCP application submitted in 2022, please don't hesitate to contact me.

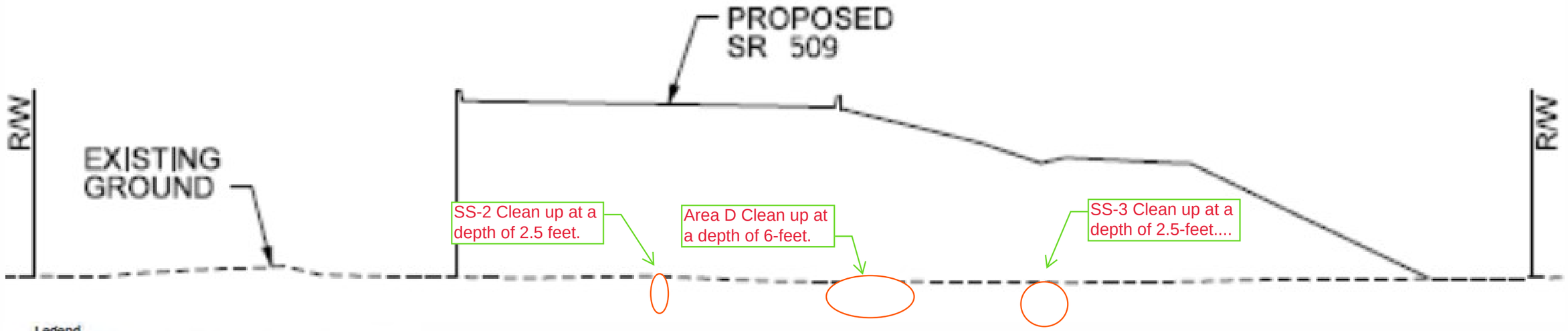
Sincerely,
Patrick Svoboda

Patrick Svoboda
Hazardous Materials and Solid Waste Program Manager
Environmental Services Office
Washington Department of Transportation
360-870-9491 Office

N

A1 TOWING - CLEANUP





Legend

- Boring Number and Approximate Location
- Monitoring Well Number and Approximate Location
- Previous WSDOT Explorations (2016)
- Drum Storage
- Assessment Area

Puget Sound GATEWAY Program

WSDOT

509 5 167

SR 509/24TH AVE. S. TO S. 188TH ST.
NEW EXPRESSWAY PROJECT

DATE: 4/5/2023 PRINTED BY: roegreg
FILE NAME: c:\users\roegreg\pw_wsdot\d0373158\A1 Towing Cleanup.dgn
MODEL NAME: Default

Sample ID	Date Collected	Depth Below Ground Surface (ft)	NWTPH-Gx Gasoline	NWTPH-Dx Diesel	Heavy Oil (Lube Oil)	Benzene
SS1	**10/25/2016**		ND	ND	**1900**	ND
SS2	**10/25/2016**		ND	ND	**220**	**0.022**
SS3	**10/25/2016**		ND	ND	**31,000**	ND
SS4	**10/25/2016**		ND	ND	**60**	ND
SS1a	**3/15/2018**		ND	ND	**82**	ND
SS2a	**3/15/2018**		ND	**58**	**370**	ND
SS3a (stockpile)	**3/15/2018**		ND	ND	**470**	ND
SS4a (stockpile)	**3/15/2018**		ND	ND	**260**	ND
FC1-1	**9/20/2018**				**590**	
FC1-2	**9/21/2018**				ND	
GEI-1	**12/25/2021**	9 to 10	<3.01	<4.4	<10.9	
GEI-2	**12/25/2021**	9 to 10	<2.99	<4.34	<10.80	
GEI-3	**12/25/2021**	9 to 10	<3.23	<4.50	<11.2	
GEI-4	**12/25/2021**	2 to 3	<2.97	<21.8	**166**	
GEI-5	**12/25/2021**	7 to 8	<3.02	<4.36	<10.9	
GEI-6	**12/25/2021**	7 to 8	<2.95	<4.33	<10.8	
MW-1	**12/25/2021**	2 to 3	<3.43	<4.69	<11.7	
MW-2	**12/25/2021**	9 to 10	<3.08	<4.43	<11.1	
MW-3	**12/25/2021**	2 to 3	<3.35	**5.55**	**24.3**	
MTCA Method A Cleanup Levels for Unrestricted Use			**30/100**[1]	**2,000**	**2,000**	**0.03**

Notes:

[1] TPH, gasoline range organics, benzene present / benzene not present

[2] MTCA Soil Protective of Groundwater Vadose @ 13 degrees C

Bold - analyte was detected at a concentration above the laboratory reported detection limit

- = no cleanup level noted

mg/kg = milligrams per kilogram

ND = Not Detected

TEQ = Toxic Equivalency

NWTPH = Northwest Total Petroleum Hydrocarbons

MTCA = Model Toxics Control Act

Anthracene	Acenapthene	Acenaphthylene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) Fluoranthene	Benzo (g,h,i) Perylene	Benzo (k) Fluoranthene
<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654
<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650
<0.00675	<0.00675	<0.00675	<0.00675	<0.00675	<0.00675	<0.00675	<0.00675
<0.00655	<0.00655	<0.00655	**0.0298**	**0.0363**	**0.05**	**0.0306**	**0.015**
<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654
<0.00649	<0.00649	0.00649	0.00649	0.00649	0.00649	0.00649	0.00649
<0.00703	<0.00703	<0.00703	<0.00703	<0.00703	<0.00703	<0.00703	<0.00703
<0.00665	<0.00665	0.00665	0.00665	0.00665	0.00665	0.00665	0.00665
<0.00691	<0.00691	0.00691	0.00691	0.00691	0.00691	0.00691	0.00691
$1{,}100^2$	**49^2**	**-**	**-**	**0.1**	**-**	**-**	**-**

Contaminants Detected (mg/kg)

Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.0218	<0.00654	<0.00654
<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.0217	<0.00650	<0.00650
<0.00675	<0.00675	<0.00675	<0.00675	<0.00675	<0.0225	<0.00675	<0.00675
0.0354	**0.0066**	**0.0622**	<0.0066	**0.0325**	<0.0218	**0.0244**	**0.0474**
<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.02180	<0.00654	<0.00654
0.00649	0.00649	0.00649	0.00649	0.00649	<0.0216	<0.00649	<0.00649
<0.00703	<0.00703	<0.00703	<0.00703	<0.00703	<0.02340	<0.00703	<0.00703
0.00665	0.00665	0.00665	0.00665	0.00665	<0.0222	<0.00665	<0.00665
0.00691	0.00691	0.00691	0.00691	0.00691	<0.023	<0.00691	<0.00691
-	-	**630[2]**	**51[2]**	-	**5**	-	**330[2]**

1-Methyl-naphthalene	2-Methyl-napthalene	Total cPAHs TEQ	Arsemic	Barium	Cadmium	Chromium	Lead
			ND			**48**	
			35			**46**	
			ND			**22**	
			ND			**42**	
			ND			**41**	
			ND			**52**	
			ND			**47**	
			ND			**60**	
<0.0218	<0.0128	ND	**2.26**	**41.9**	<1.09	**23.4**	<2.2
<0.0217	<0.0217	ND	**2.36**	**45.2**	<1.08	**21.5**	<2.17
<0.0225	<0.0225	ND	**2.93**	**25.3**	<1.12	**11.8**	<2.25
<0.0218	<0.0218	**0.0223**	**6.28**	**72.2**	<1.09	**33.9**	**27.6**
<0.0218	<0.0218	ND	**2.58**	**39.6**	<1.09	**21.1**	<2.18
<0.0216	<0.0216	ND	**2.31**	**35.1**	<1.08	**16.3**	<2.16
<0.0234	<0.0234	ND	**3.70**	**61**	<1.17	**26.7**	<2.34
<0.0222	<0.0222	ND	**3.17**	**44.9**	<1.11	**24.4**	<2.22
<0.023	<0.023	ND	**7.77**	**58.8**	<1.15	**41.6**	**3.16**
0.08[2]	**1.7**[2]	-	**20**	**1,600**[2]	**2**	**2000**	**250**

Mercury	Selenium	Silver
<0.0436	<2.72	<0.545
<0.0434	<2.71	<0.542
<0.0450	<2.81	<0.562
0.0731	<2.73	<0.546
<0.0436	<2.73	<0.545
<0.0433	<2.71	<0.541
<0.0469	<2.93	<0.0586
<0.0443	<2.77	<0.554
<0.0460	<2.88	<0.575
2	**5.2^2**	**14^2**

VCP Application
Standard and Expedited Processes

Washington State Department of Ecology
Toxics Cleanup Program

Application Form

Check the box of the process you are applying for:
- ☒ **Standard VCP**
- ☐ **Expedited VCP**

The Department of Ecology (Ecology) may provide informal, site-specific, technical consultations to persons conducting independent remedial actions at contaminated sites under the Voluntary Cleanup Program (VCP).[1] Ecology may provide the consultations under either the **Standard VCP** process or the **Expedited VCP** process.

Apply to the Standard VCP process

To apply for the **Standard VCP** process, you **must** submit to Ecology all the following:

- VCP application form, completed and signed ← this form
- VCP agreement form,[2] signed by applicant
- Agency determination checklist,[3] completed.

To request an opinion on a planned or completed remedial action, you **must** complete **Part 1.F** in this form. Submit with this application one searchable pdf file and one hard copy of each report you want us to review. See our report requirements on our Working with the Voluntary Cleanup Program webpage.[4]

Send your completed application to our regional contact listed, based on your site's county.

Northwest Region
Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom counties

Sonia Fernandez
Sonia.Fernandez@ecy.wa.gov
(425) 649-7233

Eastern Region
Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman counties

Ted Uecker
Ted.Uecker@ecy.wa.gov
(509) 329-3522



Southwest Region
Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum counties

Nicholas Acklam
Nicholas.Acklam@ecy.wa.gov
(360) 407-6347

Central Region
Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima counties

Frosti Smith
Frosti.Smith@ecy.wa.gov
(509) 454-7841

[1] https://www.ecy.wa.gov/VCP
[2] https://fortress.wa.gov/ecy/publications/SummaryPages/ecy070324.html
[3] http://ecyapfass/Biblio2/SummaryPages/ECY070620.html
[4] https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Voluntary-Cleanup-Program/Working-with-VCP

Apply to the Expedited VCP process

You may apply for the **Expedited VCP** process only during periods specified by Ecology. To see when Ecology is accepting **Expedited VCP** applications, see the Expedited VCP process webpage[5] or subscribe to our **Expedited VCP** email list.

To apply for the **Expedited VCP** process, you **must** submit to Ecology all the following:

- VCP application form, completed and signed ← this form
- Voluntary Cleanup Program Expedited Process agreement,[6] signed by applicant
- Agency determination checklist, completed
- Remedial investigation report or equivalent, meeting the elements of our remedial investigation checklist, and other reports you want us to review (one searchable pdf file and one hard copy each)
- Electronic environmental data submitted to the Environmental Information Management (EIM) system,[7] which provides automatically generated email as confirmation
- Project schedule.

See the Voluntary Cleanup Program (VCP): Guidance for the Expedited VCP Process[8] for additional information.

To submit your **Expedited VCP** application to Ecology, upload electronic files to Box.com,[9] after creating your online account:

Sarah Wollwage, Expedited VCP Planner
Toxics Cleanup Program
Department of Ecology
PO Box 47600 Lacey, WA 98504-7600

Do not send your **Expedited VCP** application materials to an Ecology regional office.

You **must pay** the **nonrefundable application fee** within seven calendar days of receiving our invoice, or we may reject your **Expedited VCP** application. After receiving the complete application, we will send the invoice to the email listed for the project billing contact in **Part 1.C** of this form. We will not process your application until we have received payment. Contact Sarah Wollwage at Sarah.Wollwage@ecy.wa.gov or (360) 407-7141 for additional information.

Part 1 – Administration

1.A	**Applicant.** The applicant is the person or organization requesting services from Ecology, and is responsible for paying Ecology's incurred costs incurred. The agreement explains the applicant's authority and duty.
Name of applicant:	Washington State Department of Transportation (WSDOT)
What type of entity is the applicant?	
☐ Person	A **person** applicant **must** serve as the project billing contact. Identify this person and their contact information in both **Parts 1.B and 1.C**.
☒ Organization	An **organization** applicant **must** identify the project manager in **Part 1.B** and the project billing contact in **Part 1.C**. The organization **must** employ both persons.

[5] https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Voluntary-Cleanup-Program/VCP-Expedited
[6] http://ecyapfass/Biblio2/SummaryPages/ECY070633.html
[7] https://ecology.wa.gov/Research-Data/Data-resources/Environmental-Information-Management-database/EIM-submit-data
[8] https://fortress.wa.gov/ecy/publications/summarypages/2009053.html
[9] https://account.box.com/login

Part 1 – Administration

What is the applicant's involvement at the site? Check **all that apply**.

- [x] property owner
- [ ] past property owner
- [ ] future property owner
- [ ] property lessee
- [ ] other – specify: _____
- [ ] business owner (operator)
- [ ] mortgage holder
- [ ] consultant
- [ ] attorney
- [ ] agent of property owner
- [ ] private person / organization
- [ ] public agency / organization

Expedited VCP note: The **Expedited VCP** applicant **must** have an ownership interest in or operate the facility or have a contractual right to purchase, redevelop, or reuse the facility. Agents for the property owner, such as a consultant, **may not apply** for the **Expedited VCP process**.

If not the current property owner, is the applicant authorized to grant property access? ☐ yes ☐ no

1.B Project manager. We will send the project manager all official correspondence. The project manager **must** be either the applicant or employed by the applicant. The project manager may not be an independent contractor hired by the applicant. Enter the required information.

Name: Patrick Svoboda	Title: Hazardous Materials and Solid Waste Program Manager	
Mailing address: 2214 RW Johnson Blvd SW		
City: Tumwater	State: Washington	Zip: 98512
Phone: 360-870-9491	Email: SvobodP@wsdot.wa.gov	Fax:

1.C Project billing contact. We will send the project billing contact monthly invoices. The project billing contact **must** be either the applicant or employed by the applicant. The project billing contact may not be an independent contractor hired by the applicant. Enter the required information.

Name: Same as Project Manager - see 1.b.	Title:	
Mailing address:		
City:	State:	Zip:
Phone:	Email:	Fax:

1.D Project consultant.

Is the applicant a consultant? ☐ yes ☒ no

If "**yes**", skip to **Part 1.E**.

If **"no"**, **and** the applicant hired a consultant to conduct the independent remedial action, enter the required information.

Name:	Title:	
Organization:		
Mailing address:		
City:	State:	Zip:
Phone:	Email:	Fax:

Do you want us to contact the project consultant? ☐ yes ☐ no

Part 1 – Administration

1.E Property owner.

Is the applicant the owner of the property where independent remedial action is being conducted?

☒ yes If **"yes"**, enter the type of entity and skip to **Part 1.F**.
☐ no If **"no",** enter below all of the required information.

Name:	Title:
Organization:	
Mailing address:	

City:	State:	Zip:
Phone:	Email:	Fax:

What type of entity is the property owner? Check **one**.

☐ private ☐ tribal ☐ federal ☒ state
☐ county ☐ municipal ☐ public school ☐ mixed
☐ other – specify: _____

1.F Request for written opinion.

Are you requesting a written opinion at this time? ☒ yes ☐ no

If **"yes"**, list the report(s) or plan(s) below you are requesting a written opinion for. Note: Your reports **must** meet the requirements on our Working with the Voluntary Cleanup Program webpage.[10]

1 - Phase II Environmental Site Assessment, Soil Sampling Report State Route (SR) 509, Foreman Property 18451 12th Avenue South (Jan. 24, 2019)

Prepared for Washington State Department of Transportation SR 509 Project Office - Prepared By Headquarters Hazardous Materials and Solid Waste Program Environmental Services Office

2 - Phase II Environmental Site Assessment A-1 Towing King County Tax Parcel 3223049048 Des Moines, Washington

Prepared for Washington State Department of Transportation - Prepared by GeoEngineers (Dec. 22, 2021)

Attach to this application additional remedial action reports or plans you want us to review. We will base our opinion on the information in the site file, including information attached to this application.

1.G Reporting requirements. Comply with the following two reporting requirements when requesting written opinions on planned or completed remedial actions.

1.G.1 Professional licensing. Documents submitted containing geologic, hydrogeologic, or engineering work **must** be stamped by of an appropriately licensed professional, as required by Chapters 18.220 and 18.43 RCW.

[10] https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Voluntary-Cleanup-Program/Working-with-VCP

Part 1 – Administration

1.G.2 Data submittal to EIM. You **must** submit all site environmental sampling and analysis data in an electronic format that meets our requirements for transfer into our EIM system. Refer to our EIM webpage for instructions on how to apply for an account and submit your data. Failure to comply with these requirements may result in unnecessary delays.

For **Expedited VCP** applications **only**, the study ID and CSV file name **must** both begin with "XVC" in the title. **Do not** use spaces or hyphens in either the study ID or CSV file name.

Have you submitted all the site's environmental data to EIM? ☒ yes ☐ no

☒ yes If **"yes"**, enter the study ID and CSV file name below.

☐ no If **"no",** and data need to be submitted, submit your data to EIM first, and then complete the required information below.

We will not accept your **Expedited VCP** application unless you have satisfied these requirements.

We will not issue a no further action (NFA) opinion, unless you have satisfied these requirements.

Study ID	CSV File name	Submitted to EIM? (y/n)
Ex: XVCNW9999	Ex: XVCnw9999_June20_results.csv	yes
Study ID: In Process	CSV File name: In Process	In Process
Study ID:	CSV File name:	
Study ID:	CSV File name:	
Study ID:	CSV File name:	
Study ID:	CSV File name:	
Study ID:	CSV File name:	
Study ID:	CSV File name:	
Study ID:	CSV File name:	

Part 2 – Site description

2.A Site name. If we have already identified the site, enter the site name we provided. Otherwise, enter a suggested name for the site. You may also include an alternative name.

Name: A-1 Right Towing

Alternative name: Foreman's Welding Property

Part 2 – Site description

2.B Source property. The source property is the property where hazardous substances were released into the environment. For example, for an underground storage tank (UST) release, the source property is where the underground storage tank is located that caused the release.

Do you know on which property the releases occurred? ☑ yes ☐ no

If **"yes",** refer to the source property when identifying the physical address and geographic position below.

If **"no",** refer to the property addressed by your cleanup when identifying the physical address and geographic position below.

2.B.1 Physical address. Enter the property's physical address.

Street address: 18459 Des Moines Memorial Drive S.		
City: SeaTac	State: WA	Zip: 98148

2.B.2 Geographic position. Enter the property's geographic position.

Coordinates	Latitude:	Degrees: 47	Minutes: 26	Seconds: 11.93
	Longitude:	Degrees: 122	Minutes: 19	Seconds: 17.28
Location on property (e.g., point of release or center of parcel]	Center of Parcel			
Collection method (e.g., GPS or address matching)	GPS			
Collection source (i.e., map scale)	Google Earth			
Horizontal datum (i.e., base reference for coordinate system)	WGS 84			
Accuracy level (i.e., +/- feet or meters)	+/- 10 feet			

Legal descriptions

TRS data	Township: 23 North	Range: 4 East	Section: 32	Quarter-quarter: NE-NW-SE
Tax parcels	3223049048			

2.C Affected properties. An affected property is a property affected by the hazardous substances released on the source property. For example, a leaking UST release on one property (source property) may migrate through the soil or groundwater to an adjacent property (affected property).

Do any of the releases affect any properties adjacent to the source property?

☐ yes — If **"yes"**, identify below each property you know has been affected by the releases on the source property. If you need to add more information, go to 2.C in the additional information pages at the end of this form.

☑ no — If **"no"**, skip to **Part 2.D**.

☐ unknown — If **"unknown"**, skip to **Part 2.D**.

1	Address:
	Tax parcels:
2	Address:
	Tax parcels:
3	Address:
	Tax parcels:

Part 2 – Site description

4	Address:
	Tax parcels:

2.D Public rights-of-way affected by the releases.

Do any of the releases affect a public right-of-way (e.g., roadways)? ☐ yes ☒ no ☐ unknown

If **"yes"**, specify below. Otherwise, skip to **Part 2.E**. If you need to add more information, go to 2.D in the additional information pages at the end of this form.

2.E Extent of the site.

What is the approximate areal extent of the site? Check **only one**.

☐ < 5,000 square feet ☒ > 5,000 square feet, < 1 acre
☐ > 1 acre, < 10 acres ☐ > 10 acres ☐ unknown

2.F Description of site release(s).

2.F.1 Release source(s).

What are the source(s) of the release(s) at the site? Check **all that apply**.

☐ area-wide lead and arsenic soil contamination (see "Area-wide soil contamination" below)
☐ non-point source (e.g., contaminated soil used as fill)
☐ point source (e.g., leaking tank)
☐ unknown
☒ other – specify: leaking vehicles

Describe below the release source(s). If you need to add more information, go to 2.F.1 in the additional information pages at the end of this form.

Stored vehicles leaking fluids, welding activities, and poor housekeeping practices by the tenant

2.F.2 Release circumstances. Describe the release circumstances. If you need to add more information, go to 2.F.2 in the additional information pages at the end of this form.

De minimus leaking of fluids over a long period of time in the same spot and poor housekeeping practices by the tenant of the property.

Part 2 – Site description

2.F.3 Release discover circumstances. Describe the release discovery circumstances. If you need to add more information, go to 2.F.3 in the additional information pages at the end of this form.

In October of 2016 during an inspection after the previous tenant vacated the site, areas of suspected contamination were noted.

Soil sampling was completed in four specific areas and analyzed for various contaminants. The samples showed elevated levels of arsenic and petroleum hydrocarbons.

In 2018, the current tenant displaced site soils from the previous sampled areas and formed a new stockpile. The current tenant continued to store vehicles that leaked and impacted the property soils over time. An additional inspection indicated that the property may have additional contamination.

2.F.4 Area-wide soil contamination. Visit the Dirt Alert Program webpage[11] or see the Management Plan for the Tacoma Smelter Plume project[12] for information about the area-wide soil contamination projects.

Is the site in an area affected by smelter emissions, such as from the Tacoma Smelter Plume area?

☒ yes ☐ no ☐ unknown

See if the site is within the mapped Tacoma Smelter Plume area.

Is the site located in a former fruit orchard in operation before 1947? ☐ yes ☒ no ☐ unknown

Is the site affected by area-wide arsenic or lead soil contamination? ☐ yes ☐ no ☒ unknown

2.G Nature and extent of contamination. The following refers to conditions after the release but before cleanup.

Hazardous substances and affected media. Identify hazardous substances released and media (e.g., soil) affected by those substances to the extent known. Use the codes at the end of the table.

Hazardous substance	Check affected media				
	Soil	Ground-water	Surface water	Sediment	Air
Ex: benzene	C	S	N/A	N/A	B
SVOCs	B	NA	NA	NA	NA
Petroleum - Lube Oil (heavy oils)	C	NA	NA	NA	NA
Cr, Sg, Ag, Ba, Cd, Pb, Hg	B	NA	NA	NA	NA
Arsenic	C	NA	NA	NA	NA
Benzene	B	NA	NA	NA	NA
NWTPH-Dx	B	NA	NA	NA	NA

[11] https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Dirt-Alert-program

[12] https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-sites/Toxic-cleanup-sites/Tacoma-smelter

VOCs	O	NA	NA	NA	NA
PAHs	B	NA	NA	NA	NA
NWTPH-Gx	O	NA	NA	NA	NA

C = confirmed, greater than cleanup level
B = confirmed, less than cleanup level
O = confirmed, not present
S = suspected
N/A = not suspected
U = unknown

2.G.1 Drinking water.

Does site contamination pose a threat or potential threat to an existing drinking water source (groundwater or surface water)? ☐ yes ☒ no ☐ unknown

If **"yes"**, what type of drinking water system is threatened by the contamination? Check **all that apply**.

☐ single family ☐ public

If **"public drinking water supply"** is selected, is the contamination located within or upstream of a 10-year wellhead protection area? ☐ yes ☐ no ☐ unknown

If **"yes"**, or help is needed, see the Source Water Assessment Program (SWAP) Mapping Tool[13] or call the Department of Health at (800) 521-0323 for information.

2.G.2 Indoor air.

Are contaminant odors noted in any buildings, underground utilities conduits, or other confined spaces?

☐ yes ☒ no ☐ unknown

If **"yes"**, specify below. If you need to add more information, go to 2.G.2 in the additional information pages at the end of this form.

2.H Site maps.

Attach to this application maps that identify:

- site location
- affected properties and public rights-of-way
- source(s) of release(s)
- nature and extent of contamination
- impacted human or ecological receptors (e.g., through drinking water supplies)
- site physical characteristics (e.g., property lines, building and roadway outlines, surface water bodies, water supply wells, groundwater flow direction, and utility rights-of-way)
- adjacent properties and their uses (e.g., gas station, dry cleaner, residential).

[13] https://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/SourceWater/GISMappingTool

Part 3 – Operational History

3.A Current use of source property. The following refers to only the source property and **not** other properties affected by the site contamination. Add information to the best of your ability.

3.A.1 Current property owners. Identify the current owner of the source property.

Name: Washington State Department of Transportation	Title: Owner	
Organization: State Agency		
Mailing address: 15700 Dayton Avenue North		
City: Shoreline	State: WA	Zip: 98133
Phone: 206-440-4000		

3.A.2 Current business owner (operator). Identify the current business owner operating on the source property.

Name: A-1 Towing	Title: Tenant	
Organization:		
Mailing address: 18459 Des Moines Memorial Drive		
City: SeaTac	State: WA	Zip: 98148
Phone:		

3.A.3 Current business operations. Identify the current business operations on the source property.

What is the current land use of the source property? Check **all that apply**.

☐ residential ☐ commercial ■ industrial ☐ agricultural ☐ childcare facility
☐ school ☐ park ☐ other – specify:

Does a commercial or industrial business currently operate on the source property?

☒ yes ☐ no ☐ unknown

If **"yes"**, identify in the following table the current business operations using the North American Industry Classification System (NAICS) codes and specifying the operations.

NAICS Code	Operations Description
Ex: 447110	Gasoline stations with convenience stores
488410	Motor Vehicle Towing

Is a solid waste handling facility located on the source property?

☐ yes ☒ no ☐ unknown

If **"yes"**, identify below. If you need to add more information, go to 3.A.3 in the additional information at the end of this form.

Part 3 – Operational History

Is a dangerous waste treatment, storage, or disposal facility located on the source property?

☐ yes ☒ no ☐ unknown

If **"yes"**, identify here: .

If you need to add more information, go to 3.A.3 in the additional information pages at the end of this form.

3.A.4 Regulation of current business operations.

Does the business operate under any federal, state, or local permits (e.g., NPDES) related to the release of hazardous substances into the environment? ☐ yes ☒ no ☐ unknown

If **"yes"**, specify below the regulated operation, the name of the permit, and the date it was issued.

Regulated operation	Permit	Date issued
Ex: wastewater discharge	NPDES permit	02/02/02

Has a state or federal notice of enforcement action (e.g., notice of violation) ever been issued related to the release of hazardous substances at the business? ☐ yes ☒ no ☐ unknown

If **"yes"**, specify notice and year issued: _____

Have business operations resulted in any other spills or other unpermitted releases on the source property? ☐ yes ☐ no ☒ unknown If **"yes"**, list in the following table.

Release	Date of release	Status of release

3.A.5 Storage tank information. Identify all aboveground storage tanks (ASTs) and USTs that have been used to store hazardous substances on the source property, regardless of whether the tanks are still in service or in place. Enter "U" where unknown.

Identification				Status and Closure				Releases	
Hazardous substance	AST or UST	Size (gal.)	Tank ID	Date installed	In use (y/n)	Date closed	Closure method (*)	Past (y/n)	Current (y/n)
Ex: diesel	UST	10,000	4	02/87	N	5/98	removed	Y	N
NA									

(*) Options = removed or closed in place.

Part 3 – Operational History

3.B Past use of source property. The following refers to only the source property, not other properties affected by the site.

3.B.1 Past property owners. Identify the owner of the source property when the release occurred.

Name: Washington State Department of Transportation		Title: Owner
Organization: State Agency		
Mailing address: 15700 Dayton Avenue North		
City: Shoreline	State: WA	Zip: 98133
Phone: 206-440-4000	Fax: NA	Email: NA

3.B.2 Past business owners (operators). Identify the site business owner (operator) when the release occurred.

Name: Foreman's Welding / A-1 Towing		Title: Tenant
Organization:		
Mailing address: 18459 Des Moines Memorial Drive		
City: SeaTac	State: WA	Zip: 98148
Phone: NA	Fax: NA	Email: NA

3.B.3 Identification of past business operations. Identify the past operations of businesses on the source property using the NAICS codes and/or specifying the operations.

NAICS Code	Operations description
Ex: 447110	Gasoline stations with convenience stores
488410	Motor Vehicle Towing

3.C Future use of source and affected properties. The following refers to both source and affected properties.

Will any ownership interest in the source property or affected properties be conveyed before or upon cleanup completion? ☐ yes ☒ no ☐ unknown

If **"yes"**, specify below. If you need to add more information, go to 3.C in the additional information pages at the end of this form.

Part 3 – Operational History

3.D Redevelopment plans as part of cleanup.

Will any of the source or affected properties, or portions of those properties, be redeveloped as part of the cleanup? ☐ yes ☒ no ☐ unknown

If **"yes"**, specify below the proposed land use. Check **all that apply**.

☐ residential ☐ school ☐ commercial ☐ industrial ☐ childcare facility

☐ agricultural ☐ park ☐ other – specify:

Also, specify below the activities proposed for that land use. If you need to add more information, go to 3.D in the additional information pages at the end of this form.

This parcel of land will be used for the expansion of SR-509 and will in the future consist of roadway on the parcel.

Part 4 – Administrative history

Have you previously reported the release(s) of hazardous substances?

☒ yes ☐ no ☐ unknown If **"yes"**, when? 2/19

Has cleanup of the site, or any portion of the site, ever been managed under the **Standard VCP** or **Expedited VCP**? ☐ yes ☒ no ☐ unknown

If **"yes"**, specify **Standard VCP** or **Expedited VCP** project number: _____

Has the site cleanup, or any portion, ever been managed under a federal or state order or decree?

☐ yes ☒ no ☐ unknown If **"yes"**, specify type and docket number: _____

Part 5 – Independent remedial actions

5.A Scope of remedial actions.

Do you plan to characterize and investigate all site contamination, including contamination on affected adjacent properties, as part of your cleanup project? ☐ yes ☒ no ☐ unknown

If **"no"**, describe below the scope of the cleanup project, including the contamination (properties, portions of a property, media and/or hazardous substances) that you **do not** plan on characterizing or investigation as part of the **Standard VCP** or **Expedited VCP** project. If you need to add more information, go to 5.A in the additional information pages at the end of this form.

WSDOT has already completed Independent remedial actions. The site has been sampled twice with the last sampling occurring after soils were removed.

Follow up sampling indicated that the site had levels of contamination below cleanup levels or non-detect.

Part 5 – Independent remedial actions

5.B Status of remedial actions.

What is the current status of remedial actions at the site? Check **all that apply** in table.

Remedial action	Planned	Ongoing	Completed	Not applicable
Initial response (UST only)				X
Interim action				X
Remedial investigation			X	
Feasibility study				X
Cleanup action			X	

5.C Documentation of remedial actions.

List all known remedial action plans or reports produced for the site, including:

- title
- preparer
- date produced
- whether submitted to us
- date submitted to us

If you need to add more information, go to 5.C in the additional information pages at the end of this form.

	Title	Preparer	Date	Submitted to Ecology	
				yes/no	date
Ex:	Jane Doe site: Remedial Investigation Work Plan	Freedom Consulting	02/20/19	no	n/a
1	Phase II Environmental Site Assessment, Soil Sampling Report, Foreman Property	WSDOT Hazardous Materials and Solid Waste Program	1/24/2019	Yes	2/26/2019
2	Phase II Environmental Site Assessment, A-1 Towing	GeoEngineers	12/22/2021	No	
3					
4					
5					
6					
7					
8					
9					
10					

Part 6 – Statement and signature

6.A	**Statement and signature.** The undersigned **affirms** that the information provided in this application is true and accurate to the best of the applicant's knowledge. Someone other than the **applicant** may sign this application form.		
Name: Patrick Svoboda		Title: Hazardous Materials and Solid Waste Program Manager	
Signature: *Patrick Svoboda*			Date: 12/22/2022
Organization: Washington State Department of Transportation			
Mailing address: 2214 RW Johnson Blvd SW			
City: Tumwater		State: Washington	Zip: 98512
Phone: 360-870-9491	Email: SvobodP@wsdot.wa.gov	Fax:	

6.B Affiliation.

What is the signatory's involvement at the site? Check **all that apply**.

- ☒ applicant
- ☒ property owner
- ☐ consultant
- ☐ attorney
- ☐ other - specify:

Expedited VCP note: While anyone may sign the **application form**, only certain types of applicants are eligible to join **Expedited VCP process** and sign the **Expedited VCP agreement**. To sign the agreement, the applicant **must** have an ownership interest in or operate the facility or have a contractual right to purchase, redevelop, or reuse the facility. If the applicant is a corporation, a representative authorized to bind the corporation **must** sign the **Expedited VCP** agreement.

If you need this publication in an alternative format, please call the Toxics Cleanup Program at 360-407-7170 or visit our Toxics Cleanup Program webpage.[14] Persons with hearing impairment can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

[14] https://ecology.wa.gov/About-us/Get-to-know-us/Our-Programs/Toxics-Cleanup

Additional Information Pages

Insert information here that does not fit into the application format above.

2.C Affected properties (continued)	
5	Address:
	Tax parcels:
6	Address:
	Tax parcels:
7	Address:
	Tax parcels:
8	Address:
	Tax parcels:
9	Address:
	Tax parcels:
10	Address:
	Tax parcels:

2.D Public rights-of-way affected by the releases (continued)

2.F.1 Release source(s) (continued)

2.F.2 Release circumstances (continued)

2.F.3 Release discovery circumstances (continued)

2.G.2 Indoor air (continued)

3.A.3 Current business operations (continued)

3.C Future use of source and affected properties (continued)

3.C	Future use of source and affected properties (continued)

3.D	Redevelopment plans (continued)

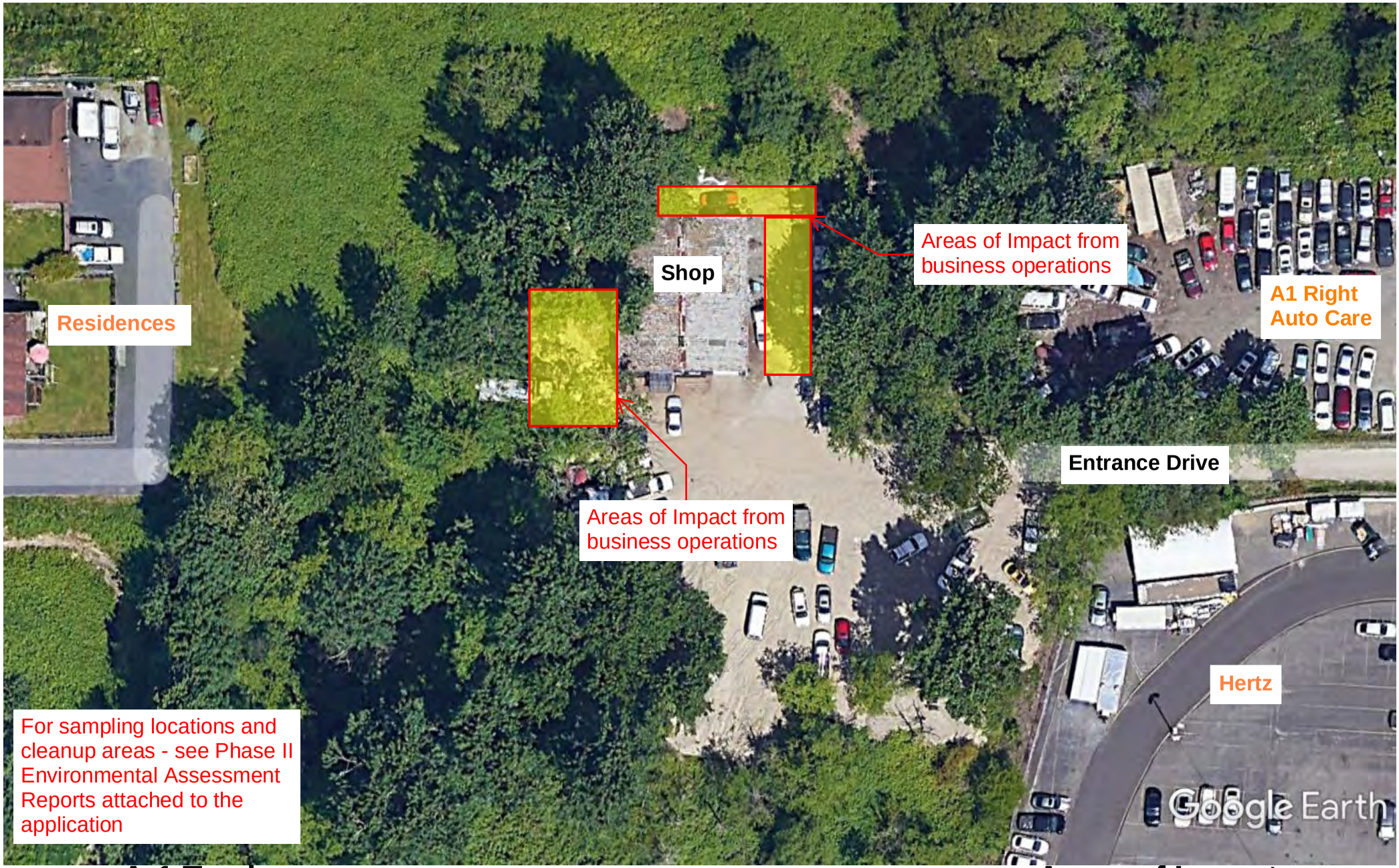
5.A	Scope of remedial actions (continued)

5.C	Documentation of remedial actions (continued)



Site Location Map
18459 Des Moines Memorial Drive, SeaTac, WA 98148

N



A-1 Towing
18459 Des Moines Memorial Drive
SeaTac, WA 98148

Areas of Impact

N

Appendix B

Previous Subsurface Investigations (2016 to 2022)

GeoEngineers, Phase II Environmental Site Assessment, November 2022.
WSDOT Headquarters Hazardous Materials and Solid Waste Program, Phase II Environmental Site Assessment, Soil Sampling Report, January 2019.
WSDOT A-1 Towing Site Figure, SR 509 – New Expressway Project.

Phase II Environmental Site Assessment, Soil Sampling Report
State Route (SR) 509
Foreman Property 18451 12th Avenue South

Prepared for

Washington State Department of Transportation
SR 509 Project Office

Prepared by

Headquarters Hazardous Materials and Solid Waste Program
Environmental Services Office

Washington State Department of Transportation

January 24, 2019

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6.0 SUMMARY AND CONCLUSIONS **5**

Appendix 1 - Vicinity with Sample & Background Map
Appendix 2 - Summary Tables
Appendix 3 - Laboratory Reports
Appendix 4 - Disposal Tickets
Appendix 5 - Photos

Acronyms and Abbreviations

ASTM E 1903-11	American Society for Testing and Materials Standard Practice for Environmental Site Assessments: Phase II Environmental Assessment Process, Designation: E 1903-11
bgs	Below ground surface
CUL	Cleanup Level
Ecology	Washington State Department of Ecology
ESA	Environmental Site Assessment
ESO	Environmental Services Office
HazMat Program	Hazardous Materials and Solid Waste Program
HQ	Headquarters
MTCA	Model Toxics Control Act
NFA	No Further Action
NWR	Northwest Region
RCRA	Resource Conservation and Recovery Act
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

1.0 INTRODUCTION

The Washington State Department of Transportation (WSDOT) Headquarters (HQ) Hazardous Materials and Solid Waste (HazMat) Program prepared this Phase II Environmental Site Assessment (ESA) Report to provide a summary of information associated with soil investigation and excavation activities within existing unconstructed WSDOT right-of-way (ROW) at 18451 12th Avenue South in Des Moines, WA (Site) (See Appendix 1).. The Site is associated with the WSDOT 509 Project Office in support of the future construction of the State Route (SR) 509 Roadway Project.

The Phase II ESA soil sampling activities assesses soil conditions within the property and confirms the presence or absence of contaminated soil after cleanup activities. A contractor, Marine Vacuum Incorporated (Marine Vac.) remediated two areas of confirmed and suspected contaminated materials.

HazMat conducted this Phase II ESA in general accordance with the American Society for Testing and Materials Standard Practice for Environmental Site Assessments (ASTM): Phase II Environmental Site Assessment Process, Designation: E 1903-11 (ASTM 1903-1) and the WSDOT Environmental Manual (EM) 31-11, Chapter 447.

1.1 SITE INFORMATION

The following sections provide information pertaining to the background, physical, geological and hydrogeological setting of the site.

1.1.1 Physical Setting and Historical Background

WSDOT purchased this Site as part of the future SR 509 Project, and leased the property to tenants since 2000. The Site is located near the intersection of Des Moines Memorial Drive and South 188 Street and the intersection of SR 509 and South 188 Street. The previous tenant, Mr. Foreman, conducted welding activities on this property from 2000 through 2016. In the summer of 2016, WSDOT allowed the Washington State Patrol (WSP) to use a portion of the property to dismantle seized vehicles. Currently, A-1 Towing leases the property as a towing yard, which includes parking vehicles throughout the site and repairing the vehicles within the garage structure.

1.2.1 Geologic and Hydrogeologic Setting

Based upon review available information near the Site vicinity, soils from surface to six feet (ft.) below ground surface (bgs) are defined as poorly graded sand, medium dense, olive gray, moist and homogenous. Soils from six to 10 ft. are defined as poorly graded sand, medium dense, olive gray, moist, and homogeneous. Soils from 10 to 15 ft. are defined as silty sand, dense, grayish brown, moist, and homogenous.

Groundwater depth varied across the Site; although, it was encountered as shallow as three ft. bgs in select locations.

2.0 BACKGROUND INFORMATION

The following provides a chronological order of the relevant events that led up to the cleanup of contaminated soils on the Site. The background describes two separate sample events prior to the contaminated soil remedial activities and confirmation sampling.

In October 2016, WSDOT Northwest Region (NWR) Real Estate Services (RES) requested the WSDOT NWR Hazardous Materials Specialist to perform a limited Phase II Environmental Site Assessment (ESA) after MR. Foreman's lease terminated. WSDOT NWR sampled four locations (A, B, C, & D) (See Appendix 1) of suspected contaminated soil identified on the property. NWR HazMat identified two relatively large heavily stained areas, numerous small stains located on the north end of the site, and abandoned solid waste debris and trash scattered throughout. WSDOT collected a total of four representative samples (SS1 in Area A, SS2 in Area B, SS3 in Area C, and SS4 in Area D). WSDOT collected samples in areas where large stains were evident (A and C), numerous small stains (D), unusual odors (A-D), and solid wastes like trash and debris were abandoned (B and D). The soil samples were analyzed using the following methods:

- Northwest Total Petroleum Hydrocarbons - Method NWTPH – Benzene, Toluene, Ethylbenzene, and Xylene (BTEX))
- Diesel and Heavy Oil - Method NWTPH (Dx)
- SVOCs - EPA Method 8270
- RCRA 8 Metals - EPA Method 6010

Analytical results of one the four soil samples indicated that that lube range petroleum hydrocarbons were detected at a concentration greater than current Model Toxics Control Act (MTCA) Method A cleanup level (CUL) of 2,000 milligrams per kilograms (SS-3 31,000 mg/kg). WSDOT considered this asphalt. The analytical results of another sample indicated that arsenic were detected at a concentration greater the current MTCA Method A CUL of 20 milligrams per kilograms (SS-2 35 mg/kg). The remaining analytes sampled were either non-detect or below MTCA Method A cleanup levels. Based upon the sample results, field remediation of contaminated soils was needed in area B (SS-2) and C (SS-3).

In April 2017, WSDOT contracted Marine Vacuum Incorporated (Marine Vac.) to cleanup areas on the Site with trash, debris, and soils with notable detectable analytes below MTCA Method A CULs.

In January 2018 A-1 Towing, the lessee, graded and displaced Site soils. Some soils were contaminated. The soils were displaced from previously sampled areas A and B. There also was a new stockpile located just north of area D.

On March 15, 2018, WSDOT Headquarters (HQ) HazMat Program collected four soil samples (SS1a, SS2a, SS3a, and SS4a) on the Site in areas previously defined as A, B, and in a new location. The HazMat Program collected a sample if there was an indication of grading with known or suspected soil contamination, or where displaced/graded soils appeared to be consolidated into a stock pile generated by the lessee. Areas C and D did not have these indicators and did not warrant additional sampling. The stock pile location is just north of area D and was estimated to contain approximately 25 cubic yards of material.

The analytical results from the March 2018 investigative sampling, individual chemical constituents detected in each soil sample were analyzed using:

- NWTPH-Gx,
- NWTPH-Dx,
- Volatiles EPA Method 8260C,
- Semi-Volatiles Method 8270D,
- Total metals EPA Method 6010D.

No sample results were above MTCA Method A cleanup standards.

3.0 FIELD INVESTIGATION

On September 21, 2018, HQ HazMat collected two soil confirmation samples (Fcl1 and Fcl2) using a pre-cleaned stainless steel spoon. HQ HazMat decontaminated the stainless steel spoon with a phosphate free cleaner (Alconox) and rinsed it with distilled water between the confirmation sample locations. HQ HazMat collected the two confirmation samples in areas remediated where:

- Soils were previously identified in concentrations that exceeded MTCA Method A cleanup levels (CULs) for lube oil; and
- Numerous stains were located throughout the area.

The Fcl1 confirmation sample was collected at the bottom from the center of where the crushed asphalt was removed.

The depth of the excavation trench for the 2nd confirmation sample could not safely be accessed. Therefore, the Fcl2 confirmation sample was collected from soil excavated with a backhoe bucket taken from the center of the bottom of the excavation.

4.0 ANALYTICAL SAMPLING RESULTS

The analytical data was reviewed and deemed acceptable. The individual chemical constituents in each soil sample was evaluated against the MTCA Method A cleanup levels for unrestricted land use. The sample results were below MTCA Method A cleanup levels. All chemical results from each of the soil sample events are presented in its entirety in Appendix 3. All of the soil samples were delivered to OnSite Environmental Incorporated located in Redmond, WA.

The analytical results from the September 2018 confirmation samples, individual constituents detected in each soil sample was evaluated against:

- NWTPH-Dx
- Semi-Volatiles EPA Method 8260C
- MTCA Metals

The laboratory analytical results from the two confirmation samples were either non-detect or at concentrations below MTCA Method A CULs.

5.0 FIELD ACTIVITIES

On September 20 and 21, 2018, Marine Vac. conducted excavation activities to address lube oil concentrations exceeding MTCA Method A CULs. Additionally, Marine Vac. excavated an area to remediate suspected contaminated materials (See Appendix 1 areas C and D). During site cleanup activities, excavated soils were segregated based on field screening results. Soils included in the direct haul to Marine Vac. for disposal as contaminated included soils based up sight, olfactory indicators, and/or had Photoionization Indication Detector (PID) levels above 10 ppm. The non-suspect soils were placed off to the side in a designated area lined and covered with 6 mil polyethylene sheeting. On September 24, 2018, Marine Vac. filled and graded the excavation areas with the existing non-suspect soils.

A total of about 8.4 cubic yards of suspected and/or confirmed contaminated material was excavated and transported for disposal by Marine Vac. Waste disposal receipts are located in Appendix 4.

No groundwater was encountered during cleanup activities.

6.0 SUMMARY AND CONCLUSIONS

WSDOT completed soil investigation and excavation activities within the Site. WSDOT investigated the soils on the Site at the end of an existing long term lease and also after the new lessee displaced and graded soils. Confirmed and suspect contamination existed on the site. Approximately 8.4 cubic yards of confirmed and suspected contaminated soil was disposed. Based on the laboratory analytical results from the confirmation sample locations, it was determined that no contamination remains on the property.

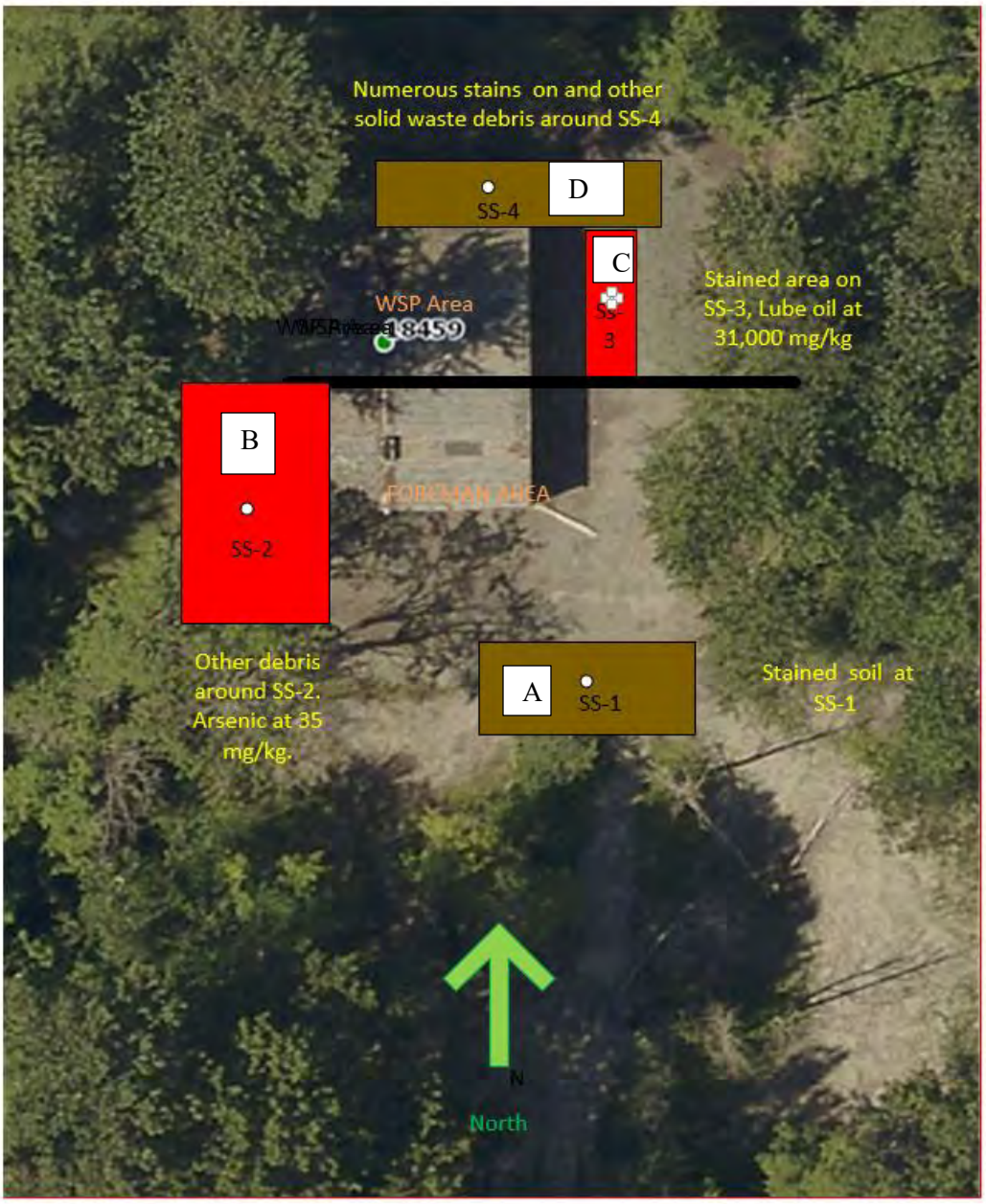
Based on the cleanup activities and the laboratory analytical results, it appears that the subsequent environmental investigation removed the confirmed or suspected contamination; therefore, with no immediate threat to human health or the environment no additional environmental investigation appears warranted at this time. WSDOT recommends Washington State Department of Ecology to accept this Site as a No Further Action.

APPENDIX 1 – VICINITY MAP and SAMPLE POINTS & BACKGROUND

VICINITY MAP WITH SAMPLE POINTS



BACKGROUND AREA



◯ Sample locations

APPENDIX 2 SUMMARY TABLES

BACKGROUND CONDITION

Sample Collected (10/2016)	Gasoline mg/kg	Diesel mg/kg	Lube Oil mg/kg	Benzene mg/kg	Chromium mg/kg	Arsenic mg/kg
SS 1	ND	ND	1900	ND	48	ND
SS 2	ND	ND	220	0.022 (0.03)	46	**35**
SS 3	ND	ND	**31,000**	ND	22	ND
SS 4 *MTCA Method A Cleanup levels mg/kg*	ND *30 mg/kg with Benzene 100 mg/kg without Benzene*	ND *2000 mg/kg*	60 *2000 mg/kg*	ND *0.03*	42 *100 mg/kg(replaced by values for III (2000) and VI (19))*	ND *20 mg/kg*

MARCH 2018 INVESTIGATION

Sample Collected (10/2016)	Gasoline mg/kg	Diesel mg/kg	Lube Oil mg/kg	Benzene mg/kg	Chromium mg/kg	Arsenic mg/kg
SS 1	ND	ND	82	ND	41	ND
SS 2	ND	58	370	ND	52	ND
SS 3 (STOCKPILE)	ND	ND	470	ND	47	ND
SS 4 (STOCKPILE)	ND	ND	260	ND	60	ND
MTCA Method A Cleanup levels mg/kg	*30 mg/kg with Benzene 100 mg/kg without Benzene*	*2000 mg/kg*	*2000 mg/kg*	*0.03 mg/kg*	*100 mg/kg(replaced by values for III (2000) and VI (19))*	*5 mg/kg*

CONFIRMATION SAMPLE

Sample Collected 8/21/2018	Lube Oil
FC1-1 (Baseline ss3)	590
FC1-2 (Baseline ss4)	ND
MTCA Method A cleanup level mg/kg	*2000 mg/kg*

APPENDIX 3 LABORATORY REPORTS

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

November 8, 2016

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project SR 509 - 12th Street
Laboratory Reference No. 1610-295

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on October 26, 2016.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

Case Narrative

Samples were collected on October 25, 2016 and received by the laboratory on October 26, 2016. 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.

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.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Semivolatiles EPA 8270D/SIM Analysis

Sample SS 4 had one surrogate recovery out of control limits. This was due to a large co-eluting non-target analyte peak, tentatively identified as 2-butoxy ethanol by spectral library search.

The Spike Blank/Spike Blank Duplicate had one recovery slightly above control limits, due to a small upward bias in the instruments' calibration and the sample was non-detect for this analyte. No further action was taken.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	10-31-16	
Toluene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
Ethyl Benzene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
m,p-Xylene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
o-Xylene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
Gasoline	**ND**	5.1	NWTPH-Gx	10-28-16	10-31-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*63-124*				
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
Benzene	**0.022**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	9.4	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*63-124*				
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	4.8	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*63-124*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	5.5	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*63-124*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1028S1					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	10-28-16	
Toluene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
Ethyl Benzene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
m,p-Xylene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
o-Xylene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
Gasoline	**ND**	5.0	NWTPH-Gx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*63-124*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-293-16										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*100*	*95*	*63-124*			
SPIKE BLANKS											
Laboratory ID:	SB1028S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.929**	**0.914**	1.00	1.00		**93**	**91**	70-124	2	12	
Toluene	**0.935**	**0.927**	1.00	1.00		**94**	**93**	73-119	1	12	
Ethyl Benzene	**0.953**	**0.942**	1.00	1.00		**95**	**94**	74-117	1	12	
m,p-Xylene	**0.905**	**0.907**	1.00	1.00		**91**	**91**	75-117	0	13	
o-Xylene	**0.943**	**0.932**	1.00	1.00		**94**	**93**	75-116	1	12	
Surrogate:											
Fluorobenzene						*95*	*91*	*63-124*			

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
Diesel Range Organics	**ND**	550	NWTPH-Dx	10-28-16	10-28-16	U1
Lube Oil	**1900**	56	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
Diesel Range Organics	**ND**	46	NWTPH-Dx	10-28-16	10-28-16	U1
Lube Oil Range Organics	**220**	70	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
Diesel Range Organics	**ND**	6000	NWTPH-Dx	10-28-16	10-31-16	U1
Lube Oil	**31000**	1100	NWTPH-Dx	10-28-16	10-31-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*---*	*50-150*				S
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
Diesel Range Organics	**ND**	30	NWTPH-Dx	10-28-16	10-28-16	
Lube Oil Range Organics	**60**	59	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1028S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	10-28-16	10-28-16	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-295-01									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	U1
Lube Oil	**1670**	**1670**	NA	NA		NA	NA	0	NA	
Surrogate:										
o-Terphenyl						*84* *100*	*50-150*			

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
n-Nitrosodimethylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.37	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**0.0099**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Fluorene	**0.0088**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**0.014**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**0.011**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.37	EPA 8270D	11-2-16	11-3-16	
Pyrene	**0.018**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**0.053**	0.037	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Chrysene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
bis(2-Ethylhexyl)phthalate	**0.26**	0.037	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*51*	*18 - 109*				
Phenol-d6	*63*	*25 - 111*				
Nitrobenzene-d5	*64*	*22 - 113*				
2-Fluorobiphenyl	*82*	*30 - 114*				
2,4,6-Tribromophenol	*88*	*22 - 116*				
Terphenyl-d14	*78*	*33 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.46	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**0.30**	0.23	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**0.044**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**0.026**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**0.014**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Fluorene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**0.012**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**0.0098**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.46	EPA 8270D	11-2-16	11-3-16	
Pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Chrysene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
bis(2-Ethylhexyl)phthalate	**0.059**	0.046	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*28*	*18 - 109*				
Phenol-d6	*29*	*25 - 111*				
Nitrobenzene-d5	*49*	*22 - 113*				
2-Fluorobiphenyl	*57*	*30 - 114*				
2,4,6-Tribromophenol	*51*	*22 - 116*				
Terphenyl-d14	*57*	*33 - 114*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
n-Nitrosodimethylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Pyridine	**ND**	1.8	EPA 8270D	11-2-16	11-4-16	
Phenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Aniline	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroethyl)ether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Chlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,3-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,4-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Benzyl alcohol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
1,2-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Methylphenol (o-Cresol)	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroisopropyl)ether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
n-Nitroso-di-n-propylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Hexachloroethane	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Nitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Isophorone	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Nitrophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dimethylphenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroethoxy)methane	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2,4-Trichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Naphthalene	**0.011**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Hexachlorobutadiene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Chloro-3-methylphenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Methylnaphthalene	**0.042**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**0.030**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4,6-Trichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3-Dichloroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4,5-Trichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Chloronaphthalene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,4-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Dimethylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,3-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,6-Dinitrotoluene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Acenaphthylene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
3-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
2,4-Dinitrophenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Acenaphthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
4-Nitrophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dinitrotoluene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Dibenzofuran	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Diethylphthalate	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
4-Chlorophenyl-phenylether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Fluorene	**0.15**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
4,6-Dinitro-2-methylphenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
n-Nitrosodiphenylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2-Diphenylhydrazine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Bromophenyl-phenylether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Hexachlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Pentachlorophenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Phenanthrene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Anthracene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Carbazole	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Di-n-butylphthalate	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Fluoranthene	**0.18**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzidine	**ND**	1.8	EPA 8270D	11-2-16	11-4-16	
Pyrene	**0.30**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
3,3'-Dichlorobenzidine	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Benzo[a]anthracene	**0.21**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Chrysene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Benzo[b]fluoranthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo(j,k)fluoranthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[a]pyrene	**0.12**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Indeno[1,2,3-cd]pyrene	**0.078**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Dibenz[a,h]anthracene	**ND**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[g,h,i]perylene	**0.15**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*53*	*18 - 109*				
Phenol-d6	*62*	*25 - 111*				
Nitrobenzene-d5	*67*	*22 - 113*				
2-Fluorobiphenyl	*68*	*30 - 114*				
2,4,6-Tribromophenol	*76*	*22 - 116*				
Terphenyl-d14	*38*	*33 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Pyridine	**ND**	0.40	EPA 8270D	11-2-16	11-7-16	
Phenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Aniline	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Chlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Benzyl alcohol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Hexachloroethane	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Nitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Isophorone	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Nitrophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Naphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4-Chloroaniline	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Dimethylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Acenaphthylene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
3-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Acenaphthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4-Nitrophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Dibenzofuran	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Diethylphthalate	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Fluorene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Pentachlorophenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Phenanthrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Carbazole	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzidine	**ND**	0.40	EPA 8270D	11-2-16	11-7-16	
Pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Butylbenzylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis-2-Ethylhexyladipate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Benzo[a]anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Chrysene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Di-n-octylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo(j,k)fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo[g,h,i]perylene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*1.6*	*18 - 109*				Q
Phenol-d6	*75*	*25 - 111*				
Nitrobenzene-d5	*78*	*22 - 113*				
2-Fluorobiphenyl	*83*	*30 - 114*				
2,4,6-Tribromophenol	*92*	*22 - 116*				
Terphenyl-d14	*85*	*33 - 114*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.33	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.33	EPA 8270D	11-2-16	11-3-16	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*69*	*18 - 109*				
Phenol-d6	*70*	*25 - 111*				
Nitrobenzene-d5	*72*	*22 - 113*				
2-Fluorobiphenyl	*74*	*30 - 114*				
2,4,6-Tribromophenol	*76*	*22 - 116*				
Terphenyl-d14	*81*	*33 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1102S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.07**	**1.02**	1.33	1.33	80	77	37 - 107	5	39	
2-Chlorophenol	**1.08**	**1.01**	1.33	1.33	81	76	36 - 107	7	40	
1,4-Dichlorobenzene	**0.503**	**0.485**	0.667	0.667	75	73	28 - 108	4	41	
n-Nitroso-di-n-propylamine	**0.488**	**0.465**	0.667	0.667	73	70	28 - 113	5	33	
1,2,4-Trichlorobenzene	**0.505**	**0.489**	0.667	0.667	76	73	33 - 106	3	38	
4-Chloro-3-methylphenol	**1.15**	**1.11**	1.33	1.33	86	83	52 - 106	4	30	
Acenaphthene	**0.525**	**0.510**	0.667	0.667	79	76	52 - 90	3	30	
4-Nitrophenol	**1.44**	**1.48**	1.33	1.33	108	111	30 - 109	3	32	I
2,4-Dinitrotoluene	**0.576**	**0.569**	0.667	0.667	86	85	50 - 101	1	32	
Pentachlorophenol	**0.981**	**0.855**	1.33	1.33	74	64	21 - 114	14	40	
Pyrene	**0.590**	**0.592**	0.667	0.667	88	89	52 - 104	0	30	
Surrogate:										
2-Fluorophenol					*79*	*75*	*18 - 109*			
Phenol-d6					*84*	*78*	*25 - 111*			
Nitrobenzene-d5					*81*	*76*	*22 - 113*			
2-Fluorobiphenyl					*87*	*80*	*30 - 114*			
2,4,6-Tribromophenol					*90*	*94*	*22 - 116*			
Terphenyl-d14					*95*	*92*	*33 - 114*			

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-295-01					
Client ID:	**Soil Sample 1**					
Arsenic	**ND**	11	6010C	10-27-16	10-27-16	
Barium	**79**	2.8	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.56	6010C	10-27-16	10-27-16	
Chromium	**48**	0.56	6010C	10-27-16	10-27-16	
Lead	**6.2**	5.6	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.28	7471B	10-27-16	10-27-16	
Selenium	**ND**	11	6010C	10-27-16	10-27-16	
Silver	**ND**	1.1	6010C	10-27-16	10-27-16	
Lab ID:	10-295-02					
Client ID:	**Soil Sample 2**					
Arsenic	**35**	14	6010C	10-27-16	10-27-16	
Barium	**170**	3.5	6010C	10-27-16	10-27-16	
Cadmium	**0.77**	0.70	6010C	10-27-16	10-27-16	
Chromium	**45**	0.70	6010C	10-27-16	10-27-16	
Lead	**37**	7.0	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.35	7471B	10-27-16	10-27-16	
Selenium	**ND**	14	6010C	10-27-16	10-27-16	
Silver	**ND**	1.4	6010C	10-27-16	10-27-16	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-295-03					
Client ID:	**Soil Sample 3**					
Arsenic	**ND**	11	6010C	10-27-16	10-27-16	
Barium	**55**	2.8	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.55	6010C	10-27-16	10-27-16	
Chromium	**22**	0.55	6010C	10-27-16	10-27-16	
Lead	**45**	5.5	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.28	7471B	10-27-16	10-27-16	
Selenium	**ND**	11	6010C	10-27-16	10-27-16	
Silver	**ND**	1.1	6010C	10-27-16	10-27-16	
Lab ID:	10-295-04					
Client ID:	**SS 4**					
Arsenic	**ND**	12	6010C	10-27-16	10-27-16	
Barium	**73**	3.0	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.59	6010C	10-27-16	10-27-16	
Chromium	**42**	0.59	6010C	10-27-16	10-27-16	
Lead	**ND**	5.9	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.30	7471B	10-27-16	10-27-16	
Selenium	**ND**	12	6010C	10-27-16	10-27-16	
Silver	**ND**	1.2	6010C	10-27-16	10-27-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-27-16
Date Analyzed:	10-27-16
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1027SM1,MB1027SM2&MB1027S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-289-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**47.1**	**46.5**	1	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**50.1**	**48.5**	3	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-289-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**92.3**	92	**91.8**	92	0	
Barium	100	**148**	101	**142**	95	4	
Cadmium	50.0	**48.7**	97	**48.3**	97	1	
Chromium	100	**135**	85	**137**	86	1	
Lead	250	**265**	106	**250**	100	6	
Mercury	0.500	**0.535**	107	**0.542**	108	1	
Selenium	100	**92.3**	92	**91.9**	92	0	
Silver	25.0	**20.8**	83	**21.0**	84	1	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

% MOISTURE

Date Analyzed: 10-27-16

Client ID	Lab ID	% Moisture
Soil Sample 1	10-295-01	11
Soil Sample 2	10-295-02	28
Soil Sample 3	10-295-03	10
SS 4	10-295-04	16

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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-napthalene) 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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

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Chain of Custody

Page (of)

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

Company: WSDOT
Project Number:
Project Name: SR509 - 12th St
Project Manager: PAT SVOBODA
Sampled by: WSDOT

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: 10-295

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Volatiles 8270D/SIM (with low-level PAHs) SVOCs	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A						% Moisture
1	Soil Sample 1	10/25/16	3:10	SOIL	3		X		X			X						X				NO					X
2	Soil Sample 2	10/25/16	3:20																			DO					X
3	Soil Sample 3	10/25/16	3:30																			83					X
4	SS 4	10/25/16	3:45																								X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	Patti Sloan	WSDOT	10/26/2016	8:15A	
Received	Diane Wyatt	SPEEDY	10-26-16	8:15A	
Relinquished	Diane Wyatt	SPEEDY	10-26-16	11:10A	
Received		0082	10/26/16	1110	
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

March 27, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project SR509 Foreman Property
Laboratory Reference No. 1803-152

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on March 16, 2018.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

Case Narrative

Samples were collected on March 15, 2018 and received by the laboratory on March 16, 2018. 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.

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.

Semivolatiles EPA 8270D/SIM Analysis

The spike blank duplicate had one recovery slightly above control limits. The samples were non-detect for this analyte, further action was taken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Gasoline	**ND**	7.3	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*66-130*				
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Gasoline	**ND**	12	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*66-130*				
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Gasoline	**ND**	5.4	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*66-130*				
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Gasoline	**ND**	10	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*66-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Gx
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Gasoline	**ND**	5.0	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*66-130*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-145-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*95*	*97*	*66-130*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Diesel Range Organics	**ND**	35	NWTPH-Dx	3-19-18	3-19-18	
Lube Oil Range Organics	**82**	71	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Diesel Range Organics	**58**	34	NWTPH-Dx	3-19-18	3-19-18	N
Lube Oil Range Organics	**370**	68	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Diesel Range Organics	**ND**	60	NWTPH-Dx	3-19-18	3-20-18	
Lube Oil	**470**	120	NWTPH-Dx	3-19-18	3-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Diesel Range Organics	**ND**	33	NWTPH-Dx	3-19-18	3-19-18	U1
Lube Oil	**260**	61	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*79*	*50-150*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	3-19-18	3-19-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-145-01										
	ORIG	DUP									
Diesel Range Organics	**64.2**	**42.0**	NA	NA		NA		NA	42	NA	
Lube Oil Range Organics	**188**	**137**	NA	NA		NA		NA	31	NA	
Surrogate:											
o-Terphenyl						*88*	*81*	*50-150*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Acetone	0.023	0.0054	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0022	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*120*	*75-131*				
Toluene-d8	*119*	*83-130*				
4-Bromofluorobenzene	*115*	*78-130*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Acetone	0.0075	0.0063	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0025	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*75-131*				
Toluene-d8	*104*	*83-130*				
4-Bromofluorobenzene	*100*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0022	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*123*	*75-131*				
Toluene-d8	*119*	*83-130*				
4-Bromofluorobenzene	*115*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0032	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*119*	*75-131*				
Toluene-d8	*121*	*83-130*				
4-Bromofluorobenzene	*118*	*78-130*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0319S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0319S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0020	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*75-131*				
Toluene-d8	*102*	*83-130*				
4-Bromofluorobenzene	*103*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0319S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0518**	**0.0521**	0.0500	0.0500	104	104	58-126	1	20	
Benzene	**0.0538**	**0.0549**	0.0500	0.0500	108	110	72-122	2	19	
Trichloroethene	**0.0503**	**0.0497**	0.0500	0.0500	101	99	75-120	1	20	
Toluene	**0.0506**	**0.0503**	0.0500	0.0500	101	101	78-123	1	19	
Chlorobenzene	**0.0453**	**0.0456**	0.0500	0.0500	91	91	75-120	1	18	
Surrogate:										
Dibromofluoromethane					*109*	*103*	*75-131*			
Toluene-d8					*109*	*99*	*83-130*			
4-Bromofluorobenzene					*105*	*99*	*78-130*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
n-Nitrosodimethylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.47	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
2,4-Dinitrophenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.47	EPA 8270D	3-21-18	3-22-18	
Pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*68*	*18 - 113*				
Phenol-d6	*71*	*19 - 119*				
Nitrobenzene-d5	*71*	*19 - 119*				
2-Fluorobiphenyl	*78*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*74*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.46	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**2.9**	1.1	EPA 8270D	3-21-18	3-23-18	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**0.016**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**0.014**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.028**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.46	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.023**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.022**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.028**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**0.012**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**0.012**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**0.020**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*61*	*18 - 113*				
Phenol-d6	*67*	*19 - 119*				
Nitrobenzene-d5	*67*	*19 - 119*				
2-Fluorobiphenyl	*77*	*33 - 109*				
2,4,6-Tribromophenol	*79*	*19 - 121*				
Terphenyl-d14	*76*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**0.12**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.013**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.012**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**0.51**	0.20	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.0092**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**0.25**	0.20	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.011**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**0.014**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*55*	*18 - 113*				
Phenol-d6	*68*	*19 - 119*				
Nitrobenzene-d5	*61*	*19 - 119*				
2-Fluorobiphenyl	*76*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*77*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**0.0097**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.012**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.013**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.0084**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.011**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*63*	*18 - 113*				
Phenol-d6	*67*	*19 - 119*				
Nitrobenzene-d5	*68*	*19 - 119*				
2-Fluorobiphenyl	*75*	*33 - 109*				
2,4,6-Tribromophenol	*74*	*19 - 121*				
Terphenyl-d14	*71*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0321S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Pyridine	**ND**	0.33	EPA 8270D	3-21-18	3-21-18	
Phenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Aniline	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Chlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Benzyl alcohol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Hexachloroethane	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Nitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Isophorone	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Nitrophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4-Chloroaniline	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Dimethylphthalate	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
3-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0321S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4-Nitrophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Dibenzofuran	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Diethylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Pentachlorophenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Carbazole	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzidine	**ND**	0.33	EPA 8270D	3-21-18	3-21-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*85*	*18 - 113*				
Phenol-d6	*86*	*19 - 119*				
Nitrobenzene-d5	*85*	*19 - 119*				
2-Fluorobiphenyl	*89*	*33 - 109*				
2,4,6-Tribromophenol	*85*	*19 - 121*				
Terphenyl-d14	*81*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0321S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.11**	**1.15**	1.33	1.33	83	86	39 - 109	4	36	
2-Chlorophenol	**1.18**	**1.28**	1.33	1.33	89	96	42 - 105	8	35	
1,4-Dichlorobenzene	**0.561**	**0.613**	0.667	0.667	84	92	31 - 103	9	37	
n-Nitroso-di-n-propylamine	**0.598**	**0.615**	0.667	0.667	90	92	36 - 104	3	34	
1,2,4-Trichlorobenzene	**0.601**	**0.618**	0.667	0.667	90	93	32 - 104	3	38	
4-Chloro-3-methylphenol	**1.17**	**1.21**	1.33	1.33	88	91	48 - 107	3	31	
Acenaphthene	**0.554**	**0.597**	0.667	0.667	83	90	38 - 102	7	33	
4-Nitrophenol	**1.21**	**1.23**	1.33	1.33	91	92	27 - 121	2	35	
2,4-Dinitrotoluene	**0.551**	**0.582**	0.667	0.667	83	87	36 - 103	5	34	
Pentachlorophenol	**1.43**	**1.53**	1.33	1.33	108	115	21 - 114	7	37	I
Pyrene	**0.585**	**0.619**	0.667	0.667	88	93	46 - 108	6	31	
Surrogate:										
2-Fluorophenol					*86*	*90*	*18 - 113*			
Phenol-d6					*87*	*90*	*19 - 119*			
Nitrobenzene-d5					*84*	*87*	*19 - 119*			
2-Fluorobiphenyl					*85*	*86*	*33 - 109*			
2,4,6-Tribromophenol					*90*	*92*	*19 - 121*			
Terphenyl-d14					*83*	*86*	*30 - 116*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-152-01					
Client ID:	**SS1 N A'**					
Arsenic	**ND**	14	6010D	3-21-18	3-21-18	
Barium	**84**	3.5	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.71	6010D	3-21-18	3-21-18	
Chromium	**41**	0.71	6010D	3-21-18	3-21-18	
Lead	**ND**	7.1	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.35	7471B	3-19-18	3-19-18	
Selenium	**ND**	14	6010D	3-21-18	3-21-18	
Silver	**ND**	1.4	6010D	3-21-18	3-21-18	
Lab ID:	03-152-02					
Client ID:	**SS2**					
Arsenic	**ND**	14	6010D	3-21-18	3-21-18	
Barium	**110**	3.4	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.68	6010D	3-21-18	3-21-18	
Chromium	**52**	0.68	6010D	3-21-18	3-21-18	
Lead	**53**	6.8	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.34	7471B	3-19-18	3-19-18	
Selenium	**ND**	14	6010D	3-21-18	3-21-18	
Silver	**ND**	1.4	6010D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-152-03					
Client ID:	**SS3**					
Arsenic	**ND**	12	6010D	3-21-18	3-21-18	
Barium	**61**	3.0	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.60	6010D	3-21-18	3-21-18	
Chromium	**47**	0.60	6010D	3-21-18	3-21-18	
Lead	**27**	6.0	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.30	7471B	3-19-18	3-19-18	
Selenium	**ND**	12	6010D	3-21-18	3-21-18	
Silver	**ND**	1.2	6010D	3-21-18	3-21-18	
Lab ID:	03-152-04					
Client ID:	**SS4**					
Arsenic	**ND**	12	6010D	3-21-18	3-21-18	
Barium	**160**	3.0	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.61	6010D	3-21-18	3-21-18	
Chromium	**60**	0.61	6010D	3-21-18	3-21-18	
Lead	**23**	6.1	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.30	7471B	3-19-18	3-19-18	
Selenium	**ND**	12	6010D	3-21-18	3-21-18	
Silver	**ND**	1.2	6010D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0321SM1

Analyte	Method	Result	PQL
Arsenic	6010D	**ND**	10
Barium	6010D	**ND**	2.5
Cadmium	6010D	**ND**	0.50
Chromium	6010D	**ND**	0.50
Lead	6010D	**ND**	5.0
Selenium	6010D	**ND**	10
Silver	6010D	**ND**	1.0

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-19-18
Date Analyzed:	3-19-18
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0319S1

Analyte	Method	Result	PQL
Mercury	7471B	**ND**	0.25

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
DUPLICATE QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**83.0**	**68.1**	20	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**30.1**	**36.9**	20	0.50	
Lead	**57.3**	**49.0**	16	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: March 27, 2018
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Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 3-19-18
Date Analyzed: 3-19-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.25	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
MS/MSD QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**95.4**	95	**90.7**	91	5	
Barium	100	**175**	92	**181**	98	4	
Cadmium	50.0	**46.4**	93	**45.9**	92	1	
Chromium	100	**123**	93	**122**	92	1	
Lead	250	**291**	93	**290**	93	0	
Selenium	100	**97.3**	97	**94.8**	95	3	
Silver	25.0	**19.3**	77	**18.8**	75	3	

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TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 3-19-18
Date Analyzed: 3-19-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.510**	102	**0.490**	98	4	

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% MOISTURE

Date Analyzed: 3-19-18

Client ID	Lab ID	% Moisture
SS1 N A'	03-152-01	29
SS2	03-152-02	27
SS3	03-152-03	16
SS4	03-152-04	18

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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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

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Chain of Custody

Page 1 of 1

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

Company: WSDOT
Project Number:
Project Name: SR509 Foreman Property
Project Manager: PATRICK SVOBODA
Sampled by:

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: 03-152

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	SS1 NA	3/15/18	12:30	S	5
2	SS2	3/15/18	1:00		
3	SS3	3/15/18	2:00		
4	SS4	3/15/18	2:15		

Lab ID	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	✓	✓	✓	✓	✓		✓	✓					✓	✓				✓
2	✓	✓	✓		✓		✓	✓					✓	✓				✓
3	✓	✓	✓		✓		✓	✓					✓	✓				✓
4	✓	✓	✓		✓		✓	✓					✓	✓				✓

	Signature	Company	Date	Time
Relinquished	Patrick Svoboda	WSDOT	3/16/18	8:30
Received	Eileen Clark	Alpha	3/16/18	8:30
Relinquished	Eileen Clark	Alpha	3/16/18	11:23
Received			3/16/18	11:23
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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

September 24, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project Foreman
Laboratory Reference No. 1809-229

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on September 21, 2018.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

Case Narrative

Samples were collected on September 20 and 21, 2018 and received by the laboratory on September 21, 2018. 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.

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.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

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

September 24, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
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Project Manager

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Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

Case Narrative

Samples were collected on September 20 and 21, 2018 and received by the laboratory on September 21, 2018. 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.

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.

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

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:	**FC1-1**					
Laboratory ID:	09-229-01					
Diesel Range Organics	**ND**	41	NWTPH-Dx	9-21-18	9-21-18	U1
Lube Oil	**590**	57	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
Diesel Range Organics	**ND**	27	NWTPH-Dx	9-21-18	9-21-18	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*81*	*50-150*				

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

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:	MB0921S3					
Diesel Range Organics	**ND**	25	NWTPH-Dx	9-21-18	9-21-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-217-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range Organics	**178**	**164**	NA	NA		NA		NA	8	NA	
Surrogate:											
o-Terphenyl						*82*	*80*	*50-150*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
n-Nitrosodimethylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	3.8	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
2,4-Dinitrophenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	3.8	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*38*	*19 - 103*				
Phenol-d6	*48*	*30 - 103*				
Nitrobenzene-d5	*44*	*27 - 105*				
2-Fluorobiphenyl	*56*	*36 - 102*				
2,4,6-Tribromophenol	*55*	*33 - 110*				
Terphenyl-d14	*64*	*38 - 108*				

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Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	0.36	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	0.36	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*41*	*19 - 103*				
Phenol-d6	*47*	*30 - 103*				
Nitrobenzene-d5	*43*	*27 - 105*				
2-Fluorobiphenyl	*52*	*36 - 102*				
2,4,6-Tribromophenol	*78*	*33 - 110*				
Terphenyl-d14	*79*	*38 - 108*				

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0921S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	0.33	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0921S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	0.33	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*42*	*19 - 103*				
Phenol-d6	*47*	*30 - 103*				
Nitrobenzene-d5	*43*	*27 - 105*				
2-Fluorobiphenyl	*50*	*36 - 102*				
2,4,6-Tribromophenol	*70*	*33 - 110*				
Terphenyl-d14	*69*	*38 - 108*				

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0921S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**0.782**	**0.896**	1.33	1.33	59	67	45 - 94	14	29	
2-Chlorophenol	**0.770**	**0.879**	1.33	1.33	58	66	46 - 94	13	33	
1,4-Dichlorobenzene	**0.360**	**0.429**	0.667	0.667	54	64	42 - 91	17	37	
n-Nitroso-di-n-propylamine	**0.382**	**0.479**	0.667	0.667	57	72	45 - 100	23	26	
1,2,4-Trichlorobenzene	**0.396**	**0.454**	0.667	0.667	59	68	45 - 100	14	32	
4-Chloro-3-methylphenol	**0.950**	**1.01**	1.33	1.33	71	76	55 - 97	6	21	
Acenaphthene	**0.444**	**0.497**	0.667	0.667	67	75	48 - 91	11	21	
4-Nitrophenol	**1.04**	**1.11**	1.33	1.33	78	83	53 - 102	7	20	
2,4-Dinitrotoluene	**0.496**	**0.524**	0.667	0.667	74	79	47 - 96	5	19	
Pentachlorophenol	**1.32**	**1.35**	1.33	1.33	99	102	35 - 125	2	26	
Pyrene	**0.540**	**0.545**	0.667	0.667	81	82	55 - 110	1	17	
Surrogate:										
2-Fluorophenol					*48*	*55*	*19 - 103*			
Phenol-d6					*55*	*61*	*30 - 103*			
Nitrobenzene-d5					*51*	*57*	*27 - 105*			
2-Fluorobiphenyl					*56*	*64*	*36 - 102*			
2,4,6-Tribromophenol					*76*	*74*	*33 - 110*			
Terphenyl-d14					*71*	*71*	*38 - 108*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
Arsenic	**ND**	11	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.57	EPA 6010D	9-21-18	9-21-18	
Chromium	**64**	0.57	EPA 6010D	9-21-18	9-21-18	
Lead	**27**	5.7	EPA 6010D	9-21-18	9-21-18	
Mercury	**ND**	0.28	EPA 7471B	9-21-18	9-21-18	
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
Arsenic	**ND**	11	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.54	EPA 6010D	9-21-18	9-21-18	
Chromium	**11**	0.54	EPA 6010D	9-21-18	9-21-18	
Lead	**ND**	5.4	EPA 6010D	9-21-18	9-21-18	
Mercury	**ND**	0.27	EPA 7471B	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

TOTAL METALS
EPA 6010D/7471B
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0921SM2					
Arsenic	**ND**	10	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.50	EPA 6010D	9-21-18	9-21-18	
Chromium	**ND**	0.50	EPA 6010D	9-21-18	9-21-18	
Lead	**ND**	5.0	EPA 6010D	9-21-18	9-21-18	
Laboratory ID:	MB0921S1					
Mercury	**ND**	0.25	EPA 7471B	9-21-18	9-21-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-138-01										
	ORIG	DUP									
Arsenic	**14.6**	**14.8**	NA	NA		NA		NA	2	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**43.8**	**50.1**	NA	NA		NA		NA	13	20	
Lead	**52.9**	**55.3**	NA	NA		NA		NA	5	20	
Laboratory ID:	09-213-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	09-138-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**106**	**105**	100	100	14.6	**92**	**91**	75-125	1	20	
Cadmium	**48.0**	**47.1**	50.0	50.0	ND	**96**	**94**	75-125	2	20	
Chromium	**145**	**147**	100	100	43.8	**101**	**103**	75-125	1	20	
Lead	**296**	**287**	250	250	52.9	**97**	**94**	75-125	3	20	
Laboratory ID:	09-213-01										
Mercury	**0.566**	**0.586**	0.500	0.500	0.0548	**102**	**106**	80-120	3	20	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

% MOISTURE

Date Analyzed: 9-21-18

Client ID	Lab ID	% Moisture
FC1-1	09-229-01	12
FC1-2	09-229-02	8

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

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Chain of Custody

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

Company: WSDOT
Project Number:
Project Name: Foreman
Project Manager: PAT SVOBODA
Sampled by: WSDOT

Turnaround Request (in working days)

(Check One) 24 hour

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

Laboratory Number: 09-229

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	FC1-1	9/20	14:15	S	6				✓			✓						✓			X
2	FC1-2	9/21	11:00	S	6				✓			✓						✓			X

	Signature	Company	Date	Time
Relinquished	[signature]	WSDOT	9/21/18	11:10
Received	[signature]	ALPHA	9-21-18	11:10
Relinquished	[signature]	ALPHA	9-21-18	12:39
Received	[signature]	ONE	9/21/18	1239
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Call when you receive these.

Chromatograms with final report ☐

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

APPENDIX 4 DISPOSAL TICKETS

PetroCard™
MORE THAN JUST FUEL.

1st + CW 1st Load 401187

Phone (206) 621.9777 **Certified Weight Ticket**

Company _____ **Charge** ____ **Cash** X

Truck # _____ **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** _____

16:53:47 20 Sep 2018

Weigh fee: 10.00
3215 4TH AVE S

Axle 1:	3240 lb
Axle 2:	5620 lb
Axle 3:	5660 lb
Total:	14520 lb

PetroCard™
MORE THAN JUST FUEL.

2nd. Load

401252

Phone (206) 621.9777 **Certified Weight Ticket**

Company X MARINE VACUME SERVICE **Charge** X **Cash** ____

Truck # X _____ **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** X R.B. ALLEN

08:44:47 22 Sep 2018

Weigh fee: 10.00
3215 4TH AVE S

Axle 1: 10680 lb
Axle 2: 7540 lb
Total: 18220 lb

V152

PetroCard™
MORE THAN JUST FUEL.

Light Weight 52

401254

Phone (206) 621.9777 **Certified Weight Ticket**

Company MARINE VACUUM SERVICE **Charge** ____ **Cash** ✓

Truck # X **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** X R B ALLEN

10:13:36 22 Sep 2018

Weigh fee: 10.00 $10.00

3215 4TH AVE S

Axle 1: 3620 lb
Axle 2: 7640 lb
Total: 11260 lb

W

PetroCard™
MORE THAN JUST FUEL.

Light Weight

401254

Phone (206) 621.9777 **Certified Weight Ticket**

Company MARINE VACUUM SERVICE **Charge** ____ **Cash** X

Truck # X **Account #** ____

Trailer # ____ **Card #** ____

Weighmaster ____ **Signature** X R B ALLEN

10:13:36 22 Sep 2018

Weigh fee: 10.00 $10.00

3215 4TH AVE S

Axle 1:	3620 lb
Axle 2:	7640 lb
Total:	11260 lb

WELCOME TO
KITIMAT SEATTLE GULL
TP53888936-001 KITIMAT SEATTLE GULL
3215 4TH AVE S
SEATTLE WA 98134

Descr.	qty	amount
SCALES	1	1.00
Sub Total		1.00
Tax		0.00
TOTAL		1.00
CASH $		1.00

THANKS, COME AGAIN
PLEASE COME AGAIN
206-621-9777
REG# 003 CSH# 009 DR# 01 TRAN# 38855
09/22/18 10:04:24 ST# 20

SEATTLE RECYCLE AND
DISPOSAL STATION

R E C E I P T

Bill Acct:CASH**
CASH CUSTOMERS

SITE:STS South Transfer Static
DATE:09/22/18 TICKET#:41071208
TIME IN:14:19 ID IN:MCA
TIME OUT:14:34 ID OUT:RJO
TURNAROUND TIME: 15
TRUCK:
ROUTE:Z-Not Specified

	LBS	TONS
GROSS:	16160	8.13
TARE:	15240	7.67
NET:	920	0.46

MATERIAL:	QTY	AMT
Package	920	$66.70

TIP FEE:	66.70
SPEC FEE:	0.00
TOTAL FEE:	**$66.70**
TENDERED:	66.70
CHANGE:	0.00

Payment Info:
5 - Credit Car $66.70

SIGNATURE: _____
NOTE:

WELCOME TO
KITIMAT SEATTLE GULL
TP53888936-001 KITIMAT SEATTLE GULL
3215 4TH AVE S
SEATTLE WA 98134

Descr.	qty	amount
< DUPLICATE RECEIPT >		
<CUSTOMER COPY>		
SCALES	1	10.00
Sub Total		10.00
Tax		0.00
TOTAL		10.00
CREDIT $		10.00

CARD TYPE: VISA
ACCT NUMBER: XXXX XXXX XXXX 1811
TRANS TYPE: SALE
APPROVAL: 012223 INVOICE: 036301
AMOUNT: $ 10.00

APPROVED 012223
****

THANKS, COME AGAIN
PLEASE COME AGAIN
206-621-9777
REG# 0003 CSH# 009 DR# 01 TRAN# 38807
09/22/18 08:30:26 ST# 20

APPENDIX 5 PHOTOS



SS-1 during investigation



SS-2 during investigation



SS-3 during investigation



SS-4 during investigation





SS-4 During investigation



General trash and debris scattered around the property



Grading and soil displacement on property



Soil displacement near SS-1



Soil displacement near SS-2



SS-2 Sample near soil displacement



SS3 of stockpile



SS4 of stockpile



Cleanup of SS-3 Area and confirmation sample area



Part of Cleanup of SS-4 area and confirmation sample taken from this area



Backfill of front area



Backfill of side area

Phase II Environmental Site Assessment

A-1 Towing
King County Tax Parcel 3223049048
Des Moines, Washington

for
Washington State Department of Transportation
c/o HNTB Corporation

November 25, 2022

GeoEngineers
Earth Science + Technology

Phase II Environmental Site Assessment

A-1 Towing
King County Tax Parcel 3223049048
Des Moines, Washington

for
Washington State Department of Transportation
c/o HNTB Corporation

November 25, 2022

GeoEngineers

4000 Kruse Way Place
Building 3, Suite 200
Lake Oswego, Oregon 97035
503.624.9274

Phase II Environmental Site Assessment

A-1 Towing
King County Tax Parcel 3223049048
Des Moines, Washington

File No. 0180-393-00

November 25, 2022

Prepared for:

Washington State Department of Transportation
c/o HNTB Corporation
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11/25/2022

CJW:PW:cdb

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1.0 INTRODUCTION AND BACKGROUND

This report describes the Phase II Environmental Site Assessment (ESA) activities conducted at the property located at King County Tax Parcel 3223049048 (the provided address of 18451 12th Avenue South in Des Moines, Washington does not map accurately) as part of the expansion of SR-509 (herein referred to as "site"). The property is owned by Washington State Department of Transportation (WSDOT) but is leased by a private party and WSDOT is evaluating environmental conditions. The approximate site location is shown in the attached Vicinity Map, Figure 1.

GeoEngineers, Inc. (GeoEngineers) reviewed a Phase II ESA prepared for the property (known as A-1 Towing and the Foreman Property) located at 18451 12th Avenue South in Des Moines, Washington by WSDOT, dated January 24, 2019. The Phase II ESA indicated that WSDOT purchased the property in 2000. A tenant (Mr. Foreman) conducted welding activities between 2000 and 2016, and the Washington State Patrol (WSP) used a portion of the property to dismantle seized vehicles in the summer of 2016. At the time of the report (January 2019), A-1 Towing leased the property as a towing yard, which included storge of vehicles throughout the site and repairing of vehicles within an existing garage structure. The Phase II report included a summary of the following activities:

- The Phase II ESA performed by WSDOT in 2016 following the termination of the lease to Mr. Foreman included soil sampling of areas with significant staining. Areas identified as Area A, B, C and D were sampled as part of the Phase II ESA. Results indicated the presence of lube oil and arsenic exceeding the Model Toxic Control Act (MTCA) Cleanup Levels (CULs) in Area B and C, respectively.
- In April 2017, WSDOT contracted Marine Vacuum Incorporated to clean up areas of the Site with trash, debris and soils with notable detectable analytes below MTCA Method A CULs. It is unclear from this statement as to what soils were actually removed and no additional details were provided.
- In January 2018, A-1 Towing graded Site soils including some that were contaminated. The soils were displaced from previously sampled areas A and B. A new stockpile was present following these activities just north of Area D.
- On March 15, 2018, WSDOT collected four additional soil samples from areas defined as Area A, B, and a new location. WSDOT collected a sample to determine if there was an indication of grading with known or suspected soil contamination, or where displaced/graded soils appeared to be consolidated into a stockpile generated by the lessee. Areas C and D did not have these indicators and did not warrant additional sampling. Sample results did not indicate results exceeding the MTCA Method A CULs.
- On September 20 and 21, 2018, Marine Vacuum Performed excavation activities to address the previously detected lube oil concentrations exceeding the MTCA Method A CULs and an area to remediate suspected contaminated materials in Area C and D. During site excavation activities soils were field screened using sight, olfactory and photoionization detector (PID) levels above 10 parts per million. Non-suspect soils were placed off to the side on a lined area and covered. On September 21, 2018, WSDOT collected two confirmation soil samples in locations where the soils had been removed. Laboratory analytical results were either non-detect or detected at concentrations less than MTCA Method A CULs. Following sample results, the stockpiled non-suspect soils were used to fill and grade the excavation areas.

- The January 24, 2019, Phase II ESA summary indicated that the known and suspected soils with contamination (approximately 8.4 cubic yards) were removed from the site and based on the analytical results no contamination remains on the property. WSDOT requested a no further action (NFA) determination from Washington State.
- Ecology responded to the request for a NFA determination indicating that additional information would be necessary including depth of samples, groundwater samples (if encountered) and more accurate sample location information (previous report had conflicting depictions).

The following sections describe our scope of services (prepared with approval by WSDOT), field activities, sampling results and opinions.

2.0 SCOPE OF SERVICES

Our general environmental scope of services was as follows:

- Prepared a Health and Safety Plan for use by GeoEngineers' personnel during the field activities.
- Coordinate the location of nine shallow proposed soil borings with one boring located at each historic background sample location SS-2, SS-3 and SS-4, which represent staining observed in Areas B, C and D, respectively (Area A does not appear to be of concern for additional assessment). Two additional borings were placed in each area based on the sample location map depicting rectangular areas of staining and or remedial excavations. At least one boring in each area will be advanced to groundwater or 15 feet below ground surface (bgs) and a groundwater monitoring well installed, if water is encountered. The additional borings will be placed in a manner to bracket the depicted area of concern. A total of nine shallow borings and three monitoring wells were proposed.
- Contact the Utility Notification Center public locating service. A private locating service will also be subcontracted to locate potential utilities.
- Retain a drilling subcontractor to advance nine direct push borings to a depth of 5 to 15 feet (bgs), dependent on field screening results, presence of groundwater and depth to native soils. If groundwater is encountered (reportedly as shallow as 3 feet bgs) at the former sample locations SS-2 through SS-4, a 2-inch-diameter polyvinyl chloride (PVC) casing monitoring well will be installed. Depths of the borings may be adjusted in an attempt to install a minimum of three wells to evaluate site specific groundwater flow direction. (Groundwater was not encountered during drilling activities and no wells were installed).
- Continuously sample push probes and visually classify and field screen (sheen, PID and odor) for potential laboratory analysis by a GeoEngineers representative. Visual classification of the soil samples is to be completed in general accordance with ASTM D 2488-90, the Standard Practice for Description and Identification of Soils.
- Collected two soil samples per boring for potential laboratory analysis based on field screening results and depth to groundwater.
- Submit the soil samples on a standard turnaround time (10 business days) for laboratory analysis of the following:
    - Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx (Gx).

- Diesel- and lube-oil range petroleum hydrocarbons by Northwest Method NWTPH-Dx (Dx and Ox).
- Resource Conservation and Recovery Act (RCRA) eight metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) by United States Environmental Protection Agency (EPA) Method 6020.
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270.
- Volatile organic compounds (VOCs) by EPA Method 8260C.

- Coordinate disposal of investigation-derived waste (IDW) at an appropriate off-site facility. Collect one composite soil sample directly from the drum or during drilling for waste profiling purposes.
- Prepare a report including sample results tables, laboratory data, site figures and boring/sampling logs documenting results of the work performed at the site. The data will be tabulated and compared against MTCA CULs.
- Upload data to the Ecology Environmental Information Management (EIM) system as required.

3.0 SUBSURFACE CONDITIONS

Logs of borings are included in Appendix A. Soils were visually classified in general accordance with ASTM D 2488-94. Boring locations are shown in Exploration Locations, Figure 2.

3.1. Subsurface Soil Conditions

Surface conditions at the site consist primarily of fill gravel (from several inches up to 2 feet). Soils encountered during exploration activities consisted of sand, silt and varying gradations of sand and silt with occasional gravel to the maximum depth explored, 15 to 20 feet bgs.

3.2. Subsurface Groundwater Conditions

Soils observed during drilling were generally moist and groundwater was not encountered during drilling.

4.0 SOIL SAMPLING AND CHEMICAL ANALYTICAL RESULTS

A GeoEngineers' field representative collected soil samples continuously from each boring for field screening and potential laboratory analysis. Samples were field screened for evidence of petroleum and/or VOC-related impact using visual, water sheen and headspace vapor screening methods using a PID. Soil samples were collected based on field screening data. The soil samples were submitted for laboratory analysis of VOCs, Gx, Dx, Ox, PAHs and/or RCRA eight metals to Pace National. Soil chemical analytical data are presented in Tables 1 and 2. Laboratory analytical reports are attached in Appendix B.

4.1. Soil Sample Analytical Results

As previously noted, three areas of concern with previous sample results were identified for additional assessment identified as areas B, C and D (no concerns were expressed by Ecology for the need to further explore Area A). The following sections summarize the results of the additional borings and soil sampling performed in each area. Approximate locations of previous sampling performed by others and the sampling performed during this assessment are shown on Figure 2.

4.1.1. Area B

Area B is located off the southwest corner of the existing structure. Previous sample SS-2 indicated levels of arsenic (35 milligrams/kilogram [mg/kg]). Three borings (GEI-3, GEI-4 and MW-2) were performed within the identified Area B. Boring MW-2 was intended to be in the approximate location of previous sample SS-2 and planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (15 feet bgs). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-3 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample GEI-4 at 2-3 feet bgs was non-detect for Gx, Dx and VOCs. Ox and PAHs and detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-2 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

4.1.2. Area C

Area C is located off the east side of the of the existing structure. Previous sample SS-3 indicated levels of lube oil at 31,000 mg/kg. Three borings (GEI-1, GEI-2 and MW-1) were performed within the identified Area C. Boring MW-1 was intended to be in the approximate location of previous sample SS-3 and planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (20 feet bgs at boring GEI-1). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-1 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample GEI-2 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-1 at 2-3 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

4.1.3. Area D

Area D is located off the north side of the existing structure. Previous observations indicated the presence of staining and groundwater in the exploration, which was not sampled. Three borings (GEI-4, GEI-6 and MW-3) were performed within the identified Area C. Boring MW-3 was intended to be in the approximate location of previous sample SS-4 and staining. MW-3 was planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (15 feet bgs). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-5 at 7-8 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

- Sample GEI-6 at 7-8 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-3 at 2-3 feet bgs was non-detect for Gx, VOCs and PAHs. Detected Dx, Ox and RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

5.0 CONCLUSIONS

GeoEngineers performed additional sampling at three areas (Area B, C and D) located around the existing structure on the A-1 towing site to further evaluate the potential presence of contaminants related to past uses at the site. Results of the assessment did not identify concentrations of Gx, Dx, Ox, VOCs, PAHs and or RCRA eight metals at concentrations exceeding the MTCA Method A Cleanup Levels. Out of the nine soil samples analyzed, only two identified low concentrations of Dx, Ox and/or PAHs. Groundwater was not encountered at the maximum depth explored at the site of 15 to 20 feet bgs.

Based on the results of the assessment a No Further Action determination should be requested from Ecology.

6.0 LIMITATIONS

We have prepared this report for the exclusive use of WSDOT. 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, experience and discrete sample collection. Contaminants may be present in areas of the site not sampled or tested. No warranty or other conditions, express or implied, should be understood.

Please refer to Appendix C, Report Limitations and Guidelines for Use, for additional information regarding the use of this report.

TABLES

GeoEngineers

Table 1

Soil Chemical Analytical Results - Petroleum Hydrocarbons and VOCs
A-1 Towing
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Field Screening Observation		NWTPH-Gx (mg/kg)	NWTPH-Dx (mg/kg)		VOCs EPA Method 8260 (mg/kg)								
				Sheen	PID (ppm)	Gasoline	Diesel	Heavy Oil	Various	Anthracene	Acenapthene	Acenaphthylene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo(g,h,i)perylene	Benzo (k) fluoranthene	Chrysene
GEI-1	GE-1 (9-10')	10/25/2021	9-10	NS	<1	<3.01	< 4.4	< 10.9	ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	NS	<1	<2.99	< 4.34	< 10.80	ND	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	NS	<1	<3.23	< 4.50	< 11.2	ND	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	NS	<1	<2.97	< 21.8	**166**	ND	< 0.00655	< 0.00655	< 0.00655	**0.0298**	**0.0363**	**0.0500**	**0.0306**	**0.0150**	**0.0354**
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	NS	<1	<3.02	< 4.36	< 10.9	ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	NS	<1	<2.95	< 4.33	< 10.8	ND	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649
MW-1	MW-1 (2-3')	10/25/2021	2-3	NS	<1	<3.43	< 4.69	< 11.7	ND	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703
MW- 2	MW-2 (9-10')	10/25/2021	9-10	NS	<1	<3.08	< 4.43	< 11.1	ND	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665
MW- 3	MW-3 (2-3')	10/25/2021	2-3	NS	<1	<3.35	**5.55**	**24.3**	ND	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691
MTCA Method A Cleanup Levels for Unrestricted Land Use						800/1,000	2,000		Various	--	--	--	--	--	--	--	--	--

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Field Screening Observation		NWTPH-Gx (mg/kg)	NWTPH-Dx (mg/kg)				VOCs EPA Method 8260 (mg/kg)										Total cPAHs[1] (mg/kg)
				Sheen	PID (ppm)	Gasoline	Diesel		Heavy Oil		Various	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methyl-naphthalene	2-Methyl-naphthalene	TEQ
GEI-1	GE-1 (9-10')	10/25/2021	9-10	NS	<1	<3.01	< 4.4		< 10.9		ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.0218	< 0.00654	< 0.00654	< 0.0218	< 0.0128	ND
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	NS	<1	<2.99	< 4.34		< 10.80		ND	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.0217	< 0.00650	< 0.00650	< 0.0217	< 0.0217	ND
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	NS	<1	<3.23	< 4.50		< 11.2		ND	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.0225	< 0.00675	< 0.00675	< 0.0225	< 0.0225	ND
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	NS	<1	<2.97	< 22		**166**		ND	**0.00660**	**0.0622**	< 0.0066	**0.0325**	< 0.0218	**0.0244**	**0.0474**	< 0.0218	< 0.0218	**0.0223**
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	NS	<1	<3.02	< 4.4		< 10.9		ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.02180	< 0.00654	< 0.00654	< 0.0218	< 0.0218	ND
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	NS	<1	<2.95	< 4.3		< 10.8		ND	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.0216	< 0.00649	< 0.00649	< 0.0216	< 0.0216	ND
MW-1	MW-1 (2-3')	10/25/2021	2-3	NS	<1	<3.43	< 4.7		< 11.7		ND	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.02340	< 0.00703	< 0.00703	< 0.0234	< 0.0234	ND
MW- 2	MW-2 (9-10')	10/25/2021	9-10	NS	<1	<3.08	< 4.43		< 11.1		ND	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.0222	< 0.00665	< 0.00665	< 0.0222	< 0.0222	ND
MW- 3	MW-3 (2-3')	10/25/2021	2-3	NS	<1	<3.35	**5.6**		**24.3**		ND	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.023	< 0.00691	< 0.00691	< 0.023	< 0.023	ND
MTCA Method A Cleanup Levels for Unrestricted Land Use						800/1,000	2,000				Various		--	--	--	5	--	--	--	--	0.1

Notes:

[1]Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) analyzed by EPA Method 8270D/SIM. Total cPAHs calculated using the toxicity equivalency (TEQ) methodology specified in Washington Administrative Code (WAC) 173-340-780(8); cPAHs that were not detected were assigned half the value of the detection limit for these calculations. Not detected (ND) is indicated for samples which no cPAHs were detected.

<3.01 = analyte not detected at or less than the presented concentration

Bold = analyte was detected at a concentration above the laboratory reported detection limit

-- = not analyzed/no cleanup level

mg/kg = milligrams per kilogram; VOCs = volatile organic compounds

NS = no sheen; ppm = parts per million

PID = Photoionization Detector

ND = Not Detected

TEQ = toxic equivalency

EPA = Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbons

MTCA = Model Toxics Control Act

Table 2

Soil Chemical Analytical Results - Metals
A-1 Towing
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Metals EPA Method 6010D/7471B (mg/kg)							
				Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
GEI-1	GE-1 (9-10')	10/25/2021	9-10	**2.26**	**41.9**	< 1.09	**23.4**	< 2.2	< 0.0436	< 2.72	< 0.545
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	**2.36**	**45.2**	< 1.08	**21.5**	< 2.17	< 0.0434	< 2.71	< 0.542
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	**2.93**	**25.3**	< 1.12	**11.8**	< 2.25	< 0.0450	< 2.81	< 0.562
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	**6.28**	**72.2**	< 1.09	**33.9**	**27.6**	**0.0731**	< 2.73	< 0.546
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	**2.58**	**39.6**	< 1.09	**21.1**	< 2.18	< 0.0436	< 2.73	< 0.545
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	**2.31**	**35.1**	< 1.08	**16.3**	< 2.16	< 0.0433	< 2.71	< 0.541
MW-1	MW-1 (2-3')	10/25/2021	2-3	**3.70**	**61.0**	< 1.17	**26.7**	< 2.34	< 0.0469	< 2.93	< 0.0586
MW- 2	MW-2 (9-10')	10/25/2021	9-10	**3.17**	**44.9**	< 1.11	**24.4**	< 2.22	< 0.0443	< 2.77	< 0.554
MW- 3	MW-3 (2-3')	10/25/2021	2-3	**7.77**	**58.8**	< 1.15	**41.6**	**3.16**	< 0.0460	< 2.88	< 0.575
MTCA Method A Cleanup Levels for Unrestricted Land Use				21	--	2	2,000	250	2	400	400
MTCA Cleanup Level for the Protection of Groundwater				--	1,600	--	--	--	--	5	14

Notes:

<1.09 = analyte not detected

Bold = analyte was detected at a concentration above the laboratory method detection limit

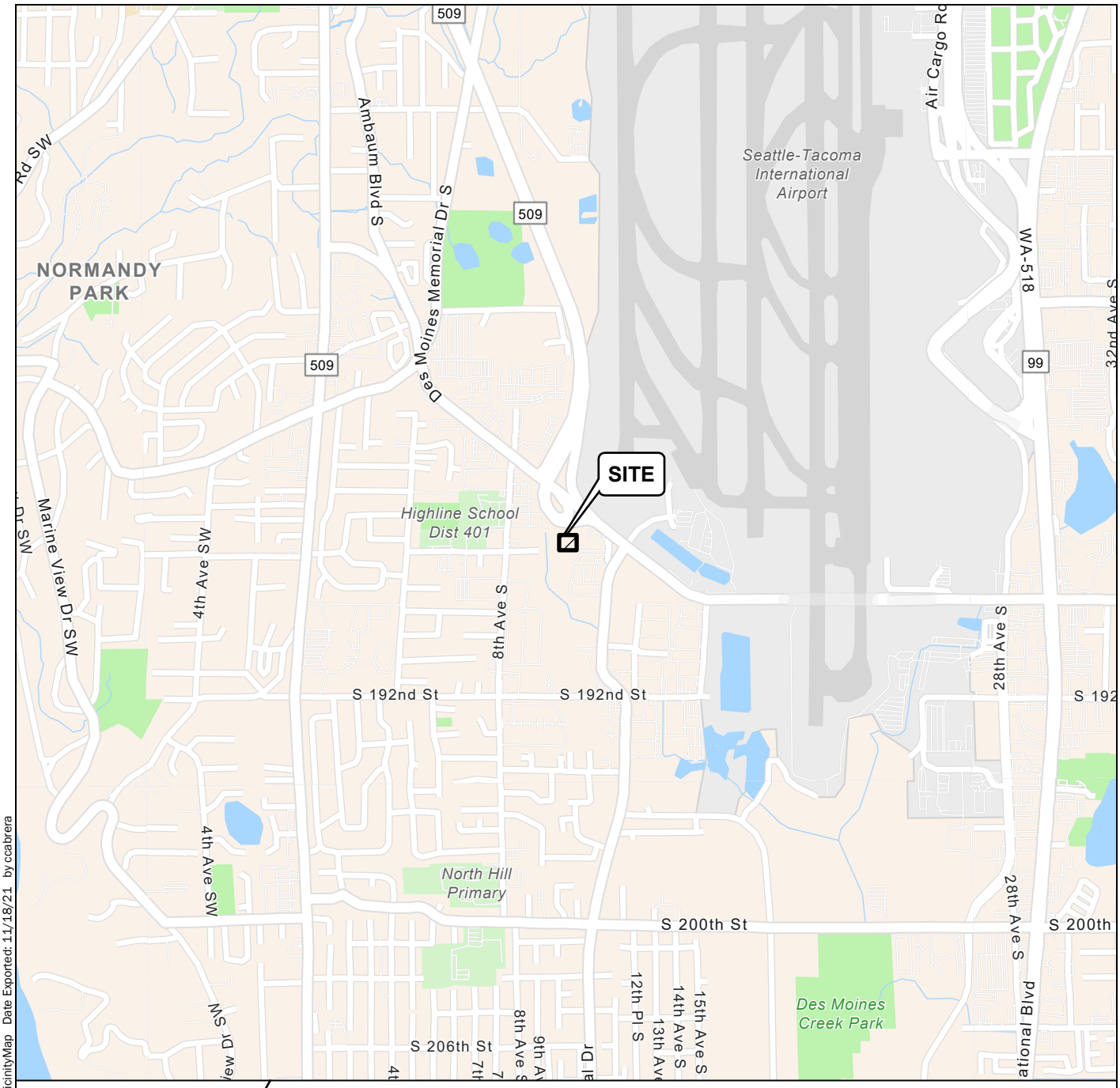
mg/kg = milligrams per kilogram

EPA = Environmental Protection Agency

MTCA = Model Toxics Control Act

FIGURES

GeoEngineers



Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

WSDOT - A-1 Towing
SeaTac, Washington

GeoEngineers

Figure 1

P:\0\0180393\GIS\0180393Project\0180393Project.aprx\0180393300_F01_VicinityMap Date Exported: 11/18/21 by ccabrera



Boring Number and Approximate Location

Monitoring Well Number and Approximate Location

Previous WSDOT Explorations (2016)

Drum Storage

Assessment Area

Data Source: ESRI Clarity

N

W E

S

30 0 30

Feet

Exploration Locations

WSDOT - A-1 Towing
SeaTac, Washington

GeoEngineers

Figure 2

P:\0\0180393\GIS\0180393Project\0180393Project.aprx\0180393_F02_ExplorationLocations Date Exported: 12/01/21 by ccabrera

Notes:

Legend

APPENDICES

GeoEngineers

APPENDIX A
Boring Logs

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

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

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

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.

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
VS	Vane shear

Sheen Classification

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

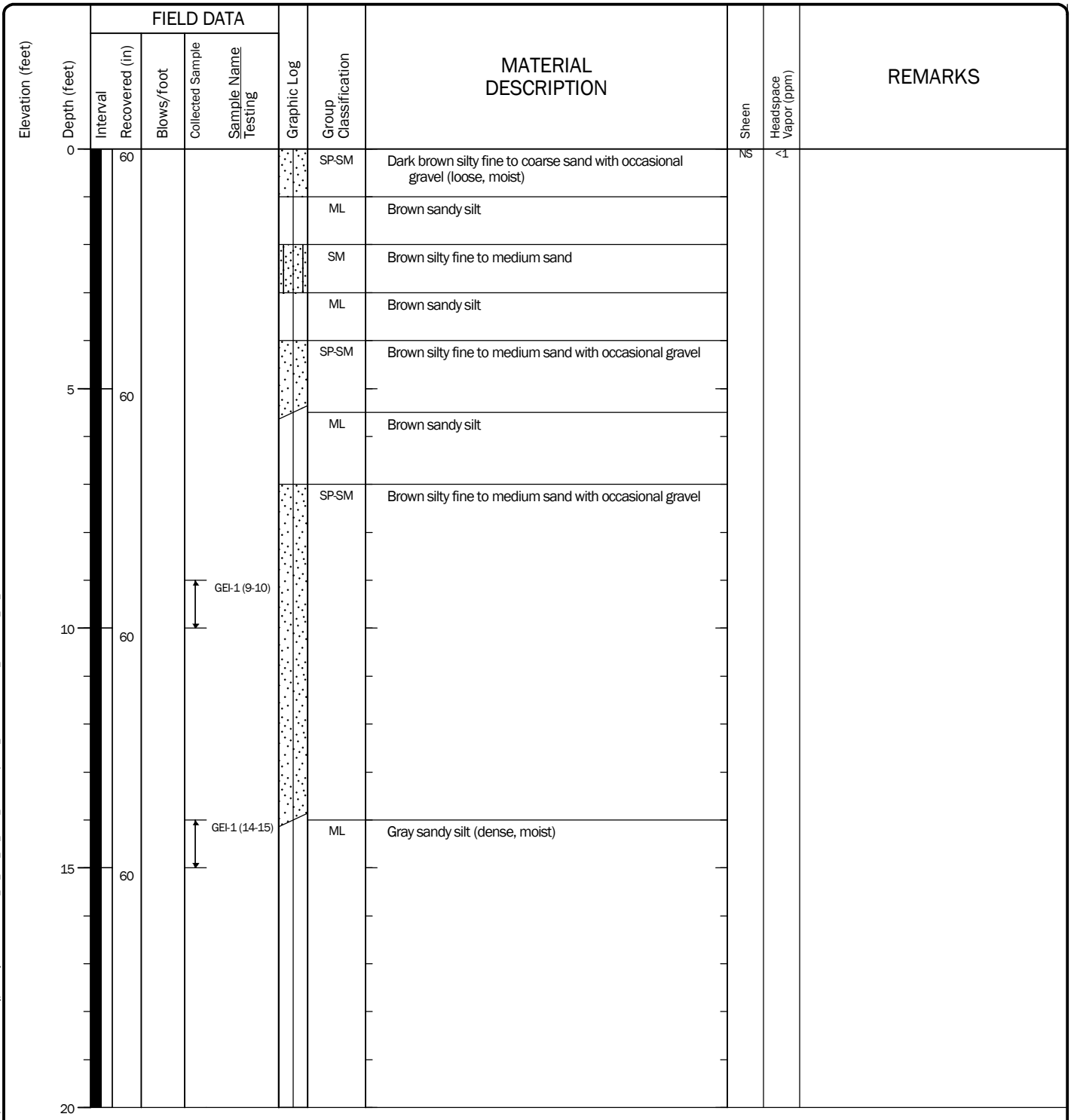
NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative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

Key to Exploration Logs

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Figure A-1

Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 20	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data		Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-1

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-2
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 10/25/2021	End 10/25/2021	Total Depth (ft)	15	Logged By	DC	Checked By	CJW	Driller	Holocene Drilling, Inc.	Drilling Method	Direct-push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe 7822T		
Easting (X) Northing (Y)					System Datum				Groundwater not observed at time of exploration			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		60					SP	Brown silty fine to medium coarse sand (loose, moist)	NS	<1	
								ML	Brown sandy silt (loose, moist)			
								SM	Brown silty fine to medium sand with occasional gravel (loose, moist)			
	5		60									
						GEI-2 (9-10)						
	10		36									
						GEI-2 (14-15)		SM	Gray silty fine to medium sand (loose, moist)			
	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-2

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-3
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 10/25/2021	End 10/25/2021	Total Depth (ft)	15	Logged By	DC	Checked By	CJW	Driller	Holocene Drilling, Inc.	Drilling Method	Direct-push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe 7822T		
Easting (X) Northing (Y)					System Datum				Groundwater not observed at time of exploration			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36					DUF	Forest duff, sandy silt with organic matter and wood debris	NS	<1	
								SM	Brown silty fine to medium sand (loose, moist)			
								ML	Brown sandy silt (loose, moist)			
	5		60					SM	Brown silty fine to medium sand with occasional gravel			
						GEI-3 (9-10)						
	10		60									
						GEI-3 (14-15)		ML	Gray sandy silt (loose, moist)			
	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-3

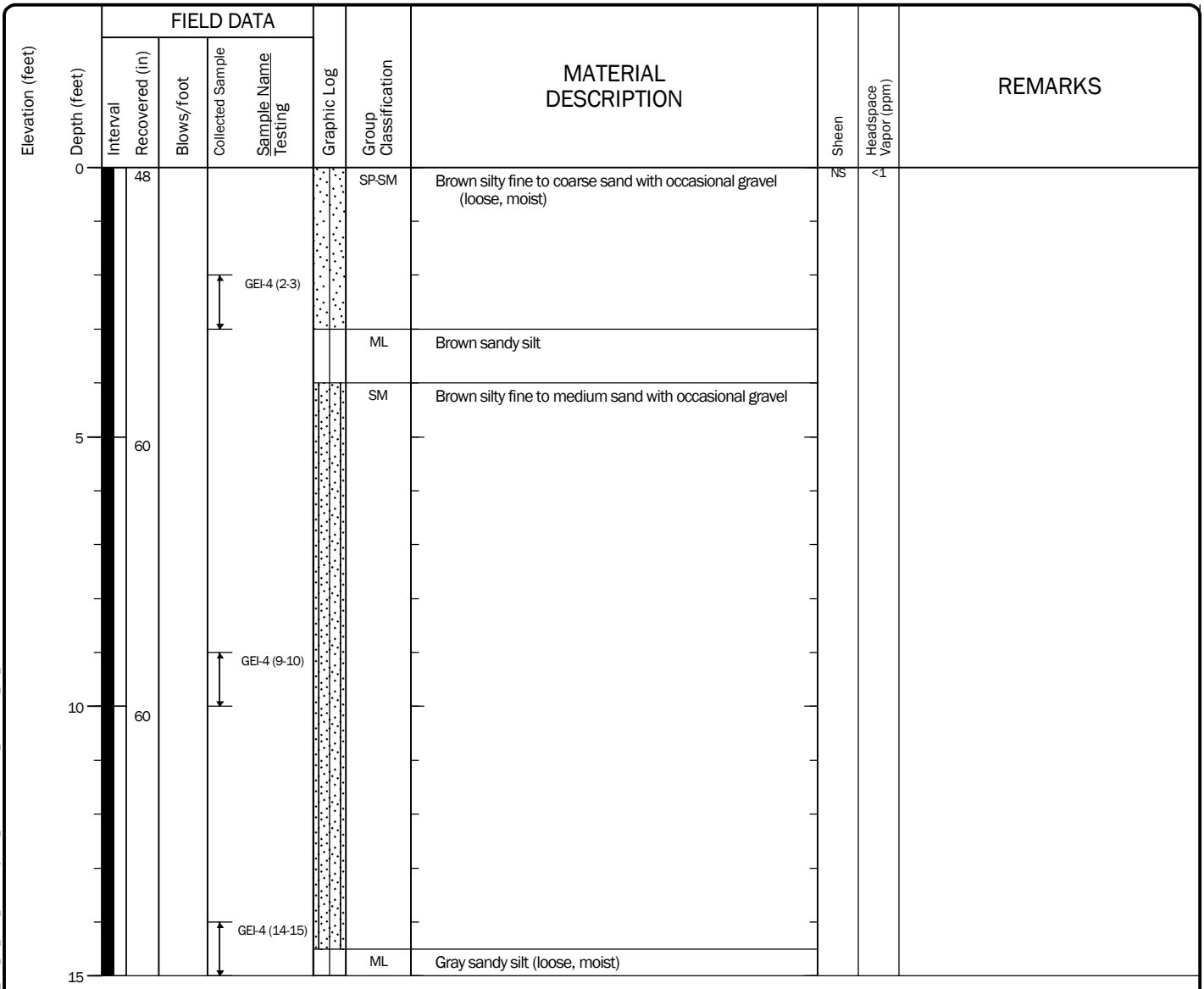
GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-4
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 15	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data		Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-4

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

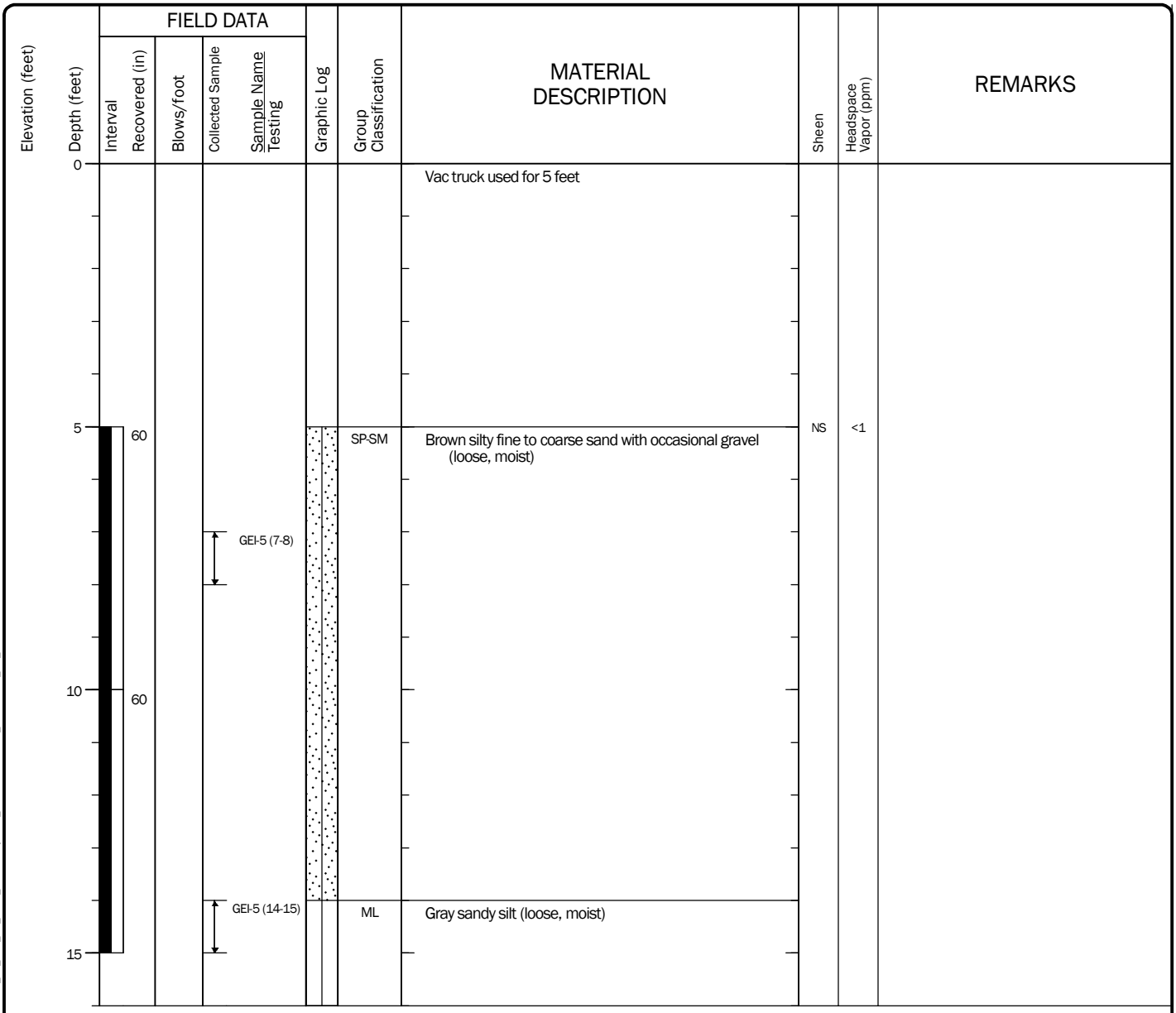
Figure A-5
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 10/26/2021	End 10/26/2021	Total Depth (ft)	16	Logged By	DC	Driller	Holocene Drilling, Inc.	Drilling Method	Direct-push
Checked By					CJW					

Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data		Drilling Equipment	Geoprobe 7822T
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-5

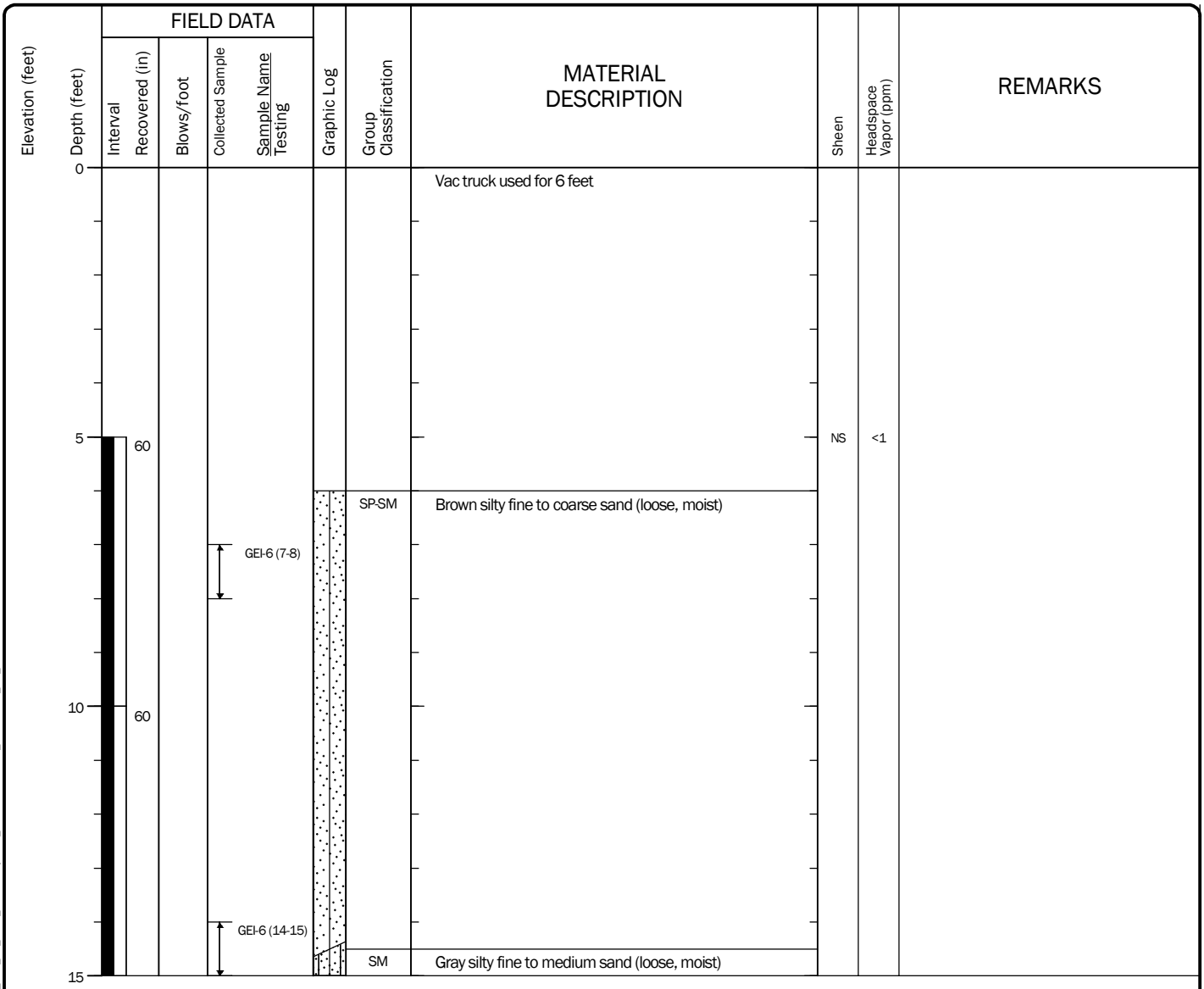
GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-6
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 10/26/2021 End 10/26/2021	Total Depth (ft) 15	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data		Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-6

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-7
Sheet 1 of 1

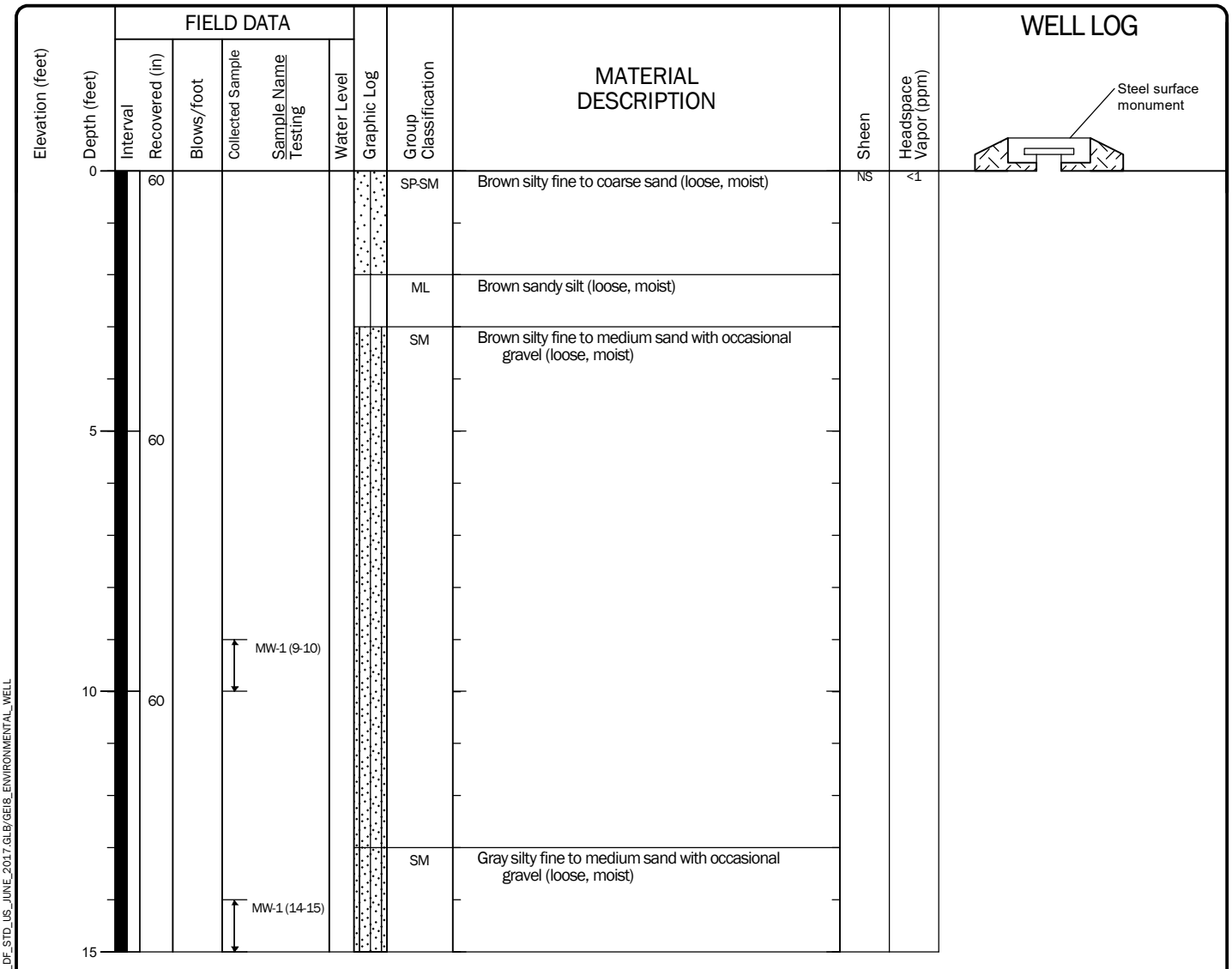
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Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 15	Logged By DC / Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push
Hammer Data		Drilling Equipment Geoprobe 7822T		
Surface Elevation (ft) Vertical Datum Undetermined		Top of Casing Elevation (ft)		
Easting (X) Northing (Y)		Horizontal Datum		

A 2-in well was installed on 10/25/2021 to a depth of 15 ft.

Groundwater: Date Measured | Depth to Water (ft) | Elevation (ft)

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring MW-1

GeoEngineers

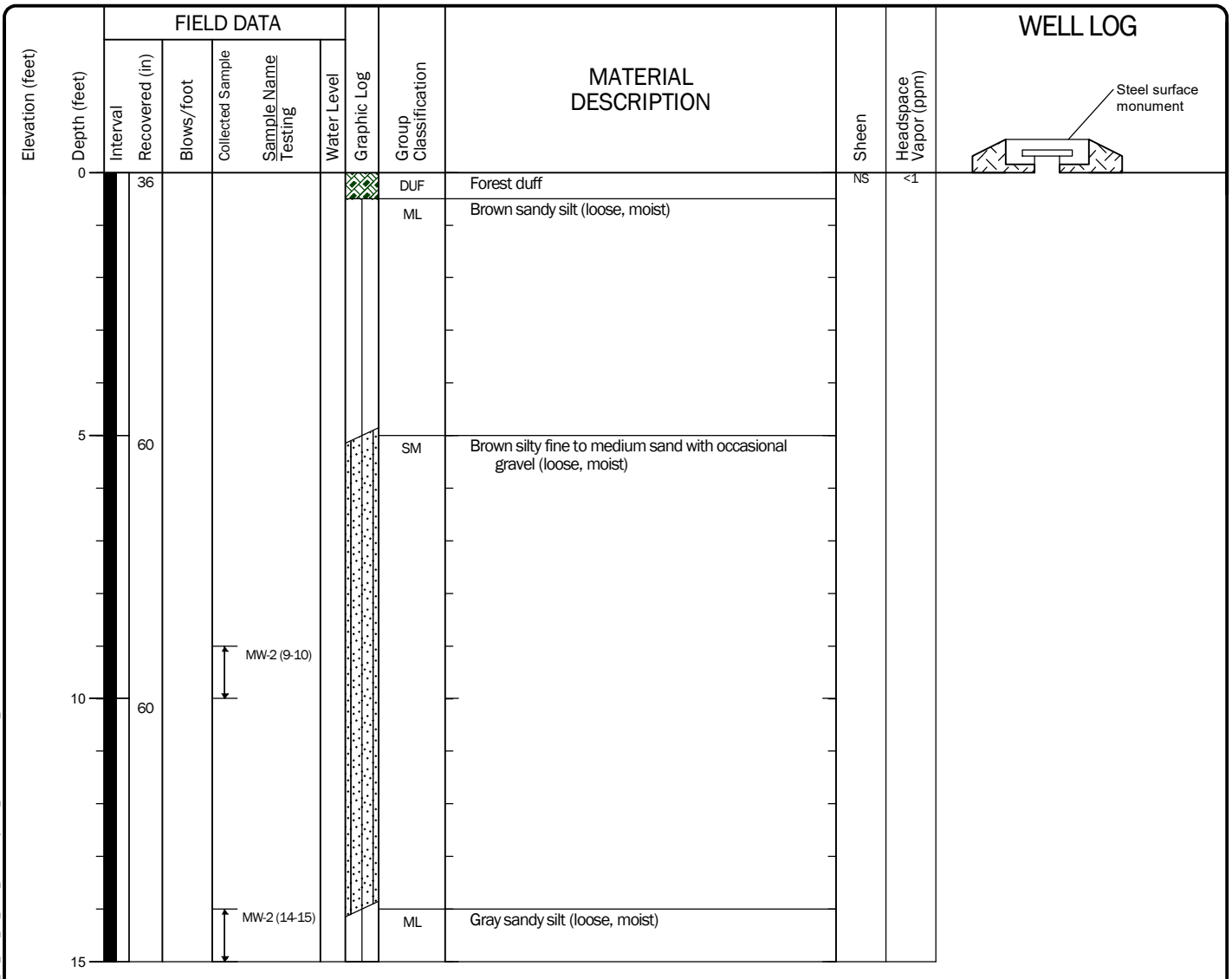
Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-8
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 15	Logged By DC / Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push
Hammer Data		Drilling Equipment Geoprobe 7822T		A 2-in well was installed on 10/26/2021 to a depth of 15 ft.
Surface Elevation (ft) Vertical Datum Undetermined		Top of Casing Elevation (ft)		Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)
Easting (X) Northing (Y)		Horizontal Datum		

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring MW-2

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-9
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393GPJ DBLibrary\Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled	Start 10/26/2021	End 10/26/2021	Total Depth (ft)	16	Logged By	DC	Checked By	CJW	Driller	Holocene Drilling, Inc.	Drilling Method	Direct-push

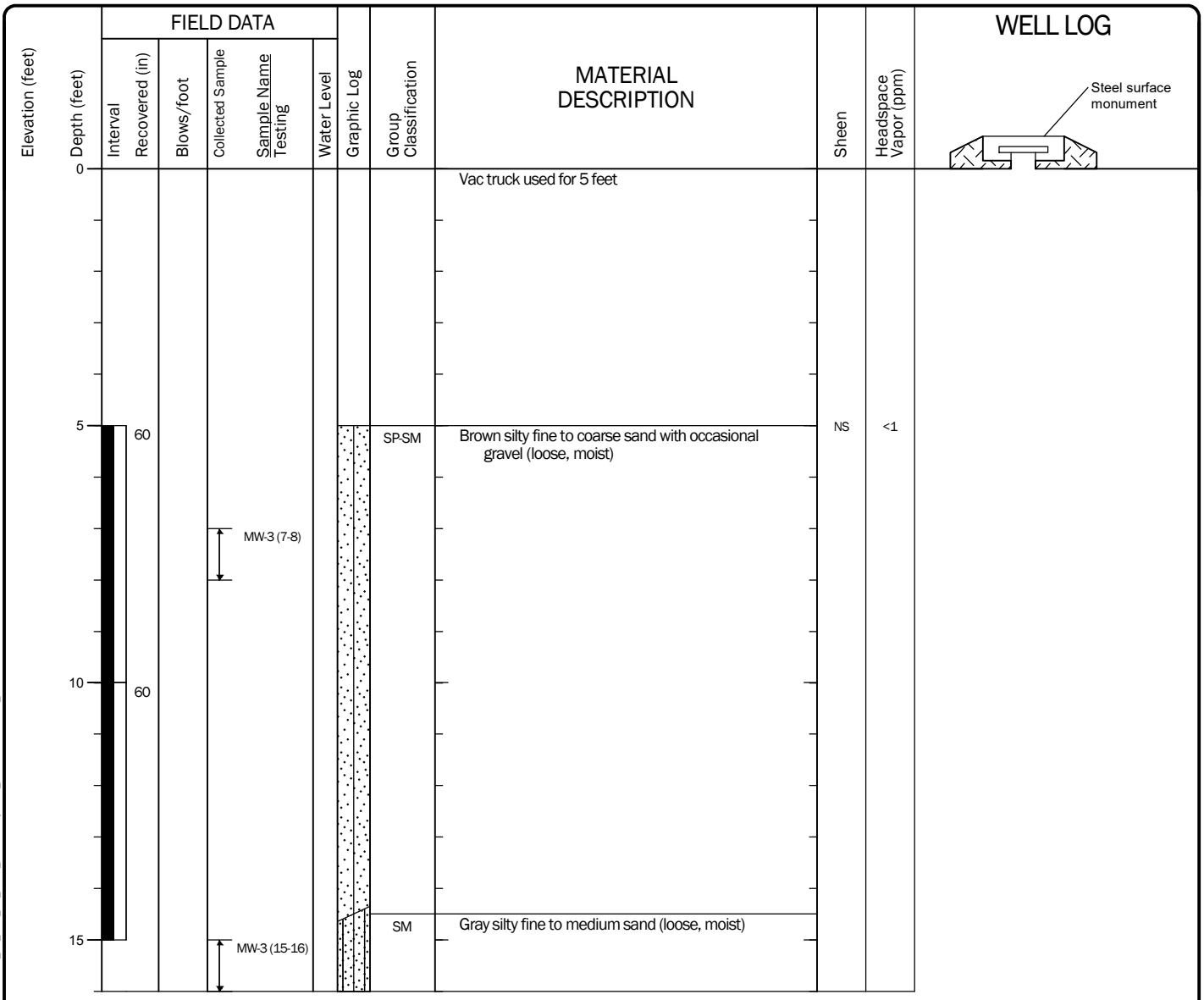
Hammer Data		Drilling Equipment	Geoprobe 7822T
Surface Elevation (ft) Vertical Datum	Undetermined	Top of Casing Elevation (ft)	
Easting (X) Northing (Y)		Horizontal Datum	

A 2-in well was installed on 10/26/2021 to a depth of 16 ft.

Groundwater

Date Measured	Depth to Water (ft)	Elevation (ft)

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring MW-3

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-10
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

APPENDIX B
Chemical Analytical Program

APPENDIX B
CHEMICAL ANALYTICAL PROGRAM

Analytical Methods

Chain-of-custody procedures were followed during the transport of the field 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

Quality controls were within required limits including duplicates. The data is of acceptable quality for their intended use.

ANALYTICAL REPORT

November 09, 2021

GeoEngineers- Portland, OR

Sample Delivery Group:	L1423266
Samples Received:	10/27/2021
Project Number:	0180-393-00
Description:	WSDOT-A-1 Towing

Report To:

Cris Watkins
4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego, OR 97035

Entire Report Reviewed By:

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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GEI-1-9-10 L1423266-01 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 11:20 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:04	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:25	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765532	25	10/25/21 11:20	10/29/21 11:17	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 11:20	10/31/21 03:56	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:15	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:00	AAT	Mt. Juliet, TN

GEI-2-9-10 L1423266-03 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 11:40 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:07	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:28	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765532	25	10/25/21 11:40	10/29/21 11:38	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 11:40	10/31/21 04:15	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:11	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:18	AAT	Mt. Juliet, TN

GEI-3-9-10 L1423266-05 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 13:45 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:09	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:32	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765532	25	10/25/21 13:45	10/29/21 12:00	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 13:45	10/31/21 04:34	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:24	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:35	AAT	Mt. Juliet, TN

MW-2-9-10 L1423266-11 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 14:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:12	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:35	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/25/21 14:00	10/29/21 04:21	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 14:00	10/31/21 04:53	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:36	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:52	AAT	Mt. Juliet, TN

GEI-4-2-3 L1423266-13 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:15	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:39	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 10:00	10/29/21 04:43	MGF	Mt. Juliet, TN

GEI-4-2-3 L1423266-13 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 10:00	10/31/21 05:12	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	5	11/02/21 03:07	11/03/21 15:22	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 16:11	AAT	Mt. Juliet, TN

MW-1-2-3 L1423266-14 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:20 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:22	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:42	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 10:20	10/29/21 05:05	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 10:20	10/31/21 05:31	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:49	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 14:27	AAT	Mt. Juliet, TN

GEI-5-7-8 L1423266-15 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:40 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:25	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:46	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 10:40	10/29/21 05:27	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 10:40	10/31/21 05:49	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:02	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 14:44	AAT	Mt. Juliet, TN

MW-3-2-3 L1423266-17 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 11:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:27	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:49	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 11:00	10/29/21 05:49	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 11:00	10/31/21 06:08	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:54	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 15:02	AAT	Mt. Juliet, TN

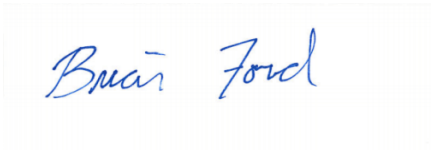
GEI-6-7-8 L1423266-20 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 12:05 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:30	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:52	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 12:05	10/29/21 06:11	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 12:05	10/31/21 06:27	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:41	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 15:19	AAT	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.8		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0436	1	11/02/2021 15:04	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.26		1.09	5	11/03/2021 18:25	WG1765966
Barium	41.9		2.72	5	11/03/2021 18:25	WG1765966
Cadmium	ND		1.09	5	11/03/2021 18:25	WG1765966
Chromium	23.4		5.45	5	11/03/2021 18:25	WG1765966
Lead	ND		2.18	5	11/03/2021 18:25	WG1765966
Selenium	ND		2.72	5	11/03/2021 18:25	WG1765966
Silver	ND		0.545	5	11/03/2021 18:25	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.01	25	10/29/2021 11:17	WG1765532
(S) a,a,a-Trifluorotoluene(FID)	*119*		*77.0-120*		*10/29/2021 11:17*	WG1765532

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0607	1	10/31/2021 03:56	WG1766323
Acrylonitrile	ND	C3	0.0152	1	10/31/2021 03:56	WG1766323
Benzene	ND		0.00121	1	10/31/2021 03:56	WG1766323
Bromobenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
Bromodichloromethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Bromoform	ND		0.0303	1	10/31/2021 03:56	WG1766323
Bromomethane	ND		0.0152	1	10/31/2021 03:56	WG1766323
n-Butylbenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
sec-Butylbenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
tert-Butylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Carbon tetrachloride	ND		0.00607	1	10/31/2021 03:56	WG1766323
Chlorobenzene	ND		0.00303	1	10/31/2021 03:56	WG1766323
Chlorodibromomethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Chloroethane	ND		0.00607	1	10/31/2021 03:56	WG1766323
Chloroform	ND		0.00303	1	10/31/2021 03:56	WG1766323
Chloromethane	ND		0.0152	1	10/31/2021 03:56	WG1766323
2-Chlorotoluene	ND		0.00303	1	10/31/2021 03:56	WG1766323
4-Chlorotoluene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0303	1	10/31/2021 03:56	WG1766323
1,2-Dibromoethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Dibromomethane	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2-Dichlorobenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,3-Dichlorobenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,4-Dichlorobenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Dichlorodifluoromethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1-Dichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,2-Dichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00303	1	10/31/2021 03:56	WG1766323
cis-1,2-Dichloroethene	ND		0.00303	1	10/31/2021 03:56	WG1766323
trans-1,2-Dichloroethene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2-Dichloropropane	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,1-Dichloropropene	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,3-Dichloropropane	ND		0.00607	1	10/31/2021 03:56	WG1766323
cis-1,3-Dichloropropene	ND		0.00303	1	10/31/2021 03:56	WG1766323
trans-1,3-Dichloropropene	ND		0.00607	1	10/31/2021 03:56	WG1766323
2,2-Dichloropropane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Di-isopropyl ether	ND		0.00121	1	10/31/2021 03:56	WG1766323
Ethylbenzene	ND		0.00303	1	10/31/2021 03:56	WG1766323
Hexachloro-1,3-butadiene	ND		0.0303	1	10/31/2021 03:56	WG1766323
Isopropylbenzene	ND		0.00303	1	10/31/2021 03:56	WG1766323
p-Isopropyltoluene	ND		0.00607	1	10/31/2021 03:56	WG1766323
2-Butanone (MEK)	ND		0.121	1	10/31/2021 03:56	WG1766323
Methylene Chloride	ND		0.0303	1	10/31/2021 03:56	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0303	1	10/31/2021 03:56	WG1766323
Methyl tert-butyl ether	ND		0.00121	1	10/31/2021 03:56	WG1766323
Naphthalene	ND		0.0152	1	10/31/2021 03:56	WG1766323
n-Propylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Styrene	ND		0.0152	1	10/31/2021 03:56	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Tetrachloroethene	ND		0.00303	1	10/31/2021 03:56	WG1766323
Toluene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0152	1	10/31/2021 03:56	WG1766323
1,2,4-Trichlorobenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
1,1,1-Trichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1,2-Trichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Trichloroethene	ND		0.00121	1	10/31/2021 03:56	WG1766323
Trichlorofluoromethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,2,3-Trichloropropane	ND		0.0152	1	10/31/2021 03:56	WG1766323
1,2,4-Trimethylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2,3-Trimethylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,3,5-Trimethylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Vinyl chloride	ND		0.00303	1	10/31/2021 03:56	WG1766323
Xylenes, Total	ND		0.00789	1	10/31/2021 03:56	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 03:56*	WG1766323
(S) 4-Bromofluorobenzene	*99.6*		*67.0-138*		*10/31/2021 03:56*	WG1766323
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*10/31/2021 03:56*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.36	1	11/03/2021 07:15	WG1766948
Residual Range Organics (RRO)	ND		10.9	1	11/03/2021 07:15	WG1766948
(S) o-Terphenyl	*53.8*		*18.0-148*		*11/03/2021 07:15*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Acenaphthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Acenaphthylene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(a)anthracene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(a)pyrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(b)fluoranthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(g,h,i)perylene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(k)fluoranthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Chrysene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Dibenz(a,h)anthracene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Fluoranthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Fluorene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Naphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
Phenanthrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Pyrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
1-Methylnaphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
2-Methylnaphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
2-Chloronaphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
(S) Nitrobenzene-d5	*85.9*		*14.0-149*		*10/30/2021 13:00*	WG1765811
(S) 2-Fluorobiphenyl	*70.0*		*34.0-125*		*10/30/2021 13:00*	WG1765811
(S) p-Terphenyl-d14	*110*		*23.0-120*		*10/30/2021 13:00*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0434	1	11/02/2021 15:07	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.36		1.08	5	11/03/2021 18:28	WG1765966
Barium	45.2		2.71	5	11/03/2021 18:28	WG1765966
Cadmium	ND		1.08	5	11/03/2021 18:28	WG1765966
Chromium	21.5		5.42	5	11/03/2021 18:28	WG1765966
Lead	ND		2.17	5	11/03/2021 18:28	WG1765966
Selenium	ND		2.71	5	11/03/2021 18:28	WG1765966
Silver	ND		0.542	5	11/03/2021 18:28	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		2.99	25	10/29/2021 11:38	WG1765532
(S) a,a,a-Trifluorotoluene(FID)	*119*		*77.0-120*		*10/29/2021 11:38*	WG1765532

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0594	1	10/31/2021 04:15	WG1766323
Acrylonitrile	ND	C3	0.0148	1	10/31/2021 04:15	WG1766323
Benzene	ND		0.00119	1	10/31/2021 04:15	WG1766323
Bromobenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
Bromodichloromethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Bromoform	ND		0.0297	1	10/31/2021 04:15	WG1766323
Bromomethane	ND		0.0148	1	10/31/2021 04:15	WG1766323
n-Butylbenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
sec-Butylbenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
tert-Butylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Carbon tetrachloride	ND		0.00594	1	10/31/2021 04:15	WG1766323
Chlorobenzene	ND		0.00297	1	10/31/2021 04:15	WG1766323
Chlorodibromomethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Chloroethane	ND		0.00594	1	10/31/2021 04:15	WG1766323
Chloroform	ND		0.00297	1	10/31/2021 04:15	WG1766323
Chloromethane	ND		0.0148	1	10/31/2021 04:15	WG1766323
2-Chlorotoluene	ND		0.00297	1	10/31/2021 04:15	WG1766323
4-Chlorotoluene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0297	1	10/31/2021 04:15	WG1766323
1,2-Dibromoethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Dibromomethane	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2-Dichlorobenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,3-Dichlorobenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,4-Dichlorobenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Dichlorodifluoromethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1-Dichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,2-Dichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00297	1	10/31/2021 04:15	WG1766323
cis-1,2-Dichloroethene	ND		0.00297	1	10/31/2021 04:15	WG1766323
trans-1,2-Dichloroethene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2-Dichloropropane	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,1-Dichloropropene	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,3-Dichloropropane	ND		0.00594	1	10/31/2021 04:15	WG1766323
cis-1,3-Dichloropropene	ND		0.00297	1	10/31/2021 04:15	WG1766323
trans-1,3-Dichloropropene	ND		0.00594	1	10/31/2021 04:15	WG1766323
2,2-Dichloropropane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Di-isopropyl ether	ND		0.00119	1	10/31/2021 04:15	WG1766323
Ethylbenzene	ND		0.00297	1	10/31/2021 04:15	WG1766323
Hexachloro-1,3-butadiene	ND		0.0297	1	10/31/2021 04:15	WG1766323
Isopropylbenzene	ND		0.00297	1	10/31/2021 04:15	WG1766323
p-Isopropyltoluene	ND		0.00594	1	10/31/2021 04:15	WG1766323
2-Butanone (MEK)	ND		0.119	1	10/31/2021 04:15	WG1766323
Methylene Chloride	ND		0.0297	1	10/31/2021 04:15	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0297	1	10/31/2021 04:15	WG1766323
Methyl tert-butyl ether	ND		0.00119	1	10/31/2021 04:15	WG1766323
Naphthalene	ND		0.0148	1	10/31/2021 04:15	WG1766323
n-Propylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Styrene	ND		0.0148	1	10/31/2021 04:15	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Tetrachloroethene	ND		0.00297	1	10/31/2021 04:15	WG1766323
Toluene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0148	1	10/31/2021 04:15	WG1766323
1,2,4-Trichlorobenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
1,1,1-Trichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1,2-Trichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Trichloroethene	ND		0.00119	1	10/31/2021 04:15	WG1766323
Trichlorofluoromethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,2,3-Trichloropropane	ND		0.0148	1	10/31/2021 04:15	WG1766323
1,2,4-Trimethylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2,3-Trimethylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,3,5-Trimethylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Vinyl chloride	ND		0.00297	1	10/31/2021 04:15	WG1766323
Xylenes, Total	ND		0.00772	1	10/31/2021 04:15	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 04:15*	WG1766323
(S) 4-Bromofluorobenzene	*96.9*		*67.0-138*		*10/31/2021 04:15*	WG1766323
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*10/31/2021 04:15*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.34	1	11/03/2021 06:11	WG1766948
Residual Range Organics (RRO)	ND		10.8	1	11/03/2021 06:11	WG1766948
(S) o-Terphenyl	*37.8*		*18.0-148*		*11/03/2021 06:11*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Acenaphthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Acenaphthylene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(a)anthracene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(a)pyrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(b)fluoranthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(g,h,i)perylene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(k)fluoranthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Chrysene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Dibenz(a,h)anthracene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Fluoranthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Fluorene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Naphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
Phenanthrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Pyrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
1-Methylnaphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
2-Methylnaphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
2-Chloronaphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
(S) Nitrobenzene-d5	*98.0*		*14.0-149*		*10/30/2021 13:18*	WG1765811
(S) 2-Fluorobiphenyl	*77.9*		*34.0-125*		*10/30/2021 13:18*	WG1765811
(S) p-Terphenyl-d14	*96.1*		*23.0-120*		*10/30/2021 13:18*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.0		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0450	1	11/02/2021 15:09	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.93		1.12	5	11/03/2021 18:32	WG1765966
Barium	25.3		2.81	5	11/03/2021 18:32	WG1765966
Cadmium	ND		1.12	5	11/03/2021 18:32	WG1765966
Chromium	11.8		5.62	5	11/03/2021 18:32	WG1765966
Lead	ND		2.25	5	11/03/2021 18:32	WG1765966
Selenium	ND		2.81	5	11/03/2021 18:32	WG1765966
Silver	ND		0.562	5	11/03/2021 18:32	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.23	25	10/29/2021 12:00	WG1765532
(S) a,a,a-Trifluorotoluene(FID)	*119*		*77.0-120*		*10/29/2021 12:00*	WG1765532

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0646	1	10/31/2021 04:34	WG1766323
Acrylonitrile	ND	C3	0.0161	1	10/31/2021 04:34	WG1766323
Benzene	ND		0.00129	1	10/31/2021 04:34	WG1766323
Bromobenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
Bromodichloromethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Bromoform	ND		0.0323	1	10/31/2021 04:34	WG1766323
Bromomethane	ND		0.0161	1	10/31/2021 04:34	WG1766323
n-Butylbenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
sec-Butylbenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
tert-Butylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Carbon tetrachloride	ND		0.00646	1	10/31/2021 04:34	WG1766323
Chlorobenzene	ND		0.00323	1	10/31/2021 04:34	WG1766323
Chlorodibromomethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Chloroethane	ND		0.00646	1	10/31/2021 04:34	WG1766323
Chloroform	ND		0.00323	1	10/31/2021 04:34	WG1766323
Chloromethane	ND		0.0161	1	10/31/2021 04:34	WG1766323
2-Chlorotoluene	ND		0.00323	1	10/31/2021 04:34	WG1766323
4-Chlorotoluene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0323	1	10/31/2021 04:34	WG1766323
1,2-Dibromoethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Dibromomethane	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2-Dichlorobenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,3-Dichlorobenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,4-Dichlorobenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Dichlorodifluoromethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1-Dichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,2-Dichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00323	1	10/31/2021 04:34	WG1766323
cis-1,2-Dichloroethene	ND		0.00323	1	10/31/2021 04:34	WG1766323
trans-1,2-Dichloroethene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2-Dichloropropane	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,1-Dichloropropene	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,3-Dichloropropane	ND		0.00646	1	10/31/2021 04:34	WG1766323
cis-1,3-Dichloropropene	ND		0.00323	1	10/31/2021 04:34	WG1766323
trans-1,3-Dichloropropene	ND		0.00646	1	10/31/2021 04:34	WG1766323
2,2-Dichloropropane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Di-isopropyl ether	ND		0.00129	1	10/31/2021 04:34	WG1766323
Ethylbenzene	ND		0.00323	1	10/31/2021 04:34	WG1766323
Hexachloro-1,3-butadiene	ND		0.0323	1	10/31/2021 04:34	WG1766323
Isopropylbenzene	ND		0.00323	1	10/31/2021 04:34	WG1766323
p-Isopropyltoluene	ND		0.00646	1	10/31/2021 04:34	WG1766323
2-Butanone (MEK)	ND		0.129	1	10/31/2021 04:34	WG1766323
Methylene Chloride	ND		0.0323	1	10/31/2021 04:34	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0323	1	10/31/2021 04:34	WG1766323
Methyl tert-butyl ether	ND		0.00129	1	10/31/2021 04:34	WG1766323
Naphthalene	ND		0.0161	1	10/31/2021 04:34	WG1766323
n-Propylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Styrene	ND		0.0161	1	10/31/2021 04:34	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Tetrachloroethene	ND		0.00323	1	10/31/2021 04:34	WG1766323
Toluene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0161	1	10/31/2021 04:34	WG1766323
1,2,4-Trichlorobenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
1,1,1-Trichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1,2-Trichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Trichloroethene	ND		0.00129	1	10/31/2021 04:34	WG1766323
Trichlorofluoromethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,2,3-Trichloropropane	ND		0.0161	1	10/31/2021 04:34	WG1766323
1,2,4-Trimethylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2,3-Trimethylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,3,5-Trimethylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Vinyl chloride	ND		0.00323	1	10/31/2021 04:34	WG1766323
Xylenes, Total	ND		0.00839	1	10/31/2021 04:34	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 04:34*	WG1766323
(S) 4-Bromofluorobenzene	*99.4*		*67.0-138*		*10/31/2021 04:34*	WG1766323
(S) 1,2-Dichloroethane-d4	*99.4*		*70.0-130*		*10/31/2021 04:34*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.50	1	11/03/2021 06:24	WG1766948
Residual Range Organics (RRO)	ND		11.2	1	11/03/2021 06:24	WG1766948
(S) o-Terphenyl	*45.3*		*18.0-148*		*11/03/2021 06:24*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Acenaphthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Acenaphthylene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(a)anthracene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(a)pyrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(b)fluoranthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(g,h,i)perylene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(k)fluoranthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Chrysene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Dibenz(a,h)anthracene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Fluoranthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Fluorene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Naphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
Phenanthrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Pyrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
1-Methylnaphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
2-Methylnaphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
2-Chloronaphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
(S) Nitrobenzene-d5	*93.3*		*14.0-149*		*10/30/2021 13:35*	WG1765811
(S) 2-Fluorobiphenyl	*75.9*		*34.0-125*		*10/30/2021 13:35*	WG1765811
(S) p-Terphenyl-d14	*96.6*		*23.0-120*		*10/30/2021 13:35*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.2		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0443	1	11/02/2021 15:12	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.17		1.11	5	11/03/2021 18:35	WG1765966
Barium	44.9		2.77	5	11/03/2021 18:35	WG1765966
Cadmium	ND		1.11	5	11/03/2021 18:35	WG1765966
Chromium	24.4		5.54	5	11/03/2021 18:35	WG1765966
Lead	ND		2.22	5	11/03/2021 18:35	WG1765966
Selenium	ND		2.77	5	11/03/2021 18:35	WG1765966
Silver	ND		0.554	5	11/03/2021 18:35	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.08	25	10/29/2021 04:21	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*91.8*		*77.0-120*		*10/29/2021 04:21*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0616	1	10/31/2021 04:53	WG1766323
Acrylonitrile	ND	C3	0.0154	1	10/31/2021 04:53	WG1766323
Benzene	ND		0.00123	1	10/31/2021 04:53	WG1766323
Bromobenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
Bromodichloromethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Bromoform	ND		0.0308	1	10/31/2021 04:53	WG1766323
Bromomethane	ND		0.0154	1	10/31/2021 04:53	WG1766323
n-Butylbenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
sec-Butylbenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
tert-Butylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Carbon tetrachloride	ND		0.00616	1	10/31/2021 04:53	WG1766323
Chlorobenzene	ND		0.00308	1	10/31/2021 04:53	WG1766323
Chlorodibromomethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Chloroethane	ND		0.00616	1	10/31/2021 04:53	WG1766323
Chloroform	ND		0.00308	1	10/31/2021 04:53	WG1766323
Chloromethane	ND		0.0154	1	10/31/2021 04:53	WG1766323
2-Chlorotoluene	ND		0.00308	1	10/31/2021 04:53	WG1766323
4-Chlorotoluene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0308	1	10/31/2021 04:53	WG1766323
1,2-Dibromoethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Dibromomethane	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2-Dichlorobenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,3-Dichlorobenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,4-Dichlorobenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Dichlorodifluoromethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1-Dichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,2-Dichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00308	1	10/31/2021 04:53	WG1766323
cis-1,2-Dichloroethene	ND		0.00308	1	10/31/2021 04:53	WG1766323
trans-1,2-Dichloroethene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2-Dichloropropane	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,1-Dichloropropene	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,3-Dichloropropane	ND		0.00616	1	10/31/2021 04:53	WG1766323
cis-1,3-Dichloropropene	ND		0.00308	1	10/31/2021 04:53	WG1766323
trans-1,3-Dichloropropene	ND		0.00616	1	10/31/2021 04:53	WG1766323
2,2-Dichloropropane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Di-isopropyl ether	ND		0.00123	1	10/31/2021 04:53	WG1766323
Ethylbenzene	ND		0.00308	1	10/31/2021 04:53	WG1766323
Hexachloro-1,3-butadiene	ND		0.0308	1	10/31/2021 04:53	WG1766323
Isopropylbenzene	ND		0.00308	1	10/31/2021 04:53	WG1766323
p-Isopropyltoluene	ND		0.00616	1	10/31/2021 04:53	WG1766323
2-Butanone (MEK)	ND		0.123	1	10/31/2021 04:53	WG1766323
Methylene Chloride	ND		0.0308	1	10/31/2021 04:53	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0308	1	10/31/2021 04:53	WG1766323
Methyl tert-butyl ether	ND		0.00123	1	10/31/2021 04:53	WG1766323
Naphthalene	ND		0.0154	1	10/31/2021 04:53	WG1766323
n-Propylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Styrene	ND		0.0154	1	10/31/2021 04:53	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Tetrachloroethene	ND		0.00308	1	10/31/2021 04:53	WG1766323
Toluene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0154	1	10/31/2021 04:53	WG1766323
1,2,4-Trichlorobenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
1,1,1-Trichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1,2-Trichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Trichloroethene	ND		0.00123	1	10/31/2021 04:53	WG1766323
Trichlorofluoromethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,2,3-Trichloropropane	ND		0.0154	1	10/31/2021 04:53	WG1766323
1,2,4-Trimethylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2,3-Trimethylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,3,5-Trimethylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Vinyl chloride	ND		0.00308	1	10/31/2021 04:53	WG1766323
Xylenes, Total	ND		0.00801	1	10/31/2021 04:53	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 04:53*	WG1766323
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*10/31/2021 04:53*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 04:53*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.43	1	11/03/2021 06:36	WG1766948
Residual Range Organics (RRO)	ND		11.1	1	11/03/2021 06:36	WG1766948
(S) o-Terphenyl	*45.8*		*18.0-148*		*11/03/2021 06:36*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Acenaphthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Acenaphthylene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(a)anthracene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(a)pyrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(b)fluoranthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(g,h,i)perylene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(k)fluoranthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Chrysene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Dibenz(a,h)anthracene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Fluoranthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Fluorene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Naphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
Phenanthrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Pyrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
1-Methylnaphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
2-Methylnaphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
2-Chloronaphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
(S) Nitrobenzene-d5	*94.9*		*14.0-149*		*10/30/2021 13:52*	WG1765811
(S) 2-Fluorobiphenyl	*81.7*		*34.0-125*		*10/30/2021 13:52*	WG1765811
(S) p-Terphenyl-d14	*95.1*		*23.0-120*		*10/30/2021 13:52*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.6		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0731		0.0437	1	11/02/2021 15:15	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	6.28		1.09	5	11/03/2021 18:39	WG1765966
Barium	72.2		2.73	5	11/03/2021 18:39	WG1765966
Cadmium	ND		1.09	5	11/03/2021 18:39	WG1765966
Chromium	33.9		5.46	5	11/03/2021 18:39	WG1765966
Lead	27.6		2.18	5	11/03/2021 18:39	WG1765966
Selenium	ND		2.73	5	11/03/2021 18:39	WG1765966
Silver	ND		0.546	5	11/03/2021 18:39	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		2.97	25	10/29/2021 04:43	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.7*		*77.0-120*		*10/29/2021 04:43*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0594	1	10/31/2021 05:12	WG1766323
Acrylonitrile	ND	C3	0.0148	1	10/31/2021 05:12	WG1766323
Benzene	ND		0.00119	1	10/31/2021 05:12	WG1766323
Bromobenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
Bromodichloromethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Bromoform	ND		0.0297	1	10/31/2021 05:12	WG1766323
Bromomethane	ND		0.0148	1	10/31/2021 05:12	WG1766323
n-Butylbenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
sec-Butylbenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
tert-Butylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Carbon tetrachloride	ND		0.00594	1	10/31/2021 05:12	WG1766323
Chlorobenzene	ND		0.00297	1	10/31/2021 05:12	WG1766323
Chlorodibromomethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Chloroethane	ND		0.00594	1	10/31/2021 05:12	WG1766323
Chloroform	ND		0.00297	1	10/31/2021 05:12	WG1766323
Chloromethane	ND		0.0148	1	10/31/2021 05:12	WG1766323
2-Chlorotoluene	ND		0.00297	1	10/31/2021 05:12	WG1766323
4-Chlorotoluene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0297	1	10/31/2021 05:12	WG1766323
1,2-Dibromoethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Dibromomethane	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2-Dichlorobenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,3-Dichlorobenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,4-Dichlorobenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Dichlorodifluoromethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1-Dichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,2-Dichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00297	1	10/31/2021 05:12	WG1766323
cis-1,2-Dichloroethene	ND		0.00297	1	10/31/2021 05:12	WG1766323
trans-1,2-Dichloroethene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2-Dichloropropane	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,1-Dichloropropene	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,3-Dichloropropane	ND		0.00594	1	10/31/2021 05:12	WG1766323
cis-1,3-Dichloropropene	ND		0.00297	1	10/31/2021 05:12	WG1766323
trans-1,3-Dichloropropene	ND		0.00594	1	10/31/2021 05:12	WG1766323
2,2-Dichloropropane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Di-isopropyl ether	ND		0.00119	1	10/31/2021 05:12	WG1766323
Ethylbenzene	ND		0.00297	1	10/31/2021 05:12	WG1766323
Hexachloro-1,3-butadiene	ND		0.0297	1	10/31/2021 05:12	WG1766323
Isopropylbenzene	ND		0.00297	1	10/31/2021 05:12	WG1766323
p-Isopropyltoluene	ND		0.00594	1	10/31/2021 05:12	WG1766323
2-Butanone (MEK)	ND		0.119	1	10/31/2021 05:12	WG1766323
Methylene Chloride	ND		0.0297	1	10/31/2021 05:12	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0297	1	10/31/2021 05:12	WG1766323
Methyl tert-butyl ether	ND		0.00119	1	10/31/2021 05:12	WG1766323
Naphthalene	ND		0.0148	1	10/31/2021 05:12	WG1766323
n-Propylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Styrene	ND		0.0148	1	10/31/2021 05:12	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Tetrachloroethene	ND		0.00297	1	10/31/2021 05:12	WG1766323
Toluene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0148	1	10/31/2021 05:12	WG1766323
1,2,4-Trichlorobenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
1,1,1-Trichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1,2-Trichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Trichloroethene	ND		0.00119	1	10/31/2021 05:12	WG1766323
Trichlorofluoromethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,2,3-Trichloropropane	ND		0.0148	1	10/31/2021 05:12	WG1766323
1,2,4-Trimethylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2,3-Trimethylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,3,5-Trimethylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Vinyl chloride	ND		0.00297	1	10/31/2021 05:12	WG1766323
Xylenes, Total	ND		0.00772	1	10/31/2021 05:12	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 05:12*	WG1766323
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*10/31/2021 05:12*	WG1766323
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*10/31/2021 05:12*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		21.8	5	11/03/2021 15:22	WG1766948
Residual Range Organics (RRO)	166		54.6	5	11/03/2021 15:22	WG1766948
(S) o-Terphenyl	*60.1*		*18.0-148*		*11/03/2021 15:22*	WG1766948

Sample Narrative:

L1423266-13 WG1766948: Cannot run at lower dilution due to viscosity of extract

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Acenaphthene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Acenaphthylene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(a)anthracene	0.0298		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(a)pyrene	0.0363		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(b)fluoranthene	0.0500		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(g,h,i)perylene	0.0306		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(k)fluoranthene	0.0150		0.00655	1	10/30/2021 16:11	WG1765811
Chrysene	0.0354		0.00655	1	10/30/2021 16:11	WG1765811
Dibenz(a,h)anthracene	0.00660		0.00655	1	10/30/2021 16:11	WG1765811
Fluoranthene	0.0622		0.00655	1	10/30/2021 16:11	WG1765811
Fluorene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Indeno(1,2,3-cd)pyrene	0.0325		0.00655	1	10/30/2021 16:11	WG1765811
Naphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
Phenanthrene	0.0244		0.00655	1	10/30/2021 16:11	WG1765811
Pyrene	0.0474		0.00655	1	10/30/2021 16:11	WG1765811
1-Methylnaphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
2-Methylnaphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
2-Chloronaphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
(S) Nitrobenzene-d5	*113*		*14.0-149*		*10/30/2021 16:11*	WG1765811
(S) 2-Fluorobiphenyl	*81.7*		*34.0-125*		*10/30/2021 16:11*	WG1765811
(S) p-Terphenyl-d14	*99.3*		*23.0-120*		*10/30/2021 16:11*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.4		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0469	1	11/02/2021 15:22	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.70		1.17	5	11/03/2021 18:42	WG1765966
Barium	61.0		2.93	5	11/03/2021 18:42	WG1765966
Cadmium	ND		1.17	5	11/03/2021 18:42	WG1765966
Chromium	26.7		5.86	5	11/03/2021 18:42	WG1765966
Lead	ND		2.34	5	11/03/2021 18:42	WG1765966
Selenium	ND		2.93	5	11/03/2021 18:42	WG1765966
Silver	ND		0.586	5	11/03/2021 18:42	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.43	25	10/29/2021 05:05	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*88.3*		*77.0-120*		*10/29/2021 05:05*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0686	1	10/31/2021 05:31	WG1766323
Acrylonitrile	ND	C3	0.0171	1	10/31/2021 05:31	WG1766323
Benzene	ND		0.00137	1	10/31/2021 05:31	WG1766323
Bromobenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
Bromodichloromethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Bromoform	ND		0.0343	1	10/31/2021 05:31	WG1766323
Bromomethane	ND		0.0171	1	10/31/2021 05:31	WG1766323
n-Butylbenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
sec-Butylbenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
tert-Butylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Carbon tetrachloride	ND		0.00686	1	10/31/2021 05:31	WG1766323
Chlorobenzene	ND		0.00343	1	10/31/2021 05:31	WG1766323
Chlorodibromomethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Chloroethane	ND		0.00686	1	10/31/2021 05:31	WG1766323
Chloroform	ND		0.00343	1	10/31/2021 05:31	WG1766323
Chloromethane	ND		0.0171	1	10/31/2021 05:31	WG1766323
2-Chlorotoluene	ND		0.00343	1	10/31/2021 05:31	WG1766323
4-Chlorotoluene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0343	1	10/31/2021 05:31	WG1766323
1,2-Dibromoethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Dibromomethane	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2-Dichlorobenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,3-Dichlorobenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,4-Dichlorobenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Dichlorodifluoromethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1-Dichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,2-Dichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00343	1	10/31/2021 05:31	WG1766323
cis-1,2-Dichloroethene	ND		0.00343	1	10/31/2021 05:31	WG1766323
trans-1,2-Dichloroethene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2-Dichloropropane	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,1-Dichloropropene	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,3-Dichloropropane	ND		0.00686	1	10/31/2021 05:31	WG1766323
cis-1,3-Dichloropropene	ND		0.00343	1	10/31/2021 05:31	WG1766323
trans-1,3-Dichloropropene	ND		0.00686	1	10/31/2021 05:31	WG1766323
2,2-Dichloropropane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Di-isopropyl ether	ND		0.00137	1	10/31/2021 05:31	WG1766323
Ethylbenzene	ND		0.00343	1	10/31/2021 05:31	WG1766323
Hexachloro-1,3-butadiene	ND		0.0343	1	10/31/2021 05:31	WG1766323
Isopropylbenzene	ND		0.00343	1	10/31/2021 05:31	WG1766323
p-Isopropyltoluene	ND		0.00686	1	10/31/2021 05:31	WG1766323
2-Butanone (MEK)	ND		0.137	1	10/31/2021 05:31	WG1766323
Methylene Chloride	ND		0.0343	1	10/31/2021 05:31	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0343	1	10/31/2021 05:31	WG1766323
Methyl tert-butyl ether	ND		0.00137	1	10/31/2021 05:31	WG1766323
Naphthalene	ND		0.0171	1	10/31/2021 05:31	WG1766323
n-Propylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Styrene	ND		0.0171	1	10/31/2021 05:31	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Tetrachloroethene	ND		0.00343	1	10/31/2021 05:31	WG1766323
Toluene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0171	1	10/31/2021 05:31	WG1766323
1,2,4-Trichlorobenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
1,1,1-Trichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1,2-Trichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Trichloroethene	ND		0.00137	1	10/31/2021 05:31	WG1766323
Trichlorofluoromethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,2,3-Trichloropropane	ND		0.0171	1	10/31/2021 05:31	WG1766323
1,2,4-Trimethylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2,3-Trimethylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,3,5-Trimethylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Vinyl chloride	ND		0.00343	1	10/31/2021 05:31	WG1766323
Xylenes, Total	ND		0.00892	1	10/31/2021 05:31	WG1766323
(S) Toluene-d8	*105*		*75.0-131*		*10/31/2021 05:31*	WG1766323
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*10/31/2021 05:31*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 05:31*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.69	1	11/03/2021 06:49	WG1766948
Residual Range Organics (RRO)	ND		11.7	1	11/03/2021 06:49	WG1766948
(S) o-Terphenyl	*32.5*		*18.0-148*		*11/03/2021 06:49*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Acenaphthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Acenaphthylene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(a)anthracene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(a)pyrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(b)fluoranthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(g,h,i)perylene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(k)fluoranthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Chrysene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Dibenz(a,h)anthracene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Fluoranthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Fluorene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Naphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
Phenanthrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Pyrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
1-Methylnaphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
2-Methylnaphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
2-Chloronaphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
(S) Nitrobenzene-d5	*85.6*		*14.0-149*		*10/30/2021 14:27*	WG1765811
(S) 2-Fluorobiphenyl	*75.7*		*34.0-125*		*10/30/2021 14:27*	WG1765811
(S) p-Terphenyl-d14	*89.7*		*23.0-120*		*10/30/2021 14:27*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.7		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0436	1	11/02/2021 15:25	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.58		1.09	5	11/03/2021 18:46	WG1765966
Barium	39.6		2.73	5	11/03/2021 18:46	WG1765966
Cadmium	ND		1.09	5	11/03/2021 18:46	WG1765966
Chromium	21.1		5.45	5	11/03/2021 18:46	WG1765966
Lead	ND		2.18	5	11/03/2021 18:46	WG1765966
Selenium	ND		2.73	5	11/03/2021 18:46	WG1765966
Silver	ND		0.545	5	11/03/2021 18:46	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.02	25	10/29/2021 05:27	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.5*		*77.0-120*		*10/29/2021 05:27*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0604	1	10/31/2021 05:49	WG1766323
Acrylonitrile	ND	C3	0.0151	1	10/31/2021 05:49	WG1766323
Benzene	ND		0.00121	1	10/31/2021 05:49	WG1766323
Bromobenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
Bromodichloromethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Bromoform	ND		0.0302	1	10/31/2021 05:49	WG1766323
Bromomethane	ND		0.0151	1	10/31/2021 05:49	WG1766323
n-Butylbenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
sec-Butylbenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
tert-Butylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Carbon tetrachloride	ND		0.00604	1	10/31/2021 05:49	WG1766323
Chlorobenzene	ND		0.00302	1	10/31/2021 05:49	WG1766323
Chlorodibromomethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Chloroethane	ND		0.00604	1	10/31/2021 05:49	WG1766323
Chloroform	ND		0.00302	1	10/31/2021 05:49	WG1766323
Chloromethane	ND		0.0151	1	10/31/2021 05:49	WG1766323
2-Chlorotoluene	ND		0.00302	1	10/31/2021 05:49	WG1766323
4-Chlorotoluene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0302	1	10/31/2021 05:49	WG1766323
1,2-Dibromoethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Dibromomethane	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2-Dichlorobenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,3-Dichlorobenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,4-Dichlorobenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Dichlorodifluoromethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1-Dichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,2-Dichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00302	1	10/31/2021 05:49	WG1766323
cis-1,2-Dichloroethene	ND		0.00302	1	10/31/2021 05:49	WG1766323
trans-1,2-Dichloroethene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2-Dichloropropane	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,1-Dichloropropene	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,3-Dichloropropane	ND		0.00604	1	10/31/2021 05:49	WG1766323
cis-1,3-Dichloropropene	ND		0.00302	1	10/31/2021 05:49	WG1766323
trans-1,3-Dichloropropene	ND		0.00604	1	10/31/2021 05:49	WG1766323
2,2-Dichloropropane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Di-isopropyl ether	ND		0.00121	1	10/31/2021 05:49	WG1766323
Ethylbenzene	ND		0.00302	1	10/31/2021 05:49	WG1766323
Hexachloro-1,3-butadiene	ND		0.0302	1	10/31/2021 05:49	WG1766323
Isopropylbenzene	ND		0.00302	1	10/31/2021 05:49	WG1766323
p-Isopropyltoluene	ND		0.00604	1	10/31/2021 05:49	WG1766323
2-Butanone (MEK)	ND		0.121	1	10/31/2021 05:49	WG1766323
Methylene Chloride	ND		0.0302	1	10/31/2021 05:49	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0302	1	10/31/2021 05:49	WG1766323
Methyl tert-butyl ether	ND		0.00121	1	10/31/2021 05:49	WG1766323
Naphthalene	ND		0.0151	1	10/31/2021 05:49	WG1766323
n-Propylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Styrene	ND		0.0151	1	10/31/2021 05:49	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Tetrachloroethene	ND		0.00302	1	10/31/2021 05:49	WG1766323
Toluene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0151	1	10/31/2021 05:49	WG1766323
1,2,4-Trichlorobenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
1,1,1-Trichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1,2-Trichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Trichloroethene	ND		0.00121	1	10/31/2021 05:49	WG1766323
Trichlorofluoromethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,2,3-Trichloropropane	ND		0.0151	1	10/31/2021 05:49	WG1766323
1,2,4-Trimethylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2,3-Trimethylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,3,5-Trimethylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Vinyl chloride	ND		0.00302	1	10/31/2021 05:49	WG1766323
Xylenes, Total	ND		0.00785	1	10/31/2021 05:49	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 05:49*	WG1766323
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*10/31/2021 05:49*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 05:49*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.36	1	11/03/2021 07:02	WG1766948
Residual Range Organics (RRO)	ND		10.9	1	11/03/2021 07:02	WG1766948
(S) o-Terphenyl	*31.1*		*18.0-148*		*11/03/2021 07:02*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Acenaphthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Acenaphthylene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(a)anthracene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(a)pyrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(b)fluoranthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(g,h,i)perylene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(k)fluoranthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Chrysene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Dibenz(a,h)anthracene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Fluoranthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Fluorene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Naphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
Phenanthrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Pyrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
1-Methylnaphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
2-Methylnaphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
2-Chloronaphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
(S) Nitrobenzene-d5	*86.5*		*14.0-149*		*10/30/2021 14:44*	WG1765811
(S) 2-Fluorobiphenyl	*71.6*		*34.0-125*		*10/30/2021 14:44*	WG1765811
(S) p-Terphenyl-d14	*97.4*		*23.0-120*		*10/30/2021 14:44*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.9		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0460	1	11/02/2021 15:27	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	7.77		1.15	5	11/03/2021 18:49	WG1765966
Barium	58.8		2.88	5	11/03/2021 18:49	WG1765966
Cadmium	ND		1.15	5	11/03/2021 18:49	WG1765966
Chromium	41.6		5.75	5	11/03/2021 18:49	WG1765966
Lead	3.16		2.30	5	11/03/2021 18:49	WG1765966
Selenium	ND		2.88	5	11/03/2021 18:49	WG1765966
Silver	ND		0.575	5	11/03/2021 18:49	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.35	25	10/29/2021 05:49	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.3*		*77.0-120*		*10/29/2021 05:49*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0669	1	10/31/2021 06:08	WG1766323
Acrylonitrile	ND	C3	0.0167	1	10/31/2021 06:08	WG1766323
Benzene	ND		0.00134	1	10/31/2021 06:08	WG1766323
Bromobenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
Bromodichloromethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Bromoform	ND		0.0335	1	10/31/2021 06:08	WG1766323
Bromomethane	ND		0.0167	1	10/31/2021 06:08	WG1766323
n-Butylbenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
sec-Butylbenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
tert-Butylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Carbon tetrachloride	ND		0.00669	1	10/31/2021 06:08	WG1766323
Chlorobenzene	ND		0.00335	1	10/31/2021 06:08	WG1766323
Chlorodibromomethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Chloroethane	ND		0.00669	1	10/31/2021 06:08	WG1766323
Chloroform	ND		0.00335	1	10/31/2021 06:08	WG1766323
Chloromethane	ND		0.0167	1	10/31/2021 06:08	WG1766323
2-Chlorotoluene	ND		0.00335	1	10/31/2021 06:08	WG1766323
4-Chlorotoluene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0335	1	10/31/2021 06:08	WG1766323
1,2-Dibromoethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Dibromomethane	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2-Dichlorobenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,3-Dichlorobenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,4-Dichlorobenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Dichlorodifluoromethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1-Dichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,2-Dichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00335	1	10/31/2021 06:08	WG1766323
cis-1,2-Dichloroethene	ND		0.00335	1	10/31/2021 06:08	WG1766323
trans-1,2-Dichloroethene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2-Dichloropropane	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,1-Dichloropropene	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,3-Dichloropropane	ND		0.00669	1	10/31/2021 06:08	WG1766323
cis-1,3-Dichloropropene	ND		0.00335	1	10/31/2021 06:08	WG1766323
trans-1,3-Dichloropropene	ND		0.00669	1	10/31/2021 06:08	WG1766323
2,2-Dichloropropane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Di-isopropyl ether	ND		0.00134	1	10/31/2021 06:08	WG1766323
Ethylbenzene	ND		0.00335	1	10/31/2021 06:08	WG1766323
Hexachloro-1,3-butadiene	ND		0.0335	1	10/31/2021 06:08	WG1766323
Isopropylbenzene	ND		0.00335	1	10/31/2021 06:08	WG1766323
p-Isopropyltoluene	ND		0.00669	1	10/31/2021 06:08	WG1766323
2-Butanone (MEK)	ND		0.134	1	10/31/2021 06:08	WG1766323
Methylene Chloride	ND		0.0335	1	10/31/2021 06:08	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0335	1	10/31/2021 06:08	WG1766323
Methyl tert-butyl ether	ND		0.00134	1	10/31/2021 06:08	WG1766323
Naphthalene	ND		0.0167	1	10/31/2021 06:08	WG1766323
n-Propylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Styrene	ND		0.0167	1	10/31/2021 06:08	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Tetrachloroethene	ND		0.00335	1	10/31/2021 06:08	WG1766323
Toluene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0167	1	10/31/2021 06:08	WG1766323
1,2,4-Trichlorobenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
1,1,1-Trichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1,2-Trichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Trichloroethene	ND		0.00134	1	10/31/2021 06:08	WG1766323
Trichlorofluoromethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,2,3-Trichloropropane	ND		0.0167	1	10/31/2021 06:08	WG1766323
1,2,4-Trimethylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2,3-Trimethylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,3,5-Trimethylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Vinyl chloride	ND		0.00335	1	10/31/2021 06:08	WG1766323
Xylenes, Total	ND		0.00870	1	10/31/2021 06:08	WG1766323
(S) Toluene-d8	*102*		*75.0-131*		*10/31/2021 06:08*	WG1766323
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*10/31/2021 06:08*	WG1766323
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*10/31/2021 06:08*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5.55		4.60	1	11/03/2021 07:54	WG1766948
Residual Range Organics (RRO)	24.3		11.5	1	11/03/2021 07:54	WG1766948
(S) o-Terphenyl	*61.6*		*18.0-148*		*11/03/2021 07:54*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Acenaphthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Acenaphthylene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(a)anthracene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(a)pyrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(b)fluoranthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(g,h,i)perylene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(k)fluoranthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Chrysene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Dibenz(a,h)anthracene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Fluoranthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Fluorene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Naphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
Phenanthrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Pyrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
1-Methylnaphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
2-Methylnaphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
2-Chloronaphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
(S) Nitrobenzene-d5	*77.8*		*14.0-149*		*10/30/2021 15:02*	WG1765811
(S) 2-Fluorobiphenyl	*62.6*		*34.0-125*		*10/30/2021 15:02*	WG1765811
(S) p-Terphenyl-d14	*80.0*		*23.0-120*		*10/30/2021 15:02*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.4		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0433	1	11/02/2021 15:30	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.31		1.08	5	11/03/2021 18:52	WG1765966
Barium	35.1		2.71	5	11/03/2021 18:52	WG1765966
Cadmium	ND		1.08	5	11/03/2021 18:52	WG1765966
Chromium	16.3		5.41	5	11/03/2021 18:52	WG1765966
Lead	ND		2.16	5	11/03/2021 18:52	WG1765966
Selenium	ND		2.71	5	11/03/2021 18:52	WG1765966
Silver	ND		0.541	5	11/03/2021 18:52	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		2.95	25	10/29/2021 06:11	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.3*		*77.0-120*		*10/29/2021 06:11*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0590	1	10/31/2021 06:27	WG1766323
Acrylonitrile	ND	C3	0.0147	1	10/31/2021 06:27	WG1766323
Benzene	ND		0.00118	1	10/31/2021 06:27	WG1766323
Bromobenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
Bromodichloromethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Bromoform	ND		0.0295	1	10/31/2021 06:27	WG1766323
Bromomethane	ND		0.0147	1	10/31/2021 06:27	WG1766323
n-Butylbenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
sec-Butylbenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
tert-Butylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Carbon tetrachloride	ND		0.00590	1	10/31/2021 06:27	WG1766323
Chlorobenzene	ND		0.00295	1	10/31/2021 06:27	WG1766323
Chlorodibromomethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Chloroethane	ND		0.00590	1	10/31/2021 06:27	WG1766323
Chloroform	ND		0.00295	1	10/31/2021 06:27	WG1766323
Chloromethane	ND		0.0147	1	10/31/2021 06:27	WG1766323
2-Chlorotoluene	ND		0.00295	1	10/31/2021 06:27	WG1766323
4-Chlorotoluene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0295	1	10/31/2021 06:27	WG1766323
1,2-Dibromoethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Dibromomethane	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2-Dichlorobenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,3-Dichlorobenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,4-Dichlorobenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Dichlorodifluoromethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1-Dichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,2-Dichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00295	1	10/31/2021 06:27	WG1766323
cis-1,2-Dichloroethene	ND		0.00295	1	10/31/2021 06:27	WG1766323
trans-1,2-Dichloroethene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2-Dichloropropane	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,1-Dichloropropene	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,3-Dichloropropane	ND		0.00590	1	10/31/2021 06:27	WG1766323
cis-1,3-Dichloropropene	ND		0.00295	1	10/31/2021 06:27	WG1766323
trans-1,3-Dichloropropene	ND		0.00590	1	10/31/2021 06:27	WG1766323
2,2-Dichloropropane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Di-isopropyl ether	ND		0.00118	1	10/31/2021 06:27	WG1766323
Ethylbenzene	ND		0.00295	1	10/31/2021 06:27	WG1766323
Hexachloro-1,3-butadiene	ND		0.0295	1	10/31/2021 06:27	WG1766323
Isopropylbenzene	ND		0.00295	1	10/31/2021 06:27	WG1766323
p-Isopropyltoluene	ND		0.00590	1	10/31/2021 06:27	WG1766323
2-Butanone (MEK)	ND		0.118	1	10/31/2021 06:27	WG1766323
Methylene Chloride	ND		0.0295	1	10/31/2021 06:27	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0295	1	10/31/2021 06:27	WG1766323
Methyl tert-butyl ether	ND		0.00118	1	10/31/2021 06:27	WG1766323
Naphthalene	ND		0.0147	1	10/31/2021 06:27	WG1766323
n-Propylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Styrene	ND		0.0147	1	10/31/2021 06:27	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Tetrachloroethene	ND		0.00295	1	10/31/2021 06:27	WG1766323
Toluene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0147	1	10/31/2021 06:27	WG1766323
1,2,4-Trichlorobenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
1,1,1-Trichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1,2-Trichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Trichloroethene	ND		0.00118	1	10/31/2021 06:27	WG1766323
Trichlorofluoromethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,2,3-Trichloropropane	ND		0.0147	1	10/31/2021 06:27	WG1766323
1,2,4-Trimethylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2,3-Trimethylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,3,5-Trimethylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Vinyl chloride	ND		0.00295	1	10/31/2021 06:27	WG1766323
Xylenes, Total	ND		0.00767	1	10/31/2021 06:27	WG1766323
(S) Toluene-d8	*103*		*75.0-131*		*10/31/2021 06:27*	WG1766323
(S) 4-Bromofluorobenzene	*96.5*		*67.0-138*		*10/31/2021 06:27*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 06:27*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.33	1	11/03/2021 07:41	WG1766948
Residual Range Organics (RRO)	ND		10.8	1	11/03/2021 07:41	WG1766948
(S) o-Terphenyl	*48.8*		*18.0-148*		*11/03/2021 07:41*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Acenaphthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Acenaphthylene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(a)anthracene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(a)pyrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(b)fluoranthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(g,h,i)perylene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(k)fluoranthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Chrysene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Dibenz(a,h)anthracene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Fluoranthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Fluorene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Naphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
Phenanthrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Pyrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
1-Methylnaphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
2-Methylnaphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
2-Chloronaphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
(S) Nitrobenzene-d5	*99.3*		*14.0-149*		*10/30/2021 15:19*	WG1765811
(S) 2-Fluorobiphenyl	*86.3*		*34.0-125*		*10/30/2021 15:19*	WG1765811
(S) p-Terphenyl-d14	*121*	J1	*23.0-120*		*10/30/2021 15:19*	WG1765811

Method Blank (MB)

(MB) R3723681-1 10/30/21 16:39

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1423266-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1423266-05 10/30/21 16:39 • (DUP) R3723681-3 10/30/21 16:39

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	89.0	89.2	1	0.237		10

Laboratory Control Sample (LCS)

(LCS) R3723681-2 10/30/21 16:39

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

QUALITY CONTROL SUMMARY

L1423266-01,03,05,11,13,14,15,17,20

Method Blank (MB)

(MB) R3724558-1 11/02/21 14:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3724558-2 11/02/21 14:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.509	102	80.0-120	

L1423622-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423622-05 11/02/21 14:57 • (MS) R3724558-3 11/02/21 14:59 • (MSD) R3724558-4 11/02/21 15:02

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.669	ND	0.790	0.736	111	103	1	75.0-125			7.13	20

QUALITY CONTROL SUMMARY

L1423266-01,03,05,11,13,14,15,17,20

Method Blank (MB)

(MB) R3725162-1 11/03/21 17:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Lead	U		0.0990	2.00
Selenium	0.208	J	0.180	2.50
Silver	U		0.0865	0.500

Laboratory Control Sample (LCS)

(LCS) R3725162-2 11/03/21 17:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	91.7	91.7	80.0-120	
Barium	100	90.8	90.8	80.0-120	
Cadmium	100	101	101	80.0-120	
Chromium	100	96.7	96.7	80.0-120	
Lead	100	93.1	93.1	80.0-120	
Selenium	100	98.2	98.2	80.0-120	
Silver	20.0	19.7	98.4	80.0-120	

L1423646-29 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423646-29 11/03/21 17:59 • (MS) R3725162-5 11/03/21 18:09 • (MSD) R3725162-6 11/03/21 18:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	29.6	112	116	82.6	85.9	5	75.0-125			2.90	20
Barium	100	382	476	502	94.4	120	5	75.0-125			5.33	20
Cadmium	100	ND	91.5	98.6	90.9	98.0	5	75.0-125			7.48	20
Chromium	100	26.3	113	115	86.4	88.8	5	75.0-125			2.09	20
Lead	100	19.4	106	110	86.2	91.0	5	75.0-125			4.46	20
Selenium	100	ND	91.3	98.2	90.2	97.1	5	75.0-125			7.27	20
Silver	20.0	ND	17.6	18.6	88.2	93.0	5	75.0-125			5.36	20

Method Blank (MB)

(MB) R3725739-3 10/29/21 04:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*117*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3725739-2 10/29/21 03:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHG C6 - C12	5.50	6.17	112	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*104*	*77.0-120*	

L1423058-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423058-01 10/29/21 08:23 • (MS) R3725739-6 10/29/21 13:48 • (MSD) R3725739-7 10/29/21 14:10

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	162	ND	199	188	123	117	25	50.0-150			5.36	27
(S) a,a,a-Trifluorotoluene(FID)					*110*	*109*		*77.0-120*				

Method Blank (MB)

(MB) R3723041-2 10/29/21 03:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*93.8*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3723041-1 10/29/21 03:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.50	5.75	105	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*100*	*77.0-120*	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3725864-2 10/31/21 00:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

Method Blank (MB)

(MB) R3725864-2 10/31/21 00:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	0.0821	J	0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*100*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3725864-1 10/30/21 23:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.554	88.6	10.0-160	
Acrylonitrile	0.625	0.518	82.9	45.0-153	
Benzene	0.125	0.112	89.6	70.0-123	
Bromobenzene	0.125	0.125	100	73.0-121	
Bromodichloromethane	0.125	0.115	92.0	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R3725864-1 10/30/21 23:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromoform	0.125	0.112	89.6	64.0-132	
Bromomethane	0.125	0.114	91.2	56.0-147	
n-Butylbenzene	0.125	0.109	87.2	68.0-135	
sec-Butylbenzene	0.125	0.108	86.4	74.0-130	
tert-Butylbenzene	0.125	0.111	88.8	75.0-127	
Carbon tetrachloride	0.125	0.113	90.4	66.0-128	
Chlorobenzene	0.125	0.115	92.0	76.0-128	
Chlorodibromomethane	0.125	0.110	88.0	74.0-127	
Chloroethane	0.125	0.121	96.8	61.0-134	
Chloroform	0.125	0.114	91.2	72.0-123	
Chloromethane	0.125	0.133	106	51.0-138	
2-Chlorotoluene	0.125	0.117	93.6	75.0-124	
4-Chlorotoluene	0.125	0.114	91.2	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.104	83.2	59.0-130	
1,2-Dibromoethane	0.125	0.117	93.6	74.0-128	
Dibromomethane	0.125	0.125	100	75.0-122	
1,2-Dichlorobenzene	0.125	0.115	92.0	76.0-124	
1,3-Dichlorobenzene	0.125	0.114	91.2	76.0-125	
1,4-Dichlorobenzene	0.125	0.112	89.6	77.0-121	
Dichlorodifluoromethane	0.125	0.107	85.6	43.0-156	
1,1-Dichloroethane	0.125	0.115	92.0	70.0-127	
1,2-Dichloroethane	0.125	0.128	102	65.0-131	
1,1-Dichloroethene	0.125	0.110	88.0	65.0-131	
cis-1,2-Dichloroethene	0.125	0.113	90.4	73.0-125	
trans-1,2-Dichloroethene	0.125	0.105	84.0	71.0-125	
1,2-Dichloropropane	0.125	0.117	93.6	74.0-125	
1,1-Dichloropropene	0.125	0.120	96.0	73.0-125	
1,3-Dichloropropane	0.125	0.120	96.0	80.0-125	
cis-1,3-Dichloropropene	0.125	0.121	96.8	76.0-127	
trans-1,3-Dichloropropene	0.125	0.124	99.2	73.0-127	
2,2-Dichloropropane	0.125	0.0921	73.7	59.0-135	
Di-isopropyl ether	0.125	0.116	92.8	60.0-136	
Ethylbenzene	0.125	0.107	85.6	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.145	116	57.0-150	
Isopropylbenzene	0.125	0.106	84.8	72.0-127	
p-Isopropyltoluene	0.125	0.101	80.8	72.0-133	
2-Butanone (MEK)	0.625	0.531	85.0	30.0-160	
Methylene Chloride	0.125	0.111	88.8	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.603	96.5	56.0-143	
Methyl tert-butyl ether	0.125	0.111	88.8	66.0-132	

Laboratory Control Sample (LCS)

(LCS) R3725864-1 10/30/21 23:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.116	92.8	59.0-130	
n-Propylbenzene	0.125	0.111	88.8	74.0-126	
Styrene	0.125	0.107	85.6	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.104	83.2	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.109	87.2	68.0-128	
Tetrachloroethene	0.125	0.123	98.4	70.0-136	
Toluene	0.125	0.113	90.4	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.122	97.6	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.126	101	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.128	102	62.0-137	
1,1,1-Trichloroethane	0.125	0.107	85.6	69.0-126	
1,1,2-Trichloroethane	0.125	0.120	96.0	78.0-123	
Trichloroethene	0.125	0.126	101	76.0-126	
Trichlorofluoromethane	0.125	0.113	90.4	61.0-142	
1,2,3-Trichloropropane	0.125	0.113	90.4	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.105	84.0	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.103	82.4	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.106	84.8	73.0-127	
Vinyl chloride	0.125	0.125	100	63.0-134	
Xylenes, Total	0.375	0.325	86.7	72.0-127	
(S) Toluene-d8			*103*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*108*	*70.0-130*	

Method Blank (MB)

(MB) R3724440-1 11/02/21 07:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*53.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3724440-2 11/02/21 07:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	32.2	64.4	50.0-150	
(S) o-Terphenyl			*70.6*	*18.0-148*	

L1423415-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423415-01 11/02/21 16:57 • (MS) R3724440-3 11/02/21 17:10 • (MSD) R3724440-4 11/02/21 17:22

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	47.8	ND	33.5	42.3	53.9	71.3	5	50.0-150		J3	23.2	20
(S) o-Terphenyl					*129*	*62.5*		*18.0-148*				

Method Blank (MB)

(MB) R3723791-2 10/30/21 10:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	*105*			*14.0-149*
(S) 2-Fluorobiphenyl	*87.4*			*34.0-125*
(S) p-Terphenyl-d14	*109*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3723791-1 10/30/21 10:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0587	73.4	50.0-126	
Acenaphthene	0.0800	0.0587	73.4	50.0-120	
Acenaphthylene	0.0800	0.0573	71.6	50.0-120	
Benzo(a)anthracene	0.0800	0.0587	73.4	45.0-120	
Benzo(a)pyrene	0.0800	0.0532	66.5	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0611	76.4	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0611	76.4	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0601	75.1	49.0-125	
Chrysene	0.0800	0.0615	76.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0610	76.3	47.0-125	
Fluoranthene	0.0800	0.0596	74.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3723791-1 10/30/21 10:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0620	77.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0590	73.8	46.0-125	
Naphthalene	0.0800	0.0582	72.8	50.0-120	
Phenanthrene	0.0800	0.0627	78.4	47.0-120	
Pyrene	0.0800	0.0593	74.1	43.0-123	
1-Methylnaphthalene	0.0800	0.0548	68.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0538	67.3	50.0-120	
2-Chloronaphthalene	0.0800	0.0555	69.4	50.0-120	
(S) Nitrobenzene-d5			*107*	*14.0-149*	
(S) 2-Fluorobiphenyl			*79.1*	*34.0-125*	
(S) p-Terphenyl-d14			*103*	*23.0-120*	

L1422174-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1422174-01 10/30/21 16:46 • (MS) R3723791-3 10/30/21 17:04 • (MSD) R3723791-4 10/30/21 17:21

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0760	0.00867	0.0599	0.0670	67.4	76.8	1	10.0-145			11.2	30
Acenaphthene	0.0760	ND	0.0537	0.0618	63.3	73.9	1	14.0-127			14.0	27
Acenaphthylene	0.0760	ND	0.0555	0.0625	73.0	82.2	1	21.0-124			11.9	25
Benzo(a)anthracene	0.0760	0.0208	0.0739	0.0757	69.9	72.2	1	10.0-139			2.41	30
Benzo(a)pyrene	0.0760	0.0134	0.0567	0.0634	57.0	65.8	1	10.0-141			11.2	31
Benzo(b)fluoranthene	0.0760	0.0366	0.0795	0.0783	56.4	54.9	1	10.0-140			1.52	36
Benzo(g,h,i)perylene	0.0760	0.0259	0.0604	0.0733	45.4	62.4	1	10.0-140			19.3	33
Benzo(k)fluoranthene	0.0760	0.00795	0.0550	0.0627	61.9	72.0	1	10.0-137			13.1	31
Chrysene	0.0760	0.0322	0.0986	0.0974	87.4	85.8	1	10.0-145			1.22	30
Dibenz(a,h)anthracene	0.0760	ND	0.0479	0.0656	56.6	79.9	1	10.0-132		J3	31.2	31
Fluoranthene	0.0760	0.0456	0.0859	0.0880	53.0	55.8	1	10.0-153			2.42	33
Fluorene	0.0760	ND	0.0620	0.0633	81.6	83.3	1	11.0-130			2.08	29
Indeno(1,2,3-cd)pyrene	0.0760	0.0145	0.0627	0.0731	63.4	77.1	1	10.0-137			15.3	32
Naphthalene	0.0760	0.0545	0.0884	0.0944	44.6	52.5	1	10.0-135			6.56	27
Phenanthrene	0.0760	0.137	0.160	0.145	30.3	10.5	1	10.0-144			9.84	31
Pyrene	0.0760	0.0469	0.0944	0.0809	62.5	44.7	1	10.0-148			15.4	35
1-Methylnaphthalene	0.0760	0.0965	0.119	0.123	29.6	34.9	1	10.0-142			3.31	28
2-Methylnaphthalene	0.0760	0.121	0.143	0.138	28.9	22.4	1	10.0-137			3.56	28
2-Chloronaphthalene	0.0760	ND	0.0497	0.0601	65.4	79.1	1	29.0-120			18.9	24
(S) Nitrobenzene-d5					*114*	*128*		*14.0-149*				
(S) 2-Fluorobiphenyl					*81.2*	*84.2*		*34.0-125*				
(S) p-Terphenyl-d14					*98.9*	*104*		*23.0-120*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company/Address:
GeoEngineers- Portland, OR

4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego. OR 97035

Billing Information:
Accounts Payable (Marlee Johnston)
17425 NE Union Hill Rd, Suite 250
Redmond, WA 98052

Pres Chk

Report to: **Cris Watkins**

Email To: **cwatkins@geoengineers.com**

Project Description:

City/State Collected: Seeton, WA

Please Circle: PT MT CT ET

Phone: **503-603-6661**

Client Project # **0180-393-00**

Lab Project # **GEOENGPOR-018039300**

Collected by (print): Dexter Chan

Site/Facility ID #

P.O. #

Collected by (Signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day X 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX no silica 8ozClr-NoPres	NWTPHDX w/ silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	PAHs 8270ESIM 8ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	H2O			Remarks	Sample # (lab only)
GEL-1-9-10		SS	9-10	10/25/21	1120	3							X				-01
GEL-1-14-15		SS	14-15		1125								X				-02
GEL-2-9-10		SS	9-10		1140								X				-03
GEL-2-14-15		SS	14-15		1145								X				-04
GEL-3-9-10		SS	9-10		1155								X				-05
GEL-3-14-15		SS	14-15		1250								X				-06
GEL-4-9-10		SS	9-10		~~1330~~ 1335								X				-07
GEL-4-14-15		SS	14-15		~~1340~~ 1350								X				-08
MW-1-9-10		SS	9-10		1225								X				-09
MW-1-14-15		SS	14-15		1230								X				-10

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

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SDG # 1423266

J226

Acctnum: GEOENGPOR
Template: T197917
Prelogin: P882161
PM: 110 - Brian Ford
PB:
Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking # 5217 3314 1922

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	10/26/21	1503			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.7 °C Bottles Received: 5	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/27/21 Time: 930	Hold: Condition: NCF / OK

Company Name/Address:
GeoEngineers- Portland, OR

4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego, OR 97035

Billing Information:
Accounts Payable (Marlee Johnston)
17425 NE Union Hill Rd, Suite 250
Redmond, WA 98052

Pres Chk

Report to: **Cris Watkins**

Email To: **cwatkins@geoengineers.com**

Project Description:

City/State Collected: Seattle, WA

Please Circle: PT MT CT ET

Phone: **503-603-6661**

Client Project # **0180-393-00**

Lab Project # **GEOENGPOR-018039300**

Collected by (print): Dexter Chen

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day X 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX no silica 8ozClr-NoPres	NWTPHDX w/ silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	PAHs 8270ESIM 8ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	HOLD			Remarks	Sample # (lab only)
MW-2-9-10		SS	9-10	10/25/21	1400	3							X				-11
MW-2-14-15		SS	14-15	10/25/21	1405								X				-12
GEI-4-2-3		SS	2-3	10/26/21	1000								X				-13
MW-1-2-3		SS	2-3		1020								X				-14
GEI-5-7-8		SS	7-8		1040								X				-15
GEI-5-15-16		SS	15-16		1045								X				-16
MW-3-2-3		SS	2-3		1100								X				-17
MW-3-7-8		SS	7-8		1105								X				-18
MW-3-14-15		SS	14-15		1110								X				-19
GEI-6-7-8		SS	7-8		1205								X				-20

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

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SDG # 423268

Table #

Acctnum: **GEOENGPOR**

Template: **T197917**

Prelogin: **P882161**

PM: **110 - Brian Ford**

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # "

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	10/26/21	1520			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.3R °C Bottles Received: 1.7+0=W 63	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/27/21 Time: 930	Hold: / Condition: NCF / OK

Company/Address:
GeoEngineers- Portland, OR

4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego, OR 97035

Billing Information:
Accounts Payable (Marlee Johnston)
17425 NE Union Hill Rd, Suite 250
Redmond, WA 98052

Pres Chk

Report to: **Cris Watkins**

Email To: **cwatkins@geoengineers.com**

Project Description:

City/State Collected: Seatac, WA

Please Circle: PT MT CT ET

Phone: **503-603-6661**

Client Project # **0180-393-00**

Lab Project # **GEOENGPOR-018039300**

Collected by (print): Dexter Chan

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX no silica 8ozClr-NoPres	NWTPHDX w/ silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	PAHs 8270ESIM 8ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	HSL				Remarks	Sample # (lab only)
GEI-6-14-15		SS	14-15	10/26/21	1210	3							X					-21

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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SDG # 1423266

Table #

Acctnum: **GEOENGPOR**

Template: **T197917**

Prelogin: **P882161**

PM: **110 - Brian Ford**

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date: 10/26/21	Time: 1500	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.7 °C Bottles Received: 5 63
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/27/21 Time: 930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Brian Ford

From: Cris J. Watkins <cwatkins@geoengineers.com>
Sent: Thursday, October 28, 2021 5:54 PM
To: Brian Ford
Cc: Phil D. Welker
Subject: RE: updated analysis request FW: L1423266 Proj 0180-393-00 Hold Samples Received

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Also – please update the project name to WSDOT-A-1 Towing. Thanks,

Cris J. Watkins
Senior Environmental Scientist | GeoEngineers, Inc.
Telephone: 503.603.6687
Mobile: 971.235.6147

From: Cris J. Watkins
Sent: Thursday, October 28, 2021 3:53 PM
To: Brian Ford <Brian.Ford@pacelabs.com>
Cc: Phil D. Welker <pwelker@geoengineers.com>
Subject: updated analysis request FW: L1423266 Proj 0180-393-00 Hold Samples Received

Hey Brian,

Can you run the following samples on a 5-day TAT:

GEI-1-9-10
GEI-2-9-10
GEI-3-9-10
GEI-4-2-3
GEI-5-7-8
GEI-6-7-8
MW-1-2-3
MW-2-9-10
MW-3-2-3

We will run Dx-no silica, Gx, PAHs, RCRA 8 and VOCs.

Thanks,

Cris J. Watkins
Senior Environmental Scientist | GeoEngineers, Inc.
Telephone: 503.603.6687
Mobile: 971.235.6147

From: Brian Ford <Brian.Ford@pacelabs.com>
Sent: Thursday, October 28, 2021 8:22 AM
To: Cris J. Watkins <cwatkins@geoengineers.com>
Subject: L1423266 Proj 0180-393-00 Hold Samples Received

[EXTERNAL]

Thanks,

Brian Ford
Project Manager 2 / Pace National
12065 Lebanon Road | Mt. Juliet, TN 37122
Office: 615.773.9772
brian.ford@pacelabs.com

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Please consider the environment before printing this email

Confidentiality: This message is confidential and intended solely for use of the individual or entity to whom it is addressed. If you are not the person for whom this message is intended, please delete it and notify me immediately, and please do not copy or send this message to anyone else.

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.

Read These Provisions Closely

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 "Report Limitations and Guidelines for Use" apply to your project or site.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for the exclusive use of the WSDOT, their authorized agents and regulatory agencies. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental site assessment or remedial action 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 project site. No one except WSDOT should rely on this plan without first conferring with GeoEngineers. This report should not be applied for any purpose or project except the one originally contemplated.

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

This report applies to the King County Tax Parcel 3223049048 project located in Des Moines, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not 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 important project changes were made.

If important changes are made after the date of this remedial action plan, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

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[1] Developed based on material provided by Geoprofessional Business Association (GBA), Professional Firms Practicing in the GeoSciences, www.geoprofesional.org.

Reliance Conditions for Third Parties

No third party may rely on the product of our services unless GeoEngineers agrees in advance, and in writing to such reliance. 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.

Environmental Regulations Are Always Evolving

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, 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 substance, change or if more stringent environmental standards are developed in the future.

Subsurface Conditions Can Change

This report is based on conditions that existed at the time our site studies were performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Always contact GeoEngineers before applying this report to determine if it is still applicable.

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 sites or for other on-site uses of the affected media (soil and/or groundwater). Note that hazardous substances may be present in some of the 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 Site or reuse of the affected media on Site to evaluate the potential for associated environmental liabilities. We cannot be responsible for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject site to another location or its reuse on site in instances that we were not aware of or could not control.

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.

If the Client desires these specialized services, they should be obtained from a consultant who offers services in this specialized field.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproduction is acceptable, but recognize that separating logs from the report can elevate risk.

Geotechnical, Geologic and Environmental Reports Should Not Be Interchanged

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from the sampling locations at the site documented in past reports. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. There is always a potential that areas of contamination exist in portions of the site that were not sampled or tested during this or previous studies. Our remedial action plan, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

GeoEngineers

Phase II Environmental Site Assessment, Soil Sampling Report
State Route (SR) 509
Foreman Property 18451 12th Avenue South

Prepared for

Washington State Department of Transportation
SR 509 Project Office

Prepared by

Headquarters Hazardous Materials and Solid Waste Program
Environmental Services Office

Washington State Department of Transportation

January 24, 2019

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Acronyms and Abbreviations

ASTM E 1903-11	American Society for Testing and Materials Standard Practice for Environmental Site Assessments: Phase II Environmental Assessment Process, Designation: E 1903-11
bgs	Below ground surface
CUL	Cleanup Level
Ecology	Washington State Department of Ecology
ESA	Environmental Site Assessment
ESO	Environmental Services Office
HazMat Program	Hazardous Materials and Solid Waste Program
HQ	Headquarters
MTCA	Model Toxics Control Act
NFA	No Further Action
NWR	Northwest Region
RCRA	Resource Conservation and Recovery Act
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

1.0 INTRODUCTION

The Washington State Department of Transportation (WSDOT) Headquarters (HQ) Hazardous Materials and Solid Waste (HazMat) Program prepared this Phase II Environmental Site Assessment (ESA) Report to provide a summary of information associated with soil investigation and excavation activities within existing unconstructed WSDOT right-of-way (ROW) at 18451 12th Avenue South in Des Moines, WA (Site) (See Appendix 1).. The Site is associated with the WSDOT 509 Project Office in support of the future construction of the State Route (SR) 509 Roadway Project.

The Phase II ESA soil sampling activities assesses soil conditions within the property and confirms the presence or absence of contaminated soil after cleanup activities. A contractor, Marine Vacuum Incorporated (Marine Vac.) remediated two areas of confirmed and suspected contaminated materials.

HazMat conducted this Phase II ESA in general accordance with the American Society for Testing and Materials Standard Practice for Environmental Site Assessments (ASTM): Phase II Environmental Site Assessment Process, Designation: E 1903-11 (ASTM 1903-1) and the WSDOT Environmental Manual (EM) 31-11, Chapter 447.

1.1 SITE INFORMATION

The following sections provide information pertaining to the background, physical, geological and hydrogeological setting of the site.

1.1.1 Physical Setting and Historical Background

WSDOT purchased this Site as part of the future SR 509 Project, and leased the property to tenants since 2000. The Site is located near the intersection of Des Moines Memorial Drive and South 188 Street and the intersection of SR 509 and South 188 Street. The previous tenant, Mr. Foreman, conducted welding activities on this property from 2000 through 2016. In the summer of 2016, WSDOT allowed the Washington State Patrol (WSP) to use a portion of the property to dismantle seized vehicles. Currently, A-1 Towing leases the property as a towing yard, which includes parking vehicles throughout the site and repairing the vehicles within the garage structure.

1.2.1 Geologic and Hydrogeologic Setting

Based upon review available information near the Site vicinity, soils from surface to six feet (ft.) below ground surface (bgs) are defined as poorly graded sand, medium dense, olive gray, moist and homogenous. Soils from six to 10 ft. are defined as poorly graded sand, medium dense, olive gray, moist, and homogeneous. Soils from 10 to 15 ft. are defined as silty sand, dense, grayish brown, moist, and homogenous.

Groundwater depth varied across the Site; although, it was encountered as shallow as three ft. bgs in select locations.

2.0 BACKGROUND INFORMATION

The following provides a chronological order of the relevant events that led up to the cleanup of contaminated soils on the Site. The background describes two separate sample events prior to the contaminated soil remedial activities and confirmation sampling.

In October 2016, WSDOT Northwest Region (NWR) Real Estate Services (RES) requested the WSDOT NWR Hazardous Materials Specialist to perform a limited Phase II Environmental Site Assessment (ESA) after MR. Foreman's lease terminated. WSDOT NWR sampled four locations (A, B, C, & D) (See Appendix 1) of suspected contaminated soil identified on the property. NWR HazMat identified two relatively large heavily stained areas, numerous small stains located on the north end of the site, and abandoned solid waste debris and trash scattered throughout. WSDOT collected a total of four representative samples (SS1 in Area A, SS2 in Area B, SS3 in Area C, and SS4 in Area D). WSDOT collected samples in areas where large stains were evident (A and C), numerous small stains (D), unusual odors (A-D), and solid wastes like trash and debris were abandoned (B and D). The soil samples were analyzed using the following methods:

- Northwest Total Petroleum Hydrocarbons - Method NWTPH – Benzene, Toluene, Ethylbenzene, and Xylene (BTEX))
- Diesel and Heavy Oil - Method NWTPH (Dx)
- SVOCs - EPA Method 8270
- RCRA 8 Metals - EPA Method 6010

Analytical results of one the four soil samples indicated that that lube range petroleum hydrocarbons were detected at a concentration greater than current Model Toxics Control Act (MTCA) Method A cleanup level (CUL) of 2,000 milligrams per kilograms (SS-3 31,000 mg/kg). WSDOT considered this asphalt. The analytical results of another sample indicated that arsenic were detected at a concentration greater the current MTCA Method A CUL of 20 milligrams per kilograms (SS-2 35 mg/kg). The remaining analytes sampled were either non-detect or below MTCA Method A cleanup levels. Based upon the sample results, field remediation of contaminated soils was needed in area B (SS-2) and C (SS-3).

In April 2017, WSDOT contracted Marine Vacuum Incorporated (Marine Vac.) to cleanup areas on the Site with trash, debris, and soils with notable detectable analytes below MTCA Method A CULs.

In January 2018 A-1 Towing, the lessee, graded and displaced Site soils. Some soils were contaminated. The soils were displaced from previously sampled areas A and B. There also was a new stockpile located just north of area D.

On March 15, 2018, WSDOT Headquarters (HQ) HazMat Program collected four soil samples (SS1a, SS2a, SS3a, and SS4a) on the Site in areas previously defined as A, B, and in a new location. The HazMat Program collected a sample if there was an indication of grading with known or suspected soil contamination, or where displaced/graded soils appeared to be consolidated into a stock pile generated by the lessee. Areas C and D did not have these indicators and did not warrant additional sampling. The stock pile location is just north of area D and was estimated to contain approximately 25 cubic yards of material.

The analytical results from the March 2018 investigative sampling, individual chemical constituents detected in each soil sample were analyzed using:

- NWTPH-Gx,
- NWTPH-Dx,
- Volatiles EPA Method 8260C,
- Semi-Volatiles Method 8270D,
- Total metals EPA Method 6010D.

No sample results were above MTCA Method A cleanup standards.

3.0 FIELD INVESTIGATION

On September 21, 2018, HQ HazMat collected two soil confirmation samples (Fcl1 and Fcl2) using a pre-cleaned stainless steel spoon. HQ HazMat decontaminated the stainless steel spoon with a phosphate free cleaner (Alconox) and rinsed it with distilled water between the confirmation sample locations. HQ HazMat collected the two confirmation samples in areas remediated where:

- Soils were previously identified in concentrations that exceeded MTCA Method A cleanup levels (CULs) for lube oil; and
- Numerous stains were located throughout the area.

The Fcl1 confirmation sample was collected at the bottom from the center of where the crushed asphalt was removed.

The depth of the excavation trench for the 2nd confirmation sample could not safely be accessed. Therefore, the Fcl2 confirmation sample was collected from soil excavated with a backhoe bucket taken from the center of the bottom of the excavation.

4.0 ANALYTICAL SAMPLING RESULTS

The analytical data was reviewed and deemed acceptable. The individual chemical constituents in each soil sample was evaluated against the MTCA Method A cleanup levels for unrestricted land use. The sample results were below MTCA Method A cleanup levels. All chemical results from each of the soil sample events are presented in its entirety in Appendix 3. All of the soil samples were delivered to OnSite Environmental Incorporated located in Redmond, WA.

The analytical results from the September 2018 confirmation samples, individual constituents detected in each soil sample was evaluated against:

- NWTPH-Dx
- Semi-Volatiles EPA Method 8260C
- MTCA Metals

The laboratory analytical results from the two confirmation samples were either non-detect or at concentrations below MTCA Method A CULs.

5.0 FIELD ACTIVITIES

On September 20 and 21, 2018, Marine Vac. conducted excavation activities to address lube oil concentrations exceeding MTCA Method A CULs. Additionally, Marine Vac. excavated an area to remediate suspected contaminated materials (See Appendix 1 areas C and D). During site cleanup activities, excavated soils were segregated based on field screening results. Soils included in the direct haul to Marine Vac. for disposal as contaminated included soils based up sight, olfactory indicators, and/or had Photoionization Indication Detector (PID) levels above 10 ppm. The non-suspect soils were placed off to the side in a designated area lined and covered with 6 mil polyethylene sheeting. On September 24, 2018, Marine Vac. filled and graded the excavation areas with the existing non-suspect soils.

A total of about 8.4 cubic yards of suspected and/or confirmed contaminated material was excavated and transported for disposal by Marine Vac. Waste disposal receipts are located in Appendix 4.

No groundwater was encountered during cleanup activities.

6.0 SUMMARY AND CONCLUSIONS

WSDOT completed soil investigation and excavation activities within the Site. WSDOT investigated the soils on the Site at the end of an existing long term lease and also after the new lessee displaced and graded soils. Confirmed and suspect contamination existed on the site. Approximately 8.4 cubic yards of confirmed and suspected contaminated soil was disposed. Based on the laboratory analytical results from the confirmation sample locations, it was determined that no contamination remains on the property.

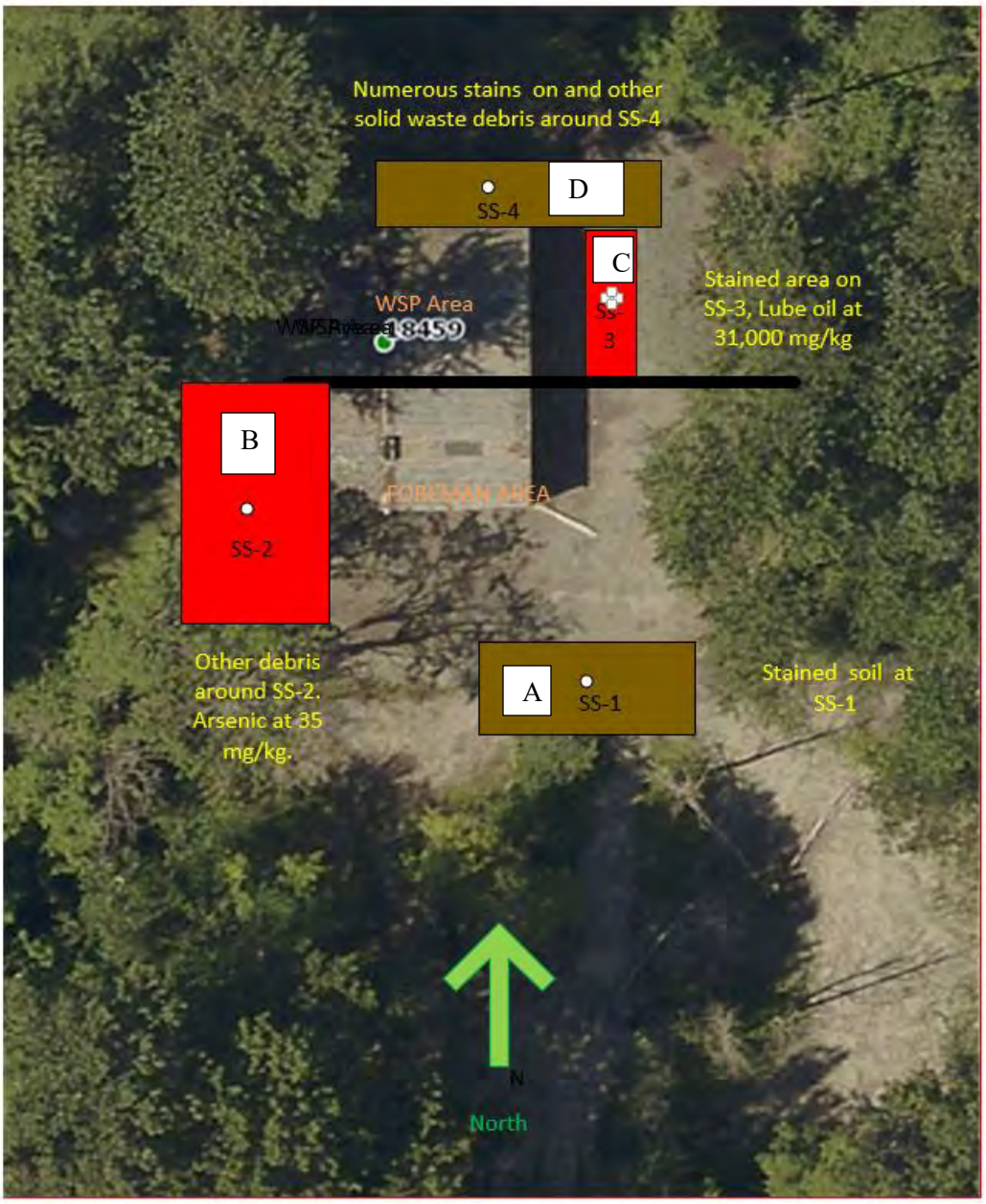
Based on the cleanup activities and the laboratory analytical results, it appears that the subsequent environmental investigation removed the confirmed or suspected contamination; therefore, with no immediate threat to human health or the environment no additional environmental investigation appears warranted at this time. WSDOT recommends Washington State Department of Ecology to accept this Site as a No Further Action.

APPENDIX 1 – VICINITY MAP and SAMPLE POINTS & BACKGROUND

VICINITY MAP WITH SAMPLE POINTS



BACKGROUND AREA



◯ Sample locations

APPENDIX 2 SUMMARY TABLES

BACKGROUND CONDITION

Sample Collected (10/2016)	Gasoline mg/kg	Diesel mg/kg	Lube Oil mg/kg	Benzene mg/kg	Chromium mg/kg	Arsenic mg/kg
SS 1	ND	ND	1900	ND	48	ND
SS 2	ND	ND	220	0.022 (0.03)	46	**35**
SS 3	ND	ND	**31,000**	ND	22	ND
SS 4 *MTCA Method A Cleanup levels mg/kg*	ND *30 mg/kg with Benzene 100 mg/kg without Benzene*	ND *2000 mg/kg*	60 *2000 mg/kg*	ND *0.03*	42 *100 mg/kg(replaced by values for III (2000) and VI (19))*	ND *20 mg/kg*

MARCH 2018 INVESTIGATION

Sample Collected (10/2016)	Gasoline mg/kg	Diesel mg/kg	Lube Oil mg/kg	Benzene mg/kg	Chromium mg/kg	Arsenic mg/kg
SS 1	ND	ND	82	ND	41	ND
SS 2	ND	58	370	ND	52	ND
SS 3 (STOCKPILE)	ND	ND	470	ND	47	ND
SS 4 (STOCKPILE)	ND	ND	260	ND	60	ND
MTCA Method A Cleanup levels mg/kg	*30 mg/kg with Benzene 100 mg/kg without Benzene*	*2000 mg/kg*	*2000 mg/kg*	*0.03 mg/kg*	*100 mg/kg(replaced by values for III (2000) and VI (19))*	*5 mg/kg*

CONFIRMATION SAMPLE

Sample Collected 8/21/2018	Lube Oil
FC1-1 (Baseline ss3)	590
FC1-2 (Baseline ss4)	ND
MTCA Method A cleanup level mg/kg	*2000 mg/kg*

APPENDIX 3 LABORATORY REPORTS

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

November 8, 2016

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project SR 509 - 12th Street
Laboratory Reference No. 1610-295

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on October 26, 2016.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

Case Narrative

Samples were collected on October 25, 2016 and received by the laboratory on October 26, 2016. 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.

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.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Semivolatiles EPA 8270D/SIM Analysis

Sample SS 4 had one surrogate recovery out of control limits. This was due to a large co-eluting non-target analyte peak, tentatively identified as 2-butoxy ethanol by spectral library search.

The Spike Blank/Spike Blank Duplicate had one recovery slightly above control limits, due to a small upward bias in the instruments' calibration and the sample was non-detect for this analyte. No further action was taken.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	10-31-16	
Toluene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
Ethyl Benzene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
m,p-Xylene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
o-Xylene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
Gasoline	**ND**	5.1	NWTPH-Gx	10-28-16	10-31-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*63-124*				
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
Benzene	**0.022**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	9.4	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*63-124*				
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	4.8	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*63-124*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	5.5	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*63-124*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1028S1					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	10-28-16	
Toluene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
Ethyl Benzene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
m,p-Xylene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
o-Xylene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
Gasoline	**ND**	5.0	NWTPH-Gx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*63-124*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-293-16										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*100*	*95*	*63-124*			
SPIKE BLANKS											
Laboratory ID:	SB1028S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.929**	**0.914**	1.00	1.00		**93**	**91**	70-124	2	12	
Toluene	**0.935**	**0.927**	1.00	1.00		**94**	**93**	73-119	1	12	
Ethyl Benzene	**0.953**	**0.942**	1.00	1.00		**95**	**94**	74-117	1	12	
m,p-Xylene	**0.905**	**0.907**	1.00	1.00		**91**	**91**	75-117	0	13	
o-Xylene	**0.943**	**0.932**	1.00	1.00		**94**	**93**	75-116	1	12	
Surrogate:											
Fluorobenzene						*95*	*91*	*63-124*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
Diesel Range Organics	**ND**	550	NWTPH-Dx	10-28-16	10-28-16	U1
Lube Oil	**1900**	56	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
Diesel Range Organics	**ND**	46	NWTPH-Dx	10-28-16	10-28-16	U1
Lube Oil Range Organics	**220**	70	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
Diesel Range Organics	**ND**	6000	NWTPH-Dx	10-28-16	10-31-16	U1
Lube Oil	**31000**	1100	NWTPH-Dx	10-28-16	10-31-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*---*	*50-150*				S
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
Diesel Range Organics	**ND**	30	NWTPH-Dx	10-28-16	10-28-16	
Lube Oil Range Organics	**60**	59	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1028S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	10-28-16	10-28-16	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-295-01									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	U1
Lube Oil	**1670**	**1670**	NA	NA		NA	NA	0	NA	
Surrogate:										
o-Terphenyl						*84* *100*	*50-150*			

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
n-Nitrosodimethylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.37	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**0.0099**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Fluorene	**0.0088**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**0.014**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**0.011**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.37	EPA 8270D	11-2-16	11-3-16	
Pyrene	**0.018**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**0.053**	0.037	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Chrysene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
bis(2-Ethylhexyl)phthalate	**0.26**	0.037	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*51*	*18 - 109*				
Phenol-d6	*63*	*25 - 111*				
Nitrobenzene-d5	*64*	*22 - 113*				
2-Fluorobiphenyl	*82*	*30 - 114*				
2,4,6-Tribromophenol	*88*	*22 - 116*				
Terphenyl-d14	*78*	*33 - 114*				

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Samples Submitted: October 26, 2016
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Project: SR 509 - 12th Street

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.46	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**0.30**	0.23	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**0.044**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**0.026**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**0.014**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Fluorene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**0.012**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**0.0098**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.46	EPA 8270D	11-2-16	11-3-16	
Pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Chrysene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
bis(2-Ethylhexyl)phthalate	**0.059**	0.046	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*28*	*18 - 109*				
Phenol-d6	*29*	*25 - 111*				
Nitrobenzene-d5	*49*	*22 - 113*				
2-Fluorobiphenyl	*57*	*30 - 114*				
2,4,6-Tribromophenol	*51*	*22 - 116*				
Terphenyl-d14	*57*	*33 - 114*				

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
n-Nitrosodimethylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Pyridine	**ND**	1.8	EPA 8270D	11-2-16	11-4-16	
Phenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Aniline	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroethyl)ether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Chlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,3-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,4-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Benzyl alcohol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
1,2-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Methylphenol (o-Cresol)	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroisopropyl)ether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
n-Nitroso-di-n-propylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Hexachloroethane	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Nitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Isophorone	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Nitrophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dimethylphenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroethoxy)methane	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2,4-Trichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Naphthalene	**0.011**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Hexachlorobutadiene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Chloro-3-methylphenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Methylnaphthalene	**0.042**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**0.030**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4,6-Trichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3-Dichloroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4,5-Trichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Chloronaphthalene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,4-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Dimethylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,3-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,6-Dinitrotoluene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Acenaphthylene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
3-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
2,4-Dinitrophenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Acenaphthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
4-Nitrophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dinitrotoluene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Dibenzofuran	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Diethylphthalate	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
4-Chlorophenyl-phenylether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Fluorene	**0.15**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
4,6-Dinitro-2-methylphenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
n-Nitrosodiphenylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2-Diphenylhydrazine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Bromophenyl-phenylether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Hexachlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Pentachlorophenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Phenanthrene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Anthracene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Carbazole	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Di-n-butylphthalate	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Fluoranthene	**0.18**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzidine	**ND**	1.8	EPA 8270D	11-2-16	11-4-16	
Pyrene	**0.30**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
3,3'-Dichlorobenzidine	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Benzo[a]anthracene	**0.21**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Chrysene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Benzo[b]fluoranthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo(j,k)fluoranthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[a]pyrene	**0.12**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Indeno[1,2,3-cd]pyrene	**0.078**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Dibenz[a,h]anthracene	**ND**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[g,h,i]perylene	**0.15**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*53*	*18 - 109*				
Phenol-d6	*62*	*25 - 111*				
Nitrobenzene-d5	*67*	*22 - 113*				
2-Fluorobiphenyl	*68*	*30 - 114*				
2,4,6-Tribromophenol	*76*	*22 - 116*				
Terphenyl-d14	*38*	*33 - 114*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
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Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Pyridine	**ND**	0.40	EPA 8270D	11-2-16	11-7-16	
Phenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Aniline	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Chlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Benzyl alcohol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Hexachloroethane	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Nitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Isophorone	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Nitrophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Naphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4-Chloroaniline	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Dimethylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Acenaphthylene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
3-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Acenaphthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4-Nitrophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Dibenzofuran	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Diethylphthalate	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Fluorene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Pentachlorophenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Phenanthrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Carbazole	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzidine	**ND**	0.40	EPA 8270D	11-2-16	11-7-16	
Pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Butylbenzylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis-2-Ethylhexyladipate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Benzo[a]anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Chrysene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Di-n-octylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo(j,k)fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo[g,h,i]perylene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*1.6*	*18 - 109*				Q
Phenol-d6	*75*	*25 - 111*				
Nitrobenzene-d5	*78*	*22 - 113*				
2-Fluorobiphenyl	*83*	*30 - 114*				
2,4,6-Tribromophenol	*92*	*22 - 116*				
Terphenyl-d14	*85*	*33 - 114*				

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Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.33	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	

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Samples Submitted: October 26, 2016
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Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.33	EPA 8270D	11-2-16	11-3-16	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*69*	*18 - 109*				
Phenol-d6	*70*	*25 - 111*				
Nitrobenzene-d5	*72*	*22 - 113*				
2-Fluorobiphenyl	*74*	*30 - 114*				
2,4,6-Tribromophenol	*76*	*22 - 116*				
Terphenyl-d14	*81*	*33 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1102S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.07**	**1.02**	1.33	1.33	80	77	37 - 107	5	39	
2-Chlorophenol	**1.08**	**1.01**	1.33	1.33	81	76	36 - 107	7	40	
1,4-Dichlorobenzene	**0.503**	**0.485**	0.667	0.667	75	73	28 - 108	4	41	
n-Nitroso-di-n-propylamine	**0.488**	**0.465**	0.667	0.667	73	70	28 - 113	5	33	
1,2,4-Trichlorobenzene	**0.505**	**0.489**	0.667	0.667	76	73	33 - 106	3	38	
4-Chloro-3-methylphenol	**1.15**	**1.11**	1.33	1.33	86	83	52 - 106	4	30	
Acenaphthene	**0.525**	**0.510**	0.667	0.667	79	76	52 - 90	3	30	
4-Nitrophenol	**1.44**	**1.48**	1.33	1.33	108	111	30 - 109	3	32	I
2,4-Dinitrotoluene	**0.576**	**0.569**	0.667	0.667	86	85	50 - 101	1	32	
Pentachlorophenol	**0.981**	**0.855**	1.33	1.33	74	64	21 - 114	14	40	
Pyrene	**0.590**	**0.592**	0.667	0.667	88	89	52 - 104	0	30	
Surrogate:										
2-Fluorophenol					*79*	*75*	*18 - 109*			
Phenol-d6					*84*	*78*	*25 - 111*			
Nitrobenzene-d5					*81*	*76*	*22 - 113*			
2-Fluorobiphenyl					*87*	*80*	*30 - 114*			
2,4,6-Tribromophenol					*90*	*94*	*22 - 116*			
Terphenyl-d14					*95*	*92*	*33 - 114*			

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-295-01					
Client ID:	**Soil Sample 1**					
Arsenic	**ND**	11	6010C	10-27-16	10-27-16	
Barium	**79**	2.8	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.56	6010C	10-27-16	10-27-16	
Chromium	**48**	0.56	6010C	10-27-16	10-27-16	
Lead	**6.2**	5.6	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.28	7471B	10-27-16	10-27-16	
Selenium	**ND**	11	6010C	10-27-16	10-27-16	
Silver	**ND**	1.1	6010C	10-27-16	10-27-16	
Lab ID:	10-295-02					
Client ID:	**Soil Sample 2**					
Arsenic	**35**	14	6010C	10-27-16	10-27-16	
Barium	**170**	3.5	6010C	10-27-16	10-27-16	
Cadmium	**0.77**	0.70	6010C	10-27-16	10-27-16	
Chromium	**45**	0.70	6010C	10-27-16	10-27-16	
Lead	**37**	7.0	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.35	7471B	10-27-16	10-27-16	
Selenium	**ND**	14	6010C	10-27-16	10-27-16	
Silver	**ND**	1.4	6010C	10-27-16	10-27-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-295-03					
Client ID:	**Soil Sample 3**					
Arsenic	**ND**	11	6010C	10-27-16	10-27-16	
Barium	**55**	2.8	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.55	6010C	10-27-16	10-27-16	
Chromium	**22**	0.55	6010C	10-27-16	10-27-16	
Lead	**45**	5.5	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.28	7471B	10-27-16	10-27-16	
Selenium	**ND**	11	6010C	10-27-16	10-27-16	
Silver	**ND**	1.1	6010C	10-27-16	10-27-16	
Lab ID:	10-295-04					
Client ID:	**SS 4**					
Arsenic	**ND**	12	6010C	10-27-16	10-27-16	
Barium	**73**	3.0	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.59	6010C	10-27-16	10-27-16	
Chromium	**42**	0.59	6010C	10-27-16	10-27-16	
Lead	**ND**	5.9	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.30	7471B	10-27-16	10-27-16	
Selenium	**ND**	12	6010C	10-27-16	10-27-16	
Silver	**ND**	1.2	6010C	10-27-16	10-27-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-27-16
Date Analyzed:	10-27-16
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1027SM1,MB1027SM2&MB1027S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-289-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**47.1**	**46.5**	1	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**50.1**	**48.5**	3	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-289-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**92.3**	92	**91.8**	92	0	
Barium	100	**148**	101	**142**	95	4	
Cadmium	50.0	**48.7**	97	**48.3**	97	1	
Chromium	100	**135**	85	**137**	86	1	
Lead	250	**265**	106	**250**	100	6	
Mercury	0.500	**0.535**	107	**0.542**	108	1	
Selenium	100	**92.3**	92	**91.9**	92	0	
Silver	25.0	**20.8**	83	**21.0**	84	1	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

% MOISTURE

Date Analyzed: 10-27-16

Client ID	Lab ID	% Moisture
Soil Sample 1	10-295-01	11
Soil Sample 2	10-295-02	28
Soil Sample 3	10-295-03	10
SS 4	10-295-04	16

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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-napthalene) 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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

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Chain of Custody

Page (of)

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

Company: WSDOT
Project Number:
Project Name: SR509 - 12th St
Project Manager: PAT SVOBODA
Sampled by: WSDOT

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: 10-295

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Volatiles 8270D/SIM (with low-level PAHs) SVOCs	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A						% Moisture
1	Soil Sample 1	10/25/16	3:10	SOIL	3		X		X			X						X				NO					X
2	Soil Sample 2	10/25/16	3:20																			DO					X
3	Soil Sample 3	10/25/16	3:30																			83					X
4	SS 4	10/25/16	3:45																								X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	Patti Sloan	WSDOT	10/26/2016	8:15A	
Received	Diane Wyatt	SPEEDY	10-26-16	8:15A	
Relinquished	Diane Wyatt	SPEEDY	10-26-16	11:10A	
Received		0082	10/26/16	1110	
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

March 27, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project SR509 Foreman Property
Laboratory Reference No. 1803-152

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on March 16, 2018.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

Case Narrative

Samples were collected on March 15, 2018 and received by the laboratory on March 16, 2018. 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.

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.

Semivolatiles EPA 8270D/SIM Analysis

The spike blank duplicate had one recovery slightly above control limits. The samples were non-detect for this analyte, further action was taken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Gasoline	**ND**	7.3	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*66-130*				
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Gasoline	**ND**	12	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*66-130*				
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Gasoline	**ND**	5.4	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*66-130*				
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Gasoline	**ND**	10	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*66-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Gx
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Gasoline	**ND**	5.0	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*66-130*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-145-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*95*	*97*	*66-130*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Diesel Range Organics	**ND**	35	NWTPH-Dx	3-19-18	3-19-18	
Lube Oil Range Organics	**82**	71	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Diesel Range Organics	**58**	34	NWTPH-Dx	3-19-18	3-19-18	N
Lube Oil Range Organics	**370**	68	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Diesel Range Organics	**ND**	60	NWTPH-Dx	3-19-18	3-20-18	
Lube Oil	**470**	120	NWTPH-Dx	3-19-18	3-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Diesel Range Organics	**ND**	33	NWTPH-Dx	3-19-18	3-19-18	U1
Lube Oil	**260**	61	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*79*	*50-150*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	3-19-18	3-19-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-145-01										
	ORIG	DUP									
Diesel Range Organics	**64.2**	**42.0**	NA	NA		NA		NA	42	NA	
Lube Oil Range Organics	**188**	**137**	NA	NA		NA		NA	31	NA	
Surrogate:											
o-Terphenyl						*88*	*81*	*50-150*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Acetone	0.023	0.0054	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0022	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*120*	*75-131*				
Toluene-d8	*119*	*83-130*				
4-Bromofluorobenzene	*115*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Acetone	0.0075	0.0063	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0025	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*75-131*				
Toluene-d8	*104*	*83-130*				
4-Bromofluorobenzene	*100*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0022	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*123*	*75-131*				
Toluene-d8	*119*	*83-130*				
4-Bromofluorobenzene	*115*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0032	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*119*	*75-131*				
Toluene-d8	*121*	*83-130*				
4-Bromofluorobenzene	*118*	*78-130*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0319S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0319S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0020	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*75-131*				
Toluene-d8	*102*	*83-130*				
4-Bromofluorobenzene	*103*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0319S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0518**	**0.0521**	0.0500	0.0500	104	104	58-126	1	20	
Benzene	**0.0538**	**0.0549**	0.0500	0.0500	108	110	72-122	2	19	
Trichloroethene	**0.0503**	**0.0497**	0.0500	0.0500	101	99	75-120	1	20	
Toluene	**0.0506**	**0.0503**	0.0500	0.0500	101	101	78-123	1	19	
Chlorobenzene	**0.0453**	**0.0456**	0.0500	0.0500	91	91	75-120	1	18	
Surrogate:										
Dibromofluoromethane					*109*	*103*	*75-131*			
Toluene-d8					*109*	*99*	*83-130*			
4-Bromofluorobenzene					*105*	*99*	*78-130*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
n-Nitrosodimethylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.47	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
2,4-Dinitrophenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.47	EPA 8270D	3-21-18	3-22-18	
Pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*68*	*18 - 113*				
Phenol-d6	*71*	*19 - 119*				
Nitrobenzene-d5	*71*	*19 - 119*				
2-Fluorobiphenyl	*78*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*74*	*30 - 116*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.46	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**2.9**	1.1	EPA 8270D	3-21-18	3-23-18	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**0.016**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**0.014**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.028**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.46	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.023**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.022**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.028**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**0.012**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**0.012**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**0.020**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*61*	*18 - 113*				
Phenol-d6	*67*	*19 - 119*				
Nitrobenzene-d5	*67*	*19 - 119*				
2-Fluorobiphenyl	*77*	*33 - 109*				
2,4,6-Tribromophenol	*79*	*19 - 121*				
Terphenyl-d14	*76*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**0.12**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.013**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.012**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**0.51**	0.20	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.0092**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**0.25**	0.20	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.011**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**0.014**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*55*	*18 - 113*				
Phenol-d6	*68*	*19 - 119*				
Nitrobenzene-d5	*61*	*19 - 119*				
2-Fluorobiphenyl	*76*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*77*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**0.0097**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.012**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.013**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.0084**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.011**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*63*	*18 - 113*				
Phenol-d6	*67*	*19 - 119*				
Nitrobenzene-d5	*68*	*19 - 119*				
2-Fluorobiphenyl	*75*	*33 - 109*				
2,4,6-Tribromophenol	*74*	*19 - 121*				
Terphenyl-d14	*71*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0321S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Pyridine	**ND**	0.33	EPA 8270D	3-21-18	3-21-18	
Phenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Aniline	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Chlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Benzyl alcohol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Hexachloroethane	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Nitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Isophorone	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Nitrophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4-Chloroaniline	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Dimethylphthalate	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
3-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0321S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4-Nitrophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Dibenzofuran	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Diethylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Pentachlorophenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Carbazole	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzidine	**ND**	0.33	EPA 8270D	3-21-18	3-21-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*85*	*18 - 113*				
Phenol-d6	*86*	*19 - 119*				
Nitrobenzene-d5	*85*	*19 - 119*				
2-Fluorobiphenyl	*89*	*33 - 109*				
2,4,6-Tribromophenol	*85*	*19 - 121*				
Terphenyl-d14	*81*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0321S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.11**	**1.15**	1.33	1.33	83	86	39 - 109	4	36	
2-Chlorophenol	**1.18**	**1.28**	1.33	1.33	89	96	42 - 105	8	35	
1,4-Dichlorobenzene	**0.561**	**0.613**	0.667	0.667	84	92	31 - 103	9	37	
n-Nitroso-di-n-propylamine	**0.598**	**0.615**	0.667	0.667	90	92	36 - 104	3	34	
1,2,4-Trichlorobenzene	**0.601**	**0.618**	0.667	0.667	90	93	32 - 104	3	38	
4-Chloro-3-methylphenol	**1.17**	**1.21**	1.33	1.33	88	91	48 - 107	3	31	
Acenaphthene	**0.554**	**0.597**	0.667	0.667	83	90	38 - 102	7	33	
4-Nitrophenol	**1.21**	**1.23**	1.33	1.33	91	92	27 - 121	2	35	
2,4-Dinitrotoluene	**0.551**	**0.582**	0.667	0.667	83	87	36 - 103	5	34	
Pentachlorophenol	**1.43**	**1.53**	1.33	1.33	108	115	21 - 114	7	37	I
Pyrene	**0.585**	**0.619**	0.667	0.667	88	93	46 - 108	6	31	
Surrogate:										
2-Fluorophenol					*86*	*90*	*18 - 113*			
Phenol-d6					*87*	*90*	*19 - 119*			
Nitrobenzene-d5					*84*	*87*	*19 - 119*			
2-Fluorobiphenyl					*85*	*86*	*33 - 109*			
2,4,6-Tribromophenol					*90*	*92*	*19 - 121*			
Terphenyl-d14					*83*	*86*	*30 - 116*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-152-01					
Client ID:	**SS1 N A'**					
Arsenic	**ND**	14	6010D	3-21-18	3-21-18	
Barium	**84**	3.5	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.71	6010D	3-21-18	3-21-18	
Chromium	**41**	0.71	6010D	3-21-18	3-21-18	
Lead	**ND**	7.1	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.35	7471B	3-19-18	3-19-18	
Selenium	**ND**	14	6010D	3-21-18	3-21-18	
Silver	**ND**	1.4	6010D	3-21-18	3-21-18	
Lab ID:	03-152-02					
Client ID:	**SS2**					
Arsenic	**ND**	14	6010D	3-21-18	3-21-18	
Barium	**110**	3.4	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.68	6010D	3-21-18	3-21-18	
Chromium	**52**	0.68	6010D	3-21-18	3-21-18	
Lead	**53**	6.8	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.34	7471B	3-19-18	3-19-18	
Selenium	**ND**	14	6010D	3-21-18	3-21-18	
Silver	**ND**	1.4	6010D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-152-03					
Client ID:	**SS3**					
Arsenic	**ND**	12	6010D	3-21-18	3-21-18	
Barium	**61**	3.0	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.60	6010D	3-21-18	3-21-18	
Chromium	**47**	0.60	6010D	3-21-18	3-21-18	
Lead	**27**	6.0	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.30	7471B	3-19-18	3-19-18	
Selenium	**ND**	12	6010D	3-21-18	3-21-18	
Silver	**ND**	1.2	6010D	3-21-18	3-21-18	
Lab ID:	03-152-04					
Client ID:	**SS4**					
Arsenic	**ND**	12	6010D	3-21-18	3-21-18	
Barium	**160**	3.0	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.61	6010D	3-21-18	3-21-18	
Chromium	**60**	0.61	6010D	3-21-18	3-21-18	
Lead	**23**	6.1	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.30	7471B	3-19-18	3-19-18	
Selenium	**ND**	12	6010D	3-21-18	3-21-18	
Silver	**ND**	1.2	6010D	3-21-18	3-21-18	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0321SM1

Analyte	Method	Result	PQL
Arsenic	6010D	**ND**	10
Barium	6010D	**ND**	2.5
Cadmium	6010D	**ND**	0.50
Chromium	6010D	**ND**	0.50
Lead	6010D	**ND**	5.0
Selenium	6010D	**ND**	10
Silver	6010D	**ND**	1.0

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-19-18
Date Analyzed:	3-19-18
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0319S1

Analyte	Method	Result	PQL
Mercury	7471B	**ND**	0.25

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
DUPLICATE QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**83.0**	**68.1**	20	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**30.1**	**36.9**	20	0.50	
Lead	**57.3**	**49.0**	16	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 3-19-18
Date Analyzed: 3-19-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.25	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
MS/MSD QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**95.4**	95	**90.7**	91	5	
Barium	100	**175**	92	**181**	98	4	
Cadmium	50.0	**46.4**	93	**45.9**	92	1	
Chromium	100	**123**	93	**122**	92	1	
Lead	250	**291**	93	**290**	93	0	
Selenium	100	**97.3**	97	**94.8**	95	3	
Silver	25.0	**19.3**	77	**18.8**	75	3	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 3-19-18
Date Analyzed: 3-19-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.510**	102	**0.490**	98	4	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

% MOISTURE

Date Analyzed: 3-19-18

Client ID	Lab ID	% Moisture
SS1 N A'	03-152-01	29
SS2	03-152-02	27
SS3	03-152-03	16
SS4	03-152-04	18

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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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

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Chain of Custody

Page 1 of 1

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

Company: WSDOT
Project Number:
Project Name: SR509 Foreman Property
Project Manager: PATRICK SVOBODA
Sampled by:

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: 03-152

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	SS1 NA	3/15/18	12:30	S	5
2	SS2	3/15/18	1:00		
3	SS3	3/15/18	2:00		
4	SS4	3/15/18	2:15		

Lab ID	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	✓	✓	✓	✓	✓		✓	✓					✓	✓				✓
2	✓	✓	✓		✓		✓	✓					✓	✓				✓
3	✓	✓	✓		✓		✓	✓					✓	✓				✓
4	✓	✓	✓		✓		✓	✓					✓	✓				✓

	Signature	Company	Date	Time
Relinquished	Patrick Svoboda	WSDOT	3/16/18	8:30
Received	Eileen Clark	Alpha	3/16/18	8:30
Relinquished	Eileen Clark	Alpha	3/16/18	11:23
Received			3/16/18	11:23
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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

September 24, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project Foreman
Laboratory Reference No. 1809-229

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on September 21, 2018.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

Case Narrative

Samples were collected on September 20 and 21, 2018 and received by the laboratory on September 21, 2018. 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.

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.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

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

September 24, 2018

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15700 Dayton Avenue North
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Project Manager

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Laboratory Reference: 1809-229
Project: Foreman

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

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:	**FC1-1**					
Laboratory ID:	09-229-01					
Diesel Range Organics	**ND**	41	NWTPH-Dx	9-21-18	9-21-18	U1
Lube Oil	**590**	57	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
Diesel Range Organics	**ND**	27	NWTPH-Dx	9-21-18	9-21-18	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*81*	*50-150*				

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

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:	MB0921S3					
Diesel Range Organics	**ND**	25	NWTPH-Dx	9-21-18	9-21-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-217-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range Organics	**178**	**164**	NA	NA		NA		NA	8	NA	
Surrogate:											
o-Terphenyl						*82*	*80*	*50-150*			

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
n-Nitrosodimethylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	3.8	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
2,4-Dinitrophenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	3.8	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*38*	*19 - 103*				
Phenol-d6	*48*	*30 - 103*				
Nitrobenzene-d5	*44*	*27 - 105*				
2-Fluorobiphenyl	*56*	*36 - 102*				
2,4,6-Tribromophenol	*55*	*33 - 110*				
Terphenyl-d14	*64*	*38 - 108*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	0.36	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	0.36	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*41*	*19 - 103*				
Phenol-d6	*47*	*30 - 103*				
Nitrobenzene-d5	*43*	*27 - 105*				
2-Fluorobiphenyl	*52*	*36 - 102*				
2,4,6-Tribromophenol	*78*	*33 - 110*				
Terphenyl-d14	*79*	*38 - 108*				

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0921S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	0.33	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0921S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	0.33	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*42*	*19 - 103*				
Phenol-d6	*47*	*30 - 103*				
Nitrobenzene-d5	*43*	*27 - 105*				
2-Fluorobiphenyl	*50*	*36 - 102*				
2,4,6-Tribromophenol	*70*	*33 - 110*				
Terphenyl-d14	*69*	*38 - 108*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0921S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**0.782**	**0.896**	1.33	1.33	59	67	45 - 94	14	29	
2-Chlorophenol	**0.770**	**0.879**	1.33	1.33	58	66	46 - 94	13	33	
1,4-Dichlorobenzene	**0.360**	**0.429**	0.667	0.667	54	64	42 - 91	17	37	
n-Nitroso-di-n-propylamine	**0.382**	**0.479**	0.667	0.667	57	72	45 - 100	23	26	
1,2,4-Trichlorobenzene	**0.396**	**0.454**	0.667	0.667	59	68	45 - 100	14	32	
4-Chloro-3-methylphenol	**0.950**	**1.01**	1.33	1.33	71	76	55 - 97	6	21	
Acenaphthene	**0.444**	**0.497**	0.667	0.667	67	75	48 - 91	11	21	
4-Nitrophenol	**1.04**	**1.11**	1.33	1.33	78	83	53 - 102	7	20	
2,4-Dinitrotoluene	**0.496**	**0.524**	0.667	0.667	74	79	47 - 96	5	19	
Pentachlorophenol	**1.32**	**1.35**	1.33	1.33	99	102	35 - 125	2	26	
Pyrene	**0.540**	**0.545**	0.667	0.667	81	82	55 - 110	1	17	
Surrogate:										
2-Fluorophenol					*48*	*55*	*19 - 103*			
Phenol-d6					*55*	*61*	*30 - 103*			
Nitrobenzene-d5					*51*	*57*	*27 - 105*			
2-Fluorobiphenyl					*56*	*64*	*36 - 102*			
2,4,6-Tribromophenol					*76*	*74*	*33 - 110*			
Terphenyl-d14					*71*	*71*	*38 - 108*			

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
Arsenic	**ND**	11	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.57	EPA 6010D	9-21-18	9-21-18	
Chromium	**64**	0.57	EPA 6010D	9-21-18	9-21-18	
Lead	**27**	5.7	EPA 6010D	9-21-18	9-21-18	
Mercury	**ND**	0.28	EPA 7471B	9-21-18	9-21-18	
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
Arsenic	**ND**	11	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.54	EPA 6010D	9-21-18	9-21-18	
Chromium	**11**	0.54	EPA 6010D	9-21-18	9-21-18	
Lead	**ND**	5.4	EPA 6010D	9-21-18	9-21-18	
Mercury	**ND**	0.27	EPA 7471B	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

TOTAL METALS
EPA 6010D/7471B
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0921SM2					
Arsenic	**ND**	10	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.50	EPA 6010D	9-21-18	9-21-18	
Chromium	**ND**	0.50	EPA 6010D	9-21-18	9-21-18	
Lead	**ND**	5.0	EPA 6010D	9-21-18	9-21-18	
Laboratory ID:	MB0921S1					
Mercury	**ND**	0.25	EPA 7471B	9-21-18	9-21-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-138-01										
	ORIG	DUP									
Arsenic	**14.6**	**14.8**	NA	NA		NA		NA	2	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**43.8**	**50.1**	NA	NA		NA		NA	13	20	
Lead	**52.9**	**55.3**	NA	NA		NA		NA	5	20	
Laboratory ID:	09-213-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	09-138-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**106**	**105**	100	100	14.6	**92**	**91**	75-125	1	20	
Cadmium	**48.0**	**47.1**	50.0	50.0	ND	**96**	**94**	75-125	2	20	
Chromium	**145**	**147**	100	100	43.8	**101**	**103**	75-125	1	20	
Lead	**296**	**287**	250	250	52.9	**97**	**94**	75-125	3	20	
Laboratory ID:	09-213-01										
Mercury	**0.566**	**0.586**	0.500	0.500	0.0548	**102**	**106**	80-120	3	20	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

% MOISTURE

Date Analyzed: 9-21-18

Client ID	Lab ID	% Moisture
FC1-1	09-229-01	12
FC1-2	09-229-02	8

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

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

Company: WSDOT
Project Number:
Project Name: Foreman
Project Manager: PAT SVOBODA
Sampled by: WSDOT

Turnaround Request (in working days)

(Check One) 24 hour

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

Laboratory Number: 09-229

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	FC1-1	9/20	14:15	S	6				✓			✓						✓			X
2	FC1-2	9/21	11:00	S	6				✓			✓						✓			X

	Signature	Company	Date	Time
Relinquished	[signature]	WSDOT	9/21/18	11:10
Received	[signature]	ALPHA	9-21-18	11:10
Relinquished	[signature]	ALPHA	9-21-18	12:39
Received	[signature]	ONE	9/21/18	1239
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Call when you receive these.

Chromatograms with final report ☐

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

APPENDIX 4 DISPOSAL TICKETS

PetroCard™
MORE THAN JUST FUEL.

1st + CW 1st Load 401187

Phone (206) 621.9777 **Certified Weight Ticket**

Company _____ **Charge** ____ **Cash** X

Truck # _____ **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** _____

16:53:47 20 Sep 2018

Weigh fee: 10.00
3215 4TH AVE S

Axle 1:	3240 lb
Axle 2:	5620 lb
Axle 3:	5660 lb
Total:	14520 lb

PetroCard™
MORE THAN JUST FUEL.

2nd. Load

401252

Phone (206) 621.9777 **Certified Weight Ticket**

Company X MARINE VACUME SERVICE **Charge** X **Cash** ____

Truck # X _____ **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** X R.B. ALLEN

08:44:47 22 Sep 2018

Weigh fee: 10.00
3215 4TH AVE S

Axle 1: 10680 lb
Axle 2: 7540 lb
Total: 18220 lb

V152

PetroCard™
MORE THAN JUST FUEL.

Light Weight 52

401254

Phone (206) 621.9777 **Certified Weight Ticket**

Company MARINE VACUUM SERVICE **Charge** ____ **Cash** ✓

Truck # X **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** X R B ALLEN

10:13:36 22 Sep 2018

Weigh fee: 10.00 $10.00

3215 4TH AVE S

Axle 1: 3620 lb
Axle 2: 7640 lb
Total: 11260 lb

W

PetroCard™
MORE THAN JUST FUEL.

Light Weight

401254

Phone (206) 621.9777 **Certified Weight Ticket**

Company MARINE VACUUM SERVICE **Charge** ____ **Cash** X

Truck # X **Account #** ____

Trailer # ____ **Card #** ____

Weighmaster ____ **Signature** X R B ALLEN

10:13:36 22 Sep 2018

Weigh fee: 10.00 $10.00

3215 4TH AVE S

Axle 1:	3620 lb
Axle 2:	7640 lb
Total:	11260 lb

WELCOME TO
KITIMAT SEATTLE GULL
TP53888936-001 KITIMAT SEATTLE GULL
3215 4TH AVE S
SEATTLE WA 98134

Descr.	qty	amount
SCALES	1	1.00
Sub Total		1.00
Tax		0.00
TOTAL		1.00
CASH $		1.00

THANKS, COME AGAIN
PLEASE COME AGAIN
206-621-9777
REG# 003 CSH# 009 DR# 01 TRAN# 38855
09/22/18 10:04:24 ST# 20

SEATTLE RECYCLE AND
DISPOSAL STATION

R E C E I P T

Bill Acct:CASH**
CASH CUSTOMERS

SITE:STS South Transfer Static
DATE:09/22/18 TICKET#:41071208
TIME IN:14:19 ID IN:MCA
TIME OUT:14:34 ID OUT:RJO
TURNAROUND TIME: 15
TRUCK:
ROUTE:Z-Not Specified

	LBS	TONS
GROSS:	16160	8.13
TARE:	15240	7.67
NET:	920	0.46

MATERIAL:	QTY	AMT
Package	920	$66.70

TIP FEE:	66.70
SPEC FEE:	0.00
TOTAL FEE:	**$66.70**
TENDERED:	66.70
CHANGE:	0.00

Payment Info:
5 - Credit Car $66.70

SIGNATURE: _____
NOTE:

WELCOME TO
KITIMAT SEATTLE GULL
TP53888936-001 KITIMAT SEATTLE GULL
3215 4TH AVE S
SEATTLE WA 98134

Descr.	qty	amount
< DUPLICATE RECEIPT >		
<CUSTOMER COPY>		
SCALES	1	10.00
Sub Total		10.00
Tax		0.00
TOTAL		10.00
CREDIT $		10.00

CARD TYPE: VISA
ACCT NUMBER: XXXX XXXX XXXX 1811
TRANS TYPE: SALE
APPROVAL: 012223 INVOICE: 036301
AMOUNT: $ 10.00

APPROVED 012223
****

THANKS, COME AGAIN
PLEASE COME AGAIN
206-621-9777
REG# 0003 CSH# 009 DR# 01 TRAN# 38807
09/22/18 08:30:26 ST# 20

APPENDIX 5 PHOTOS



SS-1 during investigation



SS-2 during investigation



SS-3 during investigation



SS-4 during investigation





SS-4 During investigation



General trash and debris scattered around the property



Grading and soil displacement on property



Soil displacement near SS-1



Soil displacement near SS-2



SS-2 Sample near soil displacement



SS3 of stockpile



SS4 of stockpile



Cleanup of SS-3 Area and confirmation sample area



Part of Cleanup of SS-4 area and confirmation sample taken from this area



Backfill of front area



Backfill of side area

Appendix C

SAP and 2024 Remedial Investigation Laboratory Reports

PBS, Petroleum Contaminated Soil Excavation Oversight and Confirmation Sampling Plan, July 2024.
PBS's 2024 Remedial Investigation – Laboratory Reports

Petroleum Contaminated Soil Excavation Oversight and Confirmation Sampling Plan

A-1 Towing Facility
King County Tax Parcel No. 3223049048
18459 Des Moines Memorial Drive South
Des Moines, Washington

Prepared for:
Atkinson Construction
23410 30th Avenue South
Kent, WA 98032

July 2024
PBS Project 40757.028

PBS
AN APEX COMPANY
214 E GALER STREET, SUITE 300
SEATTLE, WA 98102
206.233.9639 MAIN
866.727.0140 FAX
PBSUSA.COM

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3.2 Soil Excavation 4
3.3 Soil Stockpile and Loading 4
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Supporting Data

FIGURES

Figure 1. Site Plan - Remedial Excavation and Confirmation Soil Sample Locations

APPENDICES

Appendix A: GeoEngineers, Phase II Environmental Site Assessment, November 2022.
WSDOT Headquarters Hazardous Materials and Solid Waste Program, Phase II Environmental Site Assessment, Soil Sampling Report, January 2019.
WSDOT A-1 Towing Site Figure, SR 509/24th Avenue South to South 188th Street – New Expressway Project

Appendix B: Soil and Groundwater Management Plan

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1 PURPOSE

This Petroleum Contaminated Soil (PCS) Excavation Oversight and Confirmation Sampling and Analysis Plan (SAP) follows several subsurface investigations and subsequent remedial actions (Attachment A) at the A-1 Towing facility, located at 18459 Des Moines Memorial Drive South, Des Moines, Washington (the Site). PBS Engineering and Environmental LLC (PBS) notes that, in addition to the historical remedial actions at this Site, the Washington State Department of Transportation (WSDOT) has indicated that, after the demolition of the existing structures and before the start of construction for State Route (SR) 509, the top 18 inches of soil across the northern, northeastern, and southwestern portions of the Site, where petroleum-impacted soil was previously identified and remediated will be further over-excavated, removed, assessed, and disposed of appropriately. Additionally, confirmation soil samples will be collected across the Site to further assess shallow soil conditions. Following the removal of any suspect impacted soil, clean fill soil will be imported to backfill the excavated area if necessary.

The objective of the activities described in this plan is to remove all potentially impacted soil until conditions are verified to be in accordance with the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) and its implementing regulations defined in Revised Code of Washington (RCW) Chapter 70.105D and Washington Administrative Code (WAC) Chapter 173-340.

2 BACKGROUND

PBS understands that the Site is located on the west side of the King County Tax Parcel 3223049048, beyond WSDOT's Right of Way (ROW), and is part of the expansion of SR-509 (Figure 1). The Site has been owned by WSDOT since at least 2000 but was leased to several private parties over time. Reportedly, a tenant conducted industrial activities, including welding, at this Site between 2000 and 2016, and the Washington State Patrol (WSP) used a portion of the Site to dismantle seized vehicles in 2016. Additionally, A-1 Towing leased the Site as a towing yard, which included the storage of vehicles throughout the Site and the repair of vehicles within an existing garage structure (former shop).

The following bullets summarize the historical subsurface investigations and remedial actions at this Site. Detailed documentation of these investigations, remedial actions, and soil sampling findings are provided in GeoEngineers' 2022 Phase II Environmental Site Assessment, available in Attachment A.

- In 2016 WSDOT conducted a Phase II Subsurface Investigation following the lease termination of the former welding tenant (Mr. Foreman, 2000 through 2016). The WSDOT Phase II investigation included soil sampling of areas with observed suspect petroleum impacted soil (areas identified as Area A, B, C and D). Analytical results indicated the elevated concentrations of lube oil and arsenic exceeding the MTCA Cleanup Levels (CULs) in Area B and C, respectively.

- In 2017, WSDOT contracted Marine Vacuum Incorporated to remediate areas of the Site with trash, debris and some soils with concentrations below MTCA Method A CULs. GeoEngineers noted that "It is unclear from this statement as to what soils were actually removed and no additional details were provided."

- In 2018, A-1 Towing graded Site soils, including some contaminated ones. These soils were displaced from previously sampled areas A and B, resulting in a new stockpile just north of Area D.

- In March 2018, WSDOT collected four additional soil samples from Areas A, B, and a new location to assess potential grading with known or suspected soil contamination, or where displaced/graded soils

seemed to have been consolidated into a stockpile by the lessee. Because Areas C and D lacked these indicators, no additional sampling was conducted there. The sample results did not exceed the MTCA Method A CULs.

- In September 2018, WSDOT contracted Marine Vacuum Performed to conduct excavation activities to remediate areas that previously detected lube oil concentrations exceeding the MTCA Method A CULs and an area to remediate suspected contaminated materials in Area C and D. During remedial activities by soil excavation soils were field screened using visual observation, olfactory and a photoionization detector (PID) device. Subsequently, WSDOT collected two additional confirmation soil samples in locations where the soils were excavated. Laboratory analytical results were either non-detect or detected at concentrations below MTCA Method A CULs. Reportedly, clean soil was used to backfill the excavated area.

- According to a Phase II Environmental Site Assessment conducted in 2019, approximately 8.4 cubic yards of petroleum-impacted and suspected contaminated soil were removed from the Site. The analytical results from follow-up confirmation samples indicated that no contamination remained on the Site. Subsequently, WSDOT requested a No Further Action (NFA) determination from the State of Washington Department of Ecology.

- Ecology responded to the request for a NFA determination, indicating that additional information would be necessary. This includes the depth of samples, groundwater samples (if encountered), and more accurate sample location information, as the previous report had conflicting depictions.

- In 2021, GeoEngineers conducted additional sampling at three areas (B, C, and D) around the existing structure on the A-1 Towing site to further evaluate potential contaminants related to past Site uses. The analytical results did not identify concentrations of gasoline (Gx), diesel and oil (Dx), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), or the eight Resource Conservation and Recovery Act (RCRA) metals exceeding the MTCA Method A CULs. Out of the nine soil samples analyzed, only two showed low concentrations of diesel, oil, and/or PAHs, which were below CULs. Groundwater was not encountered at the maximum depth explored, which was 15 to 20 feet below ground surface (bgs).

It is PBS' understanding that after the demolition of the existing structures and as part of the future development of SR 509, WSDOT plans to excavate, remove, assess, and dispose of the top 18 inches of soil across the northern, northeastern, and southwestern portions of the Site, where contaminated soil was previously identified, to ensure the removal of any suspected and potentially remaining petroleum-impacted soil. Additionally, confirmation soil samples will be collected across the entire Site to further assess shallow soil conditions. Following the removal of any suspect impacted soil, clean fill dirt will be imported to backfill the excavated area if necessary.

3 PETROLEUM CONTAMINATED SOIL EXCAVATION AND SAMPLING ACTIVITIES

Based on past soil cleanup efforts and confirmation soil sampling, PBS has determined that additional excavation and sampling are required to completely remove any remaining petroleum-contaminated soil. Specifically, PBS will provide sampling support during excavation of the top 18 inches of soil from the northern, northeastern, and southwestern sides of a former shop (exterior) of the site. This soil will then be transported offsite for disposal, ensuring thorough remediation of the area.

PBS notes that, based on field observations and stockpile sampling results, the excavated soil may be re-used onsite if it meets Ecology's Chapter 173-350 WAC Solid Waste Handling Standards. See Section 3.1 for further discussions regarding the criteria for re-using soil onsite.

Experienced PBS personnel will conduct oversight and sampling activities for the PCS excavation, supervised by a licensed geologist or professional engineer.

A site-specific health and safety plan will be prepared and reviewed with field personnel prior to beginning work and will be maintained on site during field operations.

Before commencing the PCS excavation, Atkinson is responsible for ensuring that the site is secured with high-visibility (hi-vis) barriers to prevent potential contact by the public (including employees) with equipment or contaminated material. On-site personnel and traffic control measures will further minimize public exposure to equipment or contaminants during working hours. Open excavations will be secured outside of working hours until backfill activities are complete.

3.1 Segregation of Overburden Soil for Waste Profiling

To enhance efficiency and manage the costs associated with PCS disposal, PBS recommends dividing the Site into two sections: a northern section and a southern section. During the excavation of PCS in the northern section, it is advised to segregate clean and contaminated soil into two distinct stockpiles. Soil suspected of PCS contamination should be placed in a designated holding area that has been previously established for this purpose. The soils accumulated in these stockpiles will then be sampled to determine the appropriate disposal characterization.

Given the nature of A1-Towing activities and use of this facility as an equipment storage yard, it is possible that portions of the overburden soil across the Site is not contaminated due to undeveloped/over vegetated areas that were not utilized historically for equipment storage purposes. In the event that both of the following conditions are met, portions of the overburden soil may be segregated and stored on site for use as backfill material:

- Field observations indicate the potential for portions of the overburden soil to meet criteria for reuse on site as established in the Soil and Groundwater Management Plan (SGMP) (Appendix B), and
- Adequate space exists on site for the temporary stockpiling of overburden soil pending sampling, sample analysis and possible use as backfill.

Should potentially clean overburden soil be segregated and stockpiled on site, waste samples will be collected of the stockpiled soil as established in the SGMP (Appendix B). Stockpile soil samples, if collected, will be analyzed for the following:

- Total Petroleum Hydrocarbon as gasoline (TPH-G) by Method NWTPH-Gx;
- TPH as diesel and heavy oil (TPH-D and TPH-HO) by Method NWTPH-Dx;
- Benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA Method 8021B or 5021A; and
- Total Lead.

Analytical results of stockpile samples will be used to determine the suitability of the soil for reuse as backfill material as established in the SGMP (Appendix B). Should segregated material be deemed unsuitable for reuse as backfill, it will be disposed of offsite as established in Sections 3.0 and 5.0 of the SGMP.

3.2 Soil Excavation

During excavation, soils will be monitored for visual and olfactory evidence of contamination, including changes in color, texture, and odor. Additionally, field instruments such as a Photoionization Detector (PID) can be used to qualitatively assess the presence of volatile organic compounds (VOCs) and indicate contamination.

Soil excavation will be conducted by Atkinson's subcontractor using a track-mounted excavator. The soil excavation is conducted in 6-inch intervals by stripping the surface. Upon completing the planned excavation (see Figure 1) to the proposed depth of up to 18 inches, confirmation soil sampling will be conducted if there are no field indications such as soil staining, petroleum odor, or elevated PID readings.

If soil sampling confirms that no contaminants of concern remain within the excavation area, it will be backfilled with clean material to a depth that will be at Atkinson's discretion to reach project design goals. For the remediation of PCS that extends deeper than 18 inches, Atkinson should coordinate with WSDOT to facilitate additional excavation, assessment, and disposal of the PCS that falls outside of their initial scope of work.

3.3 Soil Stockpile and Loading

Excavated soil may be temporarily stockpiled onsite and staged for load and haul out. The stockpiled soil will be located adjacent to the excavation areas, with specific site logistics controlled by Atkinson. Atkinson will manage contaminated soil stockpiles in accordance with the procedures established in the PBS' 2024 SGMP, Section 5.4 (Appendix B).

General requirements for the temporary stockpile include:

a. Preventing intermixing of stockpiled materials with underlying soils or materials from other sources, or with other contaminants.
b. Preventing influx of rainwater.
c. Preventing erosion of stockpiled materials.
d. Applying stormwater BMPs as appropriate for stockpile construction and maintenance.
e. Maintaining daily inventory of stockpile areas and providing information to the Project Engineer, as requested.
f. Implementing appropriate site security measures such as signage and fences to alleviate hazards to the public.

3.4 Performance Soil Sampling and Analysis Plan

Performance monitoring for impacted soil excavation will involve confirmation soil sampling. Upon completing the remedial actions (to the proposed depth of up to 18 inches), confirmation soil samples will be collected on a 15-foot by 15-foot grid pattern within the northern/northeastern sides of the former shop. Following the successful completion of remediation in the northern/northeastern section, similar efforts will proceed in the southwestern side of the former shop. Based on the analytical results of these samples, the two segregated soil stockpiles will be removed and transported to appropriate landfills. Furthermore, these results will determine whether additional excavation is necessary.

Additionally, discrete confirmation soil samples will be collected across the entire Site on a 15-foot by 15-foot grid pattern (see Figure 1). Samples will be collected from a depth of 9-inches below ground surface (bgs) and 18-inches bgs. Samples collected from 18-inches bgs will be placed on hold with the project laboratory

pending the results from shallow samples. Based on the discrete confirmation soil sampling results, further remedial excavation may be warranted to confirm compliance with regulatory cleanup criteria.

The sampling method and procedures are presented below.

3.4.1 Sample Locations

After completing the excavation to the total depth (18 inches), soil samples will be collected from the sidewalls and base of the excavation following PCS removal for laboratory analysis. PBS will collect samples from the base and sidewalls of the excavation at prescribed intervals (approximately every 15 feet) to confirm compliance with regulatory cleanup criteria. The proposed excavation areas and associated confirmation sampling grid are illustrated in Figure 1.

Additionally, across the entire site, at least two confirmation soil samples will be collected from each discrete sample location at depths of 9 inches bgs and 18 inches bgs. Samples collected from 18 inches bgs will be placed on hold with the project laboratory pending the results from the shallow samples. The proposed confirmation sampling grid is illustrated in Figure 1.

3.4.2 Sample Methods

Soil sampling will adhere to the procedures outlined in Section 5.5 of the PBS's 2024 SGMP (Appendix B). Whenever feasible, disposable sampling equipment will be utilized, directly depositing samples into laboratory-provided containers. The sampler will use new disposable gloves for the collection of each sample. If non-disposable sampling equipment is employed, decontamination will occur as follows: equipment will be scrubbed using a laboratory-grade detergent (such as Alconox®), followed by rinses in tap water and distilled water. After decontamination, the equipment will be allowed to dry before collecting subsequent samples. Samples will then be collected directly into laboratory-provided containers and stored in a cooler on ice, with chain-of-custody documentation, for transport to the analytical laboratory.

Confirmation soil samples will be submitted for the following analyses:

- TPH-G by Method NWTPH-Gx;
- TPH-D and TPH-HO by Method NWTPH-Dx;
- RCRA 8 Metals by EPA Method 6010D/7471B

Each soil sample should be labeled using a Unique Sample ID.

- *Location (Sample boring #)_Depth_Time_Date*

3.4.3 Waste Profiling and Disposal

Waste soil generated from remedial actions will be profiled for offsite disposal using analytical data from previous soil sampling activities, as well as proposed sampling activities. The waste soil is expected to be characterized as non-dangerous solid waste for disposal at a Subtitle D Landfill. Material may be temporarily staged on site in stockpiles pending transport to the disposal facility, following stockpiling procedures established and described in Section 6.1 of the SGMP (PBS, 2024).

Contaminated groundwater is not anticipated to be generated during this remedial excavation.

A waste profile and weight tickets documenting receipt and tonnage of PCS from the disposal facility will be included in the follow up Remedial Action Report (if any). Weight/volume tickets will be tallied, and total tonnage/volume of exported waste will be reported.

4 SCHEDULE AND REPORTING

The analytical results from samples collected will be reviewed by the Environmental Consultant and compared to action levels provided in the Ecology MTCA regulations (WAC 173-340).

The laboratory analysis results will typically be available approximately 7 days after sample collection, unless Atkinson requests a 24-hour rush analysis. PBS will await these results and compile all data into a memo summarizing the results, laboratory report chain of custody documentation, sample location plan(s), and conclusions. These results will be used to support regulatory reporting, decision unit characterization, and, if necessary, waste profiling for disposal. The draft report will be prepared and submitted for client review approximately 2 weeks following receipt of final laboratory analytical data.

Please feel free to contact me at 206.766.7636 or nasrin.bastami@pbsusa.com with any questions.

Prepared by: Nasrin Bastami, PBS Environmental Practice Lead

Reviewed by: Melanie Young, PE, PBS Senior Environmental Engineer

Figures



LEGEND

- SS-2 — PREVIOUS WSDOT EXPLORATIONS (2016)
- MW-1 — MONITORING WELL NUMBER AND LOCATION (GEOENGINEERS, 2022)
- GEI-1 — BORING NUMBER AND LOCATION (GEOENGINEERS, 2022)
- PROPOSED CONFIRMATION SOIL SAMPLES
- ASSESSMENT AREA (2022)
- AREA OF EXCAVATION (2024)
- GRID LINES (APPROX 20' INTERVALS)

Scale 1" = 40'

0' 20' 40' 80'

PREPARED FOR: GUY ATKINSON CONSTRUCTION

PBS Engineering and Environmental Inc.
214 East Galer Street, Ste 300
Seattle, WA 98102
206.233.9639
pbsusa.com

REMEDIAL EXCAVATION & CONFIRMATION SOIL SAMPLE LOCATIONS

SR 509 STAGE 2B - A1 TOWING

DES MOINES, WASHINGTON

PROJECT
40757.028
DATE
JUL 2024
SHEET ID
1

Full Size Sheet Format Is 11x17; If Printed Size Is Not 11x17, Then This Sheet Format Has Been Modified & Indicated Drawing Scale Is Not Accurate.

Filename: L:\Projects\40500\40757 Guy Atkinson Construction\40757.028 SR 509 24th Ave - Stage 2\DWG\40757.022_Fig_1_NEW.dwg Layout Tab: SITE PLAN - A1 TOWING FACILITY User: Katie Breyman CAD Plot Date/Time: 7/15/2024 3:56:40 PM

Appendix A

GeoEngineers, Phase II Environmental Site Assessment, November 2022

Headquarters Hazardous Materials and Solid Waste Program Environmental Services Office, Phase II Environmental Site Assessment, Soil Sampling Report, January 2019

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
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5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
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August 15, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Trierweiler :

Included are the additional results from the testing of material submitted on July 31, 2024 from the A1 Towing 40757.028, F&BI 407453 project. There are 10 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0815R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 31, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 407453 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
407453 -01	SS1-9
407453 -02	SS2-9
407453 -03	SS4-9
407453 -04	SS5-9
407453 -05	SS6-9
407453 -06	SS7-9
407453 -07	SS8-9
407453 -08	SS9-9
407453 -09	SS10-9
407453 -10	SS1-18
407453 -11	SS2-18
407453 -12	SS4-18
407453 -13	SS5-18
407453 -14	SS6-18
407453 -15	SS7-18
407453 -16	SS8-18
407453 -17	SS9-18
407453 -18	SS10-18
407453 -19	SS12-9
407453 -20	SS13-9
407453 -21	SS14-9
407453 -22	SS15-9
407453 -23	SS16-9
407453 -24	SS17-9
407453 -25	SS19-9
407453 -26	SS20-9
407453 -27	SS12-18
407453 -28	SS13-18
407453 -29	SS14-18
407453 -30	SS15-18
407453 -31	SS16-18
407453 -32	SS17-18
407453 -33	SS19-18
407453 -34	SS20-18
407453 -35	SS21-9
407453 -36	SS66-9

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
407453 -37	SS67-9
407453 -38	SS68-9
407453 -39	SS69-9
407453 -40	SS70-9
407453 -41	SS71-9
407453 -42	SS72-9
407453 -43	SS73-9
407453 -44	SS75-9
407453 -45	SS21-18
407453 -46	SS66-18
407453 -47	SS67-18
407453 -48	SS68-18
407453 -49	SS69-18
407453 -50	SS70-18
407453 -51	SS71-18
407453 -52	SS72-18
407453 -53	SS73-18
407453 -54	SS75-18
407453 -55	SS76-9
407453 -56	SS77-9
407453 -57	SS78-9
407453 -58	SS79-9
407453 -59	SS80-9
407453 -60	SS81-9
407453 -61	SS82-9
407453 -62	SS83-9
407453 -63	SS84-9
407453 -64	SS85-9
407453 -65	SS76-18
407453 -66	SS77-18
407453 -67	SS78-18
407453 -68	SS79-18
407453 -69	SS80-18
407453 -70	SS81-18
407453 -71	SS82-18
407453 -72	SS83-18
407453 -73	SS84-18
407453 -74	SS85-18
407453 -75	SS86-9
407453 -76	SS95-9

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
407453 -77	SS96-9
407453 -78	SS97-9
407453 -79	SS99-9
407453 -80	SS100-9
407453 -81	SS3-9
407453 -82	SS18-9
407453 -83	SS11-9
407453 -84	SS86-18
407453 -85	SS95-18
407453 -86	SS96-18
407453 -87	SS97-18
407453 -88	SS99-18
407453 -89	SS100-18
407453 -90	SS3-18
407453 -91	SS18-18
407453 -92	SS11-18

Samples SS77-9, SS83-9, and SS11-9 were sent to Alliance Technical Group for hexavalent chromium analysis. The report is enclosed.

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS6-18	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/07/24	Lab ID:	407453-14
Date Analyzed:	08/09/24	Data File:	407453-14.121
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	21

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS9-18	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/07/24	Lab ID:	407453-17
Date Analyzed:	08/09/24	Data File:	407453-17.122
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	31

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS15-18	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/07/24	Lab ID:	407453-30
Date Analyzed:	08/09/24	Data File:	407453-30.123
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	24

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS69-18	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/07/24	Lab ID:	407453-49
Date Analyzed:	08/09/24	Data File:	407453-49.124
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	38

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	Not Applicable	Project:	A1 Towing 40757.028
Date Extracted:	08/07/24	Lab ID:	I4-652 mb
Date Analyzed:	08/09/24	Data File:	I4-652 mb.068
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1

Date of Report: 08/15/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408120-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<5	104	100	75-125	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	95	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

07/31/24

B4/VSAS

407453

Page # 1 of 10

Report To Josh Trierweiler

Company PBS Engineering

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	As/Pb			Notes
SS1-9	01 A-C	7/29/24	0930	S	3	X	X						X				A-per NB 08/07/24 ME
SS2-9	02		0940			X	X						X				
~~SS3-9~~						X	X						X				
SS4-9	03 A,C		0955			X	X						X				
SS5-9	04		1000			X	X						X				
SS6-9	05		1005			X	X						X				
SS7-9	06		1020			X								X			
SS8-9	07		1025			X	X						X				
SS9-9	08		1035			X	X						X				
SS10-9	09		1140			X	X						X				

Samples received at 1 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/30/24	
Received by:	Josh Trierweiler	PBS	7/31/24	0845
Relinquished by:				
Received by:	Anh Phan	FBT	07/31/24	08:45

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Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

407453

SAMPLE CHAIN OF CUSTODY

07/31/24

BH/VSAS

Page # 2 of 10

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	As/Pb	As		Notes
SS1-18	10A-C	7/29/24	0930	S	3	X	X						X				HOLD
SS2-18	11		0940			X	X						X				
~~SS3-18~~						X	X						X				
SS4-18	12A-C		0955			X	X						X				
SS5-18	13		1000			X	X						X				
SS6-18	14		1005			X	X						X		A		
SS7-18	15		1020			X								X			
SS8-18	16		1025			X	X						X				
SS9-18	17		1035			X	X						X		A		
SS10-18	18		1140			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

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office@friedmanandbruya.com

407453

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 3 of 10

BH/VSAS

Report To Josh Trierweiler
Company PBS Engr
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.3604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	pb			Notes
~~SS11-9~~						X	X						X				
SS12-9	19 A-C	7/29/24	1140	S	3	X	X						X				
SS13-9	20		1145			X	X						X				
SS14-9	21		1125			X								X			
SS15-9	22		1120			X								X			
SS16-9	23		1115			X								X			
SS17-9	24		1115			X	X						X				
~~SS18-9~~						X	X						X				
SS19-9	25 A-C		1145			X	X						X				
SS20-9	26		1150			X	X						X				

Samples received at 1 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	~~7/30/24~~	
Received by:	Josh Trierweiler	PBS	7/31/24	0845
Relinquished by:				
Received by:	Anh Phan	FBI	07/31/24	08:45

Friedman & Bruya, Inc.
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office@friedmanandbruya.com

407453

SAMPLE CHAIN OF CUSTODY

07/31/24

B4/VSAB

Page # 4 of 10

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing
PO #: 40757.028
REMARKS: Project specific RLs? - Yes / No
INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA8	76/AS	As		Notes
SS12-18	27 A-C	7/29/24	1140	S	3	X	X						X				HOLD
SS13-18	28		1145			X	X						X				
SS14-18	29		1125			X								X			
SS15-18	30		1120			X								X	A		
SS16-18	31		1115			X								X			
SS17-18	32		1115			X	X						X				
SS19-18	33		1145			X	X						X				
SS20-18	34		1150			X	X						X				

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBT	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

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SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 5 of 10

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / AS			Notes
SS21-9	35 A-C	7/29/24	1150	S	3	X	X						X				
SS66-9	36		1330			X								X			
SS67-9	37		1315			X	X						X				
SS68-9	38		1320			X	X						X				
SS69-9	39		1340			X	X						X				
SS70-9	40		1350			X	X						X				
SS71-9	41		1515			X	X						X				
SS72-9	42		1520			X	X						X				
SS73-9	43		1525			X	X						X				
SS75-9	44		1530			X								X			no Gx, no RCRA8

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

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407453

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 6 of 10

84 / VSAS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As	As		Notes
SS21-18	45 A-C	7/29/24	1150	S	3	X	X						X				HOLD
SS66-18	46		1330			X								X			
SS67-18	47		1315			X	X						X				
SS68-18	48		1330			X	X						X				
SS69-18	49		1340			X	X						X		A		
SS70-18	50		1350			X	X						X				
SS71-18	51		1515			X	X						X				
SS72-18	52		1520			X	X						X				
SS73-18	53		1525			X	X						X				
SS75-18	54		1530			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

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407453

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 1 of 10

B4 / VSA5

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As	Cr VI		Notes
SS76-9	55A-C	7/29/24	1530	S	3	X	X						X				
SS77-9	56		1510			X	X						X		A		
SS78-9	57		1350			X	X						X				
SS79-9	58		1355			X	X						X				
SS80-9	59		1400			X	X						X				
SS81-9	60		1430			X	X						X				
SS82-9	61		1420			X	X						X				
SS83-9	62		1405			X	X						X		A		
SS84-9	63		1405			X								X			
SS85-9	64		1420			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

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office@friedmanandbruya.com

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 8 of 10

407453

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.776-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	8D/AS			Notes
SS76-18	65A-C	7/29/24	1530	S	3	X	X						X				HOLD
SS77-18	66		1510			X	X						X				
SS78-18	67		1350			X	X						X				
SS79-18	68		1355			X	X						X				
SS80-18	69		1400			X	X						X				
SS81-18	70		1430			X	X						X				
SS82-18	71		1420			X	X						X				
SS83-18	72		1405			X	X						X				
SS84-18	73		1405			X								X			
SS85-18	74		1420			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

407453

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 9 of 10

BY/VSATS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Cr VI			Notes
SS86-9	75 A-C	7/29/24	1430	S	3	X	X						X				
SS95-9	76		1425			X	X						X				
SS96-9	77		1420			X	X						X				
SS97-9	78		1410			X	X						X				
SS99-9	79		1425			X	X						X				
SS100-9	80		1425			X	X						X				
SS3-9	81		0950			X	X						X				
SS18-9	82		1100			X	X						X				
SS11-9	83		1050			X	X						X	A			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

407453

SAMPLE CHAIN OF CUSTODY

07/31/24

BY/VSAS

Page # 10 of 10

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.776.2604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8				Notes
SS86-18	84A-C	7/29/24	1430	S	3	X	X						X				HOLD
SS95-18	85		1425			X	X						X				
SS96-18	86		1420			X	X						X				
SS97-18	87		1410			X	X						X				
SS99-18	88		1425			X	X						X				
SS100-18	89		1425			X	X						X				
SS3-18	90		0950			X	X						X				HOLD
SS18-18	91		1100			X	X						X				HOLD
SS11-18	92		1050			X	X						X				HOLD

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 407453 CLIENT PBS INITIALS/ DATE: AP 07/31/24

If custody seals are present on cooler, are they intact? ☒ NA ☐ YES ☐ NO

Cooler/Sample temperature 1 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☒ YES ☐ NO

How did samples arrive?
☒ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☒ YES ☐ NO **Initials/ Date:** JBI AP/AWB 7/31
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 2 days

Are the samples clearly identified? (explain "no" answer below) ☒ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☒ YES ☐ NO

Were appropriate sample containers used? ☒ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☒ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☒ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☒ Yes	☐ No	☐ Not on COC/label
Date Sampled	☒ Yes	☐ No	☐ Not on COC/label
Time Sampled	☐ Yes	☒ No	not match COC on 1 voa AWB 7/31 ☐ Not on COC/label
# of Containers	☒ Yes	☐ No	
Relinquished	☒ Yes	☐ No	
Requested analysis	☒ Yes	☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☒ NA ☐ YES ☐ NO

Number of unused TO15 canisters _____ **Number of unused TO17 tubes** _____

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
5500 4th Ave S
Seattle, WA 98108

RE: 407453, E-334
Work Order Number: 2408113

August 14, 2024

Attention Michael Erdahl:

Fremont Analytical, Inc, an Alliance Technical Group company, received 3 sample(s) on 8/7/2024 for the analyses presented in the following report.

Hexavalent Chromium by EPA 7196A
Sample Moisture (Percent Moisture)

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Please note, while the appearance of our logo and branding will update, our commitment to accuracy, speed, and customer service remain values celebrated and shared by Alliance Technical Group. Thank you for the opportunity to serve you.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *08/14/2024*

CLIENT: Friedman & Bruya
Project: 407453
Work Order: 2408113

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2408113-001	SS77-9	07/29/2024 3:10 PM	08/07/2024 2:09 PM
2408113-002	SS83-9	07/29/2024 2:05 PM	08/07/2024 2:09 PM
2408113-003	SS11-9	07/29/2024 10:50 AM	08/07/2024 2:09 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2408113**

Date: **8/14/2024**

CLIENT: Friedman & Bruya
Project: 407453

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

CLIENT: Friedman & Bruya
Project: 407453

Lab ID: 2408113-001 **Collection Date:** 7/29/2024 3:10:00 PM
Client Sample ID: **SS77-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93516		Analyst: EC
Percent Moisture	3.98	0.500		wt%	1	8/8/2024 12:48:31 PM
Hexavalent Chromium by EPA 7196A				Batch ID: 44780		Analyst: NR
Chromium, Hexavalent	ND	0.516		mg/Kg-dry	1	8/12/2024 2:10:00 PM

Lab ID: 2408113-002 **Collection Date:** 7/29/2024 2:05:00 PM
Client Sample ID: **SS83-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93516		Analyst: EC
Percent Moisture	10.0	0.500		wt%	1	8/8/2024 12:48:31 PM
Hexavalent Chromium by EPA 7196A				Batch ID: 44780		Analyst: NR
Chromium, Hexavalent	ND	0.550		mg/Kg-dry	1	8/12/2024 2:14:00 PM

Lab ID: 2408113-003 **Collection Date:** 7/29/2024 10:50:00 AM
Client Sample ID: **SS11-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93516		Analyst: EC
Percent Moisture	11.8	0.500		wt%	1	8/8/2024 12:48:31 PM
Hexavalent Chromium by EPA 7196A				Batch ID: 44780		Analyst: NR
Chromium, Hexavalent	ND	0.556		mg/Kg-dry	1	8/12/2024 2:31:00 PM

Work Order: 2408113
CLIENT: Friedman & Bruya
Project: 407453

QC SUMMARY REPORT

Hexavalent Chromium by EPA 7196A

Sample ID: **MB-44780**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **8/8/2024**	RunNo: **93569**
Client ID: **MBLKS**	Batch ID: **44780**		Analysis Date: **8/12/2024**	SeqNo: **1953541**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-44780**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/8/2024**	RunNo: **93569**
Client ID: **LCSS**	Batch ID: **44780**		Analysis Date: **8/12/2024**	SeqNo: **1953542**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.8	0.500	12.87	0	83.8	65.3	105.3				

Sample ID: **2408060-001ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **8/8/2024**	RunNo: **93569**
Client ID: **BATCH**	Batch ID: **44780**		Analysis Date: **8/12/2024**	SeqNo: **1953544**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.584						0		30	

Sample ID: **2408060-001AMS1**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **8/8/2024**	RunNo: **93569**
Client ID: **BATCH**	Batch ID: **44780**		Analysis Date: **8/12/2024**	SeqNo: **1953545**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	11.2	0.587	15.12	0	74.2	32	106				

Sample ID: **2408060-001AMS2**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **8/8/2024**	RunNo: **93569**
Client ID: **BATCH**	Batch ID: **44780**		Analysis Date: **8/12/2024**	SeqNo: **1953546**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	9.91	0.589	15.16	0	65.3	32	106				

Sample Log-In Check List

Client Name:	FB	Work Order Number:	2408113
Logged by:	Morgan Wilson	Date Received:	8/7/2024 2:09:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	5.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY 2408113

Page # 1 of 1

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 5500 4th Ave S

City, State, ZIP Seattle, WA 98108

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER: Alliance Technical Group

PROJECT NAME/NO.	PO #
407453	E-334

REMARKS: EIM

TURNAROUND TIME
☒ Standard TAT
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Return samples
Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: EPH	VPH	Cr VI								Notes
SS77-9		7/29/2024	1510	soil	1			x								
SS83-9		7/29/2024	1405	soil	1			x								
SS11-9		7/29/2024	1050	soil	1			x								

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	8/7/24	1101
Received by:		Rynata Ballard	AIG	8/7	2:40pm
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

August 7, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

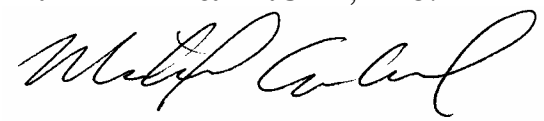
Dear Mr Trierweiler :

Included are the results from the testing of material submitted on July 31, 2024 from the A1 Towing 40757.028, F&BI 407453 project. There are 72 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0807R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 31, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 407453 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
407453 -01	SS1-9
407453 -02	SS2-9
407453 -03	SS4-9
407453 -04	SS5-9
407453 -05	SS6-9
407453 -06	SS7-9
407453 -07	SS8-9
407453 -08	SS9-9
407453 -09	SS10-9
407453 -10	SS1-18
407453 -11	SS2-18
407453 -12	SS4-18
407453 -13	SS5-18
407453 -14	SS6-18
407453 -15	SS7-18
407453 -16	SS8-18
407453 -17	SS9-18
407453 -18	SS10-18
407453 -19	SS12-9
407453 -20	SS13-9
407453 -21	SS14-9
407453 -22	SS15-9
407453 -23	SS16-9
407453 -24	SS17-9
407453 -25	SS19-9
407453 -26	SS20-9
407453 -27	SS12-18
407453 -28	SS13-18
407453 -29	SS14-18
407453 -30	SS15-18
407453 -31	SS16-18
407453 -32	SS17-18
407453 -33	SS19-18
407453 -34	SS20-18
407453 -35	SS21-9
407453 -36	SS66-9
407453 -37	SS67-9

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
407453 -38	SS68-9
407453 -39	SS69-9
407453 -40	SS70-9
407453 -41	SS71-9
407453 -42	SS72-9
407453 -43	SS73-9
407453 -44	SS75-9
407453 -45	SS21-18
407453 -46	SS66-18
407453 -47	SS67-18
407453 -48	SS68-18
407453 -49	SS69-18
407453 -50	SS70-18
407453 -51	SS71-18
407453 -52	SS72-18
407453 -53	SS73-18
407453 -54	SS75-18
407453 -55	SS76-9
407453 -56	SS77-9
407453 -57	SS78-9
407453 -58	SS79-9
407453 -59	SS80-9
407453 -60	SS81-9
407453 -61	SS82-9
407453 -62	SS83-9
407453 -63	SS84-9
407453 -64	SS85-9
407453 -65	SS76-18
407453 -66	SS77-18
407453 -67	SS78-18
407453 -68	SS79-18
407453 -69	SS80-18
407453 -70	SS81-18
407453 -71	SS82-18
407453 -72	SS83-18
407453 -73	SS84-18
407453 -74	SS85-18
407453 -75	SS86-9
407453 -76	SS95-9
407453 -77	SS96-9

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
407453 -78	SS97-9
407453 -79	SS99-9
407453 -80	SS100-9
407453 -81	SS3-9
407453 -82	SS18-9
407453 -83	SS11-9
407453 -84	SS86-18
407453 -85	SS95-18
407453 -86	SS96-18
407453 -87	SS97-18
407453 -88	SS99-18
407453 -89	SS100-18
407453 -90	SS3-18
407453 -91	SS18-18
407453 -92	SS11-18

All quality control requirements were acceptable.

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453
Date Extracted: 08/01/24
Date Analyzed: 08/01/24 and 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS1-9 407453-01	<5	94
SS2-9 407453-02	<5	93
SS4-9 407453-03	<5	78
SS5-9 407453-04	<5	81
SS6-9 407453-05	<5	97
SS8-9 407453-07	<5	86
SS9-9 407453-08	<5	88
SS10-9 407453-09	<5	83
SS12-9 407453-19	<5	95
SS13-9 407453-20	<5	84
SS17-9 407453-24	<5	92

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453
Date Extracted: 08/01/24
Date Analyzed: 08/01/24 and 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS19-9 407453-25	<5	83
SS20-9 407453-26	<5	88
SS21-9 407453-35	<5	82
SS67-9 407453-37	<5	84
SS68-9 407453-38	<5	98
SS69-9 407453-39	<5	88
SS70-9 407453-40	<5	94
SS71-9 407453-41	<5	90
SS72-9 407453-42	<5	85
SS73-9 407453-43	<5	82
SS76-9 407453-55	<5	84

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453
Date Extracted: 08/01/24
Date Analyzed: 08/01/24 and 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS77-9 407453-56	<5	83
SS78-9 407453-57	<5	80
SS79-9 407453-58	<5	84
SS80-9 407453-59	<5	84
SS81-9 407453-60	<5	83
SS82-9 407453-61	<5	80
SS83-9 407453-62	<5	88
SS85-9 407453-64	<5	81
SS86-9 407453-75	<5	86
SS95-9 407453-76	<5	94
SS96-9 407453-77	<5	96

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453
Date Extracted: 08/01/24
Date Analyzed: 08/01/24 and 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS97-9 407453-78	<5	84
SS99-9 407453-79	<5	89
SS100-9 407453-80	<5	81
SS3-9 407453-81	<5	79
SS18-9 407453-82	<5	79
SS11-9 407453-83	<5	88
Method Blank 04-1724 MB	<5	81
Method Blank 04-1725 MB	<5	96
Method Blank 04-1726 MB	<5	88

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453
Date Extracted: 07/31/24
Date Analyzed: 07/31/24 and 08/01/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS1-9 407453-01	<50	420	114
SS2-9 407453-02	<50	<250	109
SS4-9 407453-03	<50	<250	108
SS5-9 407453-04	<50	<250	107
SS6-9 407453-05	<50	<250	112
SS7-9 407453-06	<50	<250	114
SS8-9 407453-07	<50	380	109
SS9-9 407453-08	<50	<250	111
SS10-9 407453-09	<50	<250	110
SS12-9 407453-19	<50	<250	116
SS13-9 407453-20	<50	<250	109
SS14-9 407453-21	<50	<250	108

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453
Date Extracted: 07/31/24
Date Analyzed: 07/31/24 and 08/01/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS15-9 407453-22	<50	<250	118
SS16-9 407453-23	<50	390	117
SS17-9 407453-24	<50	<250	114
SS19-9 407453-25	<50	<250	113
SS20-9 407453-26	<50	<250	117
SS21-9 407453-35	<50	<250	120
SS66-9 407453-36	<50	<250	114
SS67-9 407453-37	<50	<250	114
SS68-9 407453-38	<50	<250	123
SS69-9 407453-39	<50	<250	124
SS70-9 407453-40	<50	<250	122
SS71-9 407453-41	<50	<250	119

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453
Date Extracted: 07/31/24
Date Analyzed: 07/31/24 and 08/01/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS72-9 407453-42	<50	<250	121
SS73-9 407453-43	<50	<250	122
SS75-9 407453-44	<50	<250	121
SS76-9 407453-55	<50	<250	121
SS77-9 407453-56	<50	1,100	119
SS78-9 407453-57	<50	<250	115
SS79-9 407453-58	<50	<250	122
SS80-9 407453-59	<50	<250	122
SS81-9 407453-60	<50	<250	118
SS82-9 407453-61	<50	<250	118
SS83-9 407453-62	<50	<250	114
SS84-9 407453-63	<50	<250	124

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453
Date Extracted: 07/31/24
Date Analyzed: 07/31/24 and 08/01/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS85-9 407453-64	<50	<250	124
SS86-9 407453-75	<50	<250	123
SS95-9 407453-76	<50	<250	117
SS96-9 407453-77	<50	<250	119
SS97-9 407453-78	<50	<250	123
SS99-9 407453-79	<50	<250	122
SS100-9 407453-80	<50	<250	124
SS3-9 407453-81	<50	360	124
SS18-9 407453-82	<50	<250	114

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453
Date Extracted: 07/31/24
Date Analyzed: 07/31/24 and 08/01/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS11-9 407453-83	<50	<250	124
Method Blank 04-1792 MB	<50	<250	110
Method Blank 04-1793 MB	<50	<250	107
Method Blank 04-1794 MB	<50	<250	107

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS1-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-01
Date Analyzed:	07/31/24	Data File:	407453-01.126
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.2
Barium	38
Cadmium	<1
Chromium	12
Lead	8.4
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS2-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-02
Date Analyzed:	07/31/24	Data File:	407453-02.127
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.7
Barium	75
Cadmium	<1
Chromium	23
Lead	44
Mercury	2.0
Selenium	<1
Silver	1.9

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS4-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-03
Date Analyzed:	07/31/24	Data File:	407453-03.128
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	12
Barium	78
Cadmium	<1
Chromium	18
Lead	52
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS5-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-04
Date Analyzed:	07/31/24	Data File:	407453-04.156
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.7
Barium	54
Cadmium	<1
Chromium	15
Lead	94
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS6-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-05
Date Analyzed:	07/31/24	Data File:	407453-05.157
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	27
Barium	91
Cadmium	1.2
Chromium	19
Lead	85
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS7-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-06
Date Analyzed:	07/31/24	Data File:	407453-06.158
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	13
Lead	98

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS8-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-07
Date Analyzed:	07/31/24	Data File:	407453-07.159
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.0
Barium	54
Cadmium	<1
Chromium	15
Lead	20
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS9-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-08
Date Analyzed:	07/31/24	Data File:	407453-08.160
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	20
Barium	73
Cadmium	1.2
Chromium	20
Lead	57
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS10-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-09
Date Analyzed:	07/31/24	Data File:	407453-09.161
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.3
Barium	21
Cadmium	<1
Chromium	7.2
Lead	7.9
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS12-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-19
Date Analyzed:	07/31/24	Data File:	407453-19.162
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.2
Barium	56
Cadmium	<1
Chromium	40
Lead	44
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS13-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-20
Date Analyzed:	07/31/24	Data File:	407453-20.167
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.5
Barium	21
Cadmium	<1
Lead	18
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS13-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-20 x5
Date Analyzed:	08/02/24	Data File:	407453-20 x5.078
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	14

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS14-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-21
Date Analyzed:	07/31/24	Data File:	407453-21.168
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.4
Lead	14

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS15-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-22
Date Analyzed:	07/31/24	Data File:	407453-22.169
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	23
Lead	11

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS16-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-23
Date Analyzed:	07/31/24	Data File:	407453-23.170
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.6
Lead	29

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS17-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-24
Date Analyzed:	07/31/24	Data File:	407453-24.171
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	17
Barium	140
Cadmium	<1
Chromium	24
Lead	76
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS19-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-25
Date Analyzed:	07/31/24	Data File:	407453-25.172
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	12
Barium	200
Cadmium	<1
Chromium	22
Lead	25
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS20-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-26
Date Analyzed:	07/31/24	Data File:	407453-26.173
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	11
Barium	130
Cadmium	<1
Chromium	22
Lead	31
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS21-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-35
Date Analyzed:	07/31/24	Data File:	407453-35.174
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.6
Barium	85
Cadmium	<1
Chromium	21
Lead	18
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS66-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-36
Date Analyzed:	07/31/24	Data File:	407453-36.177
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	18
Lead	28

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS67-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-37
Date Analyzed:	07/31/24	Data File:	407453-37.178
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	12
Barium	57
Cadmium	<1
Chromium	15
Lead	21
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS68-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-38
Date Analyzed:	07/31/24	Data File:	407453-38.179
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	15
Barium	64
Cadmium	<1
Chromium	13
Lead	31
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS69-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-39
Date Analyzed:	07/31/24	Data File:	407453-39.185
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	40
Barium	71
Cadmium	1.3
Chromium	14
Lead	84
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS70-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-40
Date Analyzed:	07/31/24	Data File:	407453-40.186
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.6
Barium	76
Cadmium	<1
Chromium	16
Lead	17
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS71-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-41
Date Analyzed:	07/31/24	Data File:	407453-41.189
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	11
Barium	62
Cadmium	<1
Chromium	14
Lead	20
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS72-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-42
Date Analyzed:	07/31/24	Data File:	407453-42.190
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.3
Barium	62
Cadmium	<1
Chromium	15
Lead	38
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS73-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-43
Date Analyzed:	07/31/24	Data File:	407453-43.191
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	17
Barium	65
Cadmium	<1
Chromium	19
Lead	68
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS75-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-44
Date Analyzed:	07/31/24	Data File:	407453-44.192
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	12
Lead	26

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS76-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-55
Date Analyzed:	07/31/24	Data File:	407453-55.193
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.5
Barium	49
Cadmium	<1
Chromium	14
Lead	11
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS77-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-56
Date Analyzed:	07/31/24	Data File:	407453-56.194
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	15
Barium	120
Cadmium	<1
Chromium	27
Lead	99
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS78-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-57
Date Analyzed:	07/31/24	Data File:	407453-57.195
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.0
Barium	63
Cadmium	<1
Chromium	16
Lead	71
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS79-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-58
Date Analyzed:	07/31/24	Data File:	407453-58.196
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.5
Barium	76
Cadmium	<1
Chromium	17
Lead	18
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS80-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-59
Date Analyzed:	07/31/24	Data File:	407453-59.197
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.6
Barium	53
Cadmium	<1
Chromium	16
Lead	5.5
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS81-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-60
Date Analyzed:	07/31/24	Data File:	407453-60.198
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.1
Barium	58
Cadmium	<1
Chromium	16
Lead	13
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS82-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-61
Date Analyzed:	07/31/24	Data File:	407453-61.210
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	17
Barium	51
Cadmium	<1
Chromium	21
Lead	4.2
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS83-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-62
Date Analyzed:	07/31/24	Data File:	407453-62.213
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	14
Barium	79
Cadmium	<1
Chromium	22
Lead	7.5
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS84-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-63
Date Analyzed:	07/31/24	Data File:	407453-63.214
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.8
Lead	39

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS85-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-64
Date Analyzed:	07/31/24	Data File:	407453-64.215
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.8
Barium	60
Cadmium	<1
Chromium	16
Lead	4.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS86-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-75
Date Analyzed:	07/31/24	Data File:	407453-75.216
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.5
Barium	52
Cadmium	<1
Chromium	14
Lead	4.1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS95-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-76
Date Analyzed:	07/31/24	Data File:	407453-76.217
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.6
Barium	33
Cadmium	<1
Chromium	16
Lead	6.0
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS96-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-77
Date Analyzed:	07/31/24	Data File:	407453-77.218
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.9
Barium	34
Cadmium	<1
Chromium	20
Lead	3.4
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS97-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-78
Date Analyzed:	07/31/24	Data File:	407453-78.219
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.0
Barium	51
Cadmium	<1
Chromium	15
Lead	3.7
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS99-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-79
Date Analyzed:	07/31/24	Data File:	407453-79.229
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.2
Barium	70
Cadmium	<1
Chromium	19
Lead	6.7
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS100-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-80
Date Analyzed:	07/31/24	Data File:	407453-80.230
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.6
Barium	80
Cadmium	<1
Chromium	19
Lead	5.1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS3-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-81
Date Analyzed:	07/31/24	Data File:	407453-81.231
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.3
Barium	69
Cadmium	<1
Chromium	16
Lead	38
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS18-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-82
Date Analyzed:	07/31/24	Data File:	407453-82.232
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.3
Barium	94
Cadmium	<1
Chromium	19
Lead	25
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS11-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	407453-83
Date Analyzed:	07/31/24	Data File:	407453-83.233
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	14
Barium	110
Cadmium	1.0
Chromium	57
Lead	40
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	I4-619 mb
Date Analyzed:	07/31/24	Data File:	I4-619 mb.124
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	I4-620 mb
Date Analyzed:	07/31/24	Data File:	I4-620 mb.165
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	07/31/24	Lab ID:	I4-621 mb
Date Analyzed:	07/31/24	Data File:	I4-621 mb.201
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 407453-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	95	70-130

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 407453-09 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	97	70-130

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 407453-52 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	97	70-130

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 407462-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	106	64-136	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	78-121

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 407453-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	260	97	95	64-136	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	108	78-121

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 407453-38 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	110	114	64-136	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	112	78-121

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 407453-03 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	10.6	83 b	81 b	75-125	2 b
Barium	mg/kg (ppm)	50	65.5	88 b	67 b	75-125	27 b
Cadmium	mg/kg (ppm)	10	<5	94	90	75-125	4
Chromium	mg/kg (ppm)	50	17.0	89 b	78 b	75-125	13 b
Lead	mg/kg (ppm)	50	43.5	82 b	74 b	75-125	10 b
Mercury	mg/kg (ppm	5	<5	93	89	75-125	4
Selenium	mg/kg (ppm)	5	<5	78	75	75-125	4
Silver	mg/kg (ppm)	10	<5	97	92	75-125	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	94	80-120
Barium	mg/kg (ppm)	50	96	80-120
Cadmium	mg/kg (ppm)	10	96	80-120
Chromium	mg/kg (ppm)	50	100	80-120
Lead	mg/kg (ppm)	50	95	80-120
Mercury	mg/kg (ppm)	5	92	80-120
Selenium	mg/kg (ppm)	5	92	80-120
Silver	mg/kg (ppm)	10	96	80-120

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 407453-38 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	11.8	103 b	89 b	75-125	15 b
Barium	mg/kg (ppm)	50	50.7	96 b	90 b	75-125	6 b
Cadmium	mg/kg (ppm)	10	<1	93	89	75-125	4
Chromium	mg/kg (ppm)	50	10.7	79 b	77 b	75-125	3 b
Lead	mg/kg (ppm)	50	24.2	86 b	79 b	75-125	8 b
Mercury	mg/kg (ppm	5	<1	85	83	75-125	2
Selenium	mg/kg (ppm)	5	<1	81	80	75-125	1
Silver	mg/kg (ppm)	10	<1	92	89	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	94	80-120
Barium	mg/kg (ppm)	50	95	80-120
Cadmium	mg/kg (ppm)	10	94	80-120
Chromium	mg/kg (ppm)	50	98	80-120
Lead	mg/kg (ppm)	50	92	80-120
Mercury	mg/kg (ppm)	5	89	80-120
Selenium	mg/kg (ppm)	5	93	80-120
Silver	mg/kg (ppm)	10	96	80-120

Date of Report: 08/07/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407453

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 407453-78 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	3.36	91 b	91 b	75-125	0 b
Barium	mg/kg (ppm)	50	42.7	89 b	65 b	75-125	31 b
Cadmium	mg/kg (ppm)	10	<1	94	101	75-125	7
Chromium	mg/kg (ppm)	50	12.8	83 b	80 b	75-125	4 b
Lead	mg/kg (ppm)	50	3.09	92	98	75-125	6
Mercury	mg/kg (ppm	5	<1	93	100	75-125	7
Selenium	mg/kg (ppm)	5	<1	93	100	75-125	7
Silver	mg/kg (ppm)	10	<1	94	101	75-125	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	102	80-120
Barium	mg/kg (ppm)	50	100	80-120
Cadmium	mg/kg (ppm)	10	100	80-120
Chromium	mg/kg (ppm)	50	104	80-120
Lead	mg/kg (ppm)	50	98	80-120
Mercury	mg/kg (ppm)	5	101	80-120
Selenium	mg/kg (ppm)	5	102	80-120
Silver	mg/kg (ppm)	10	101	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

407453

07/31/24

B4/VSAS

Page # 1 of 10

Report To Josh Trierweiler

Company PBS Engineering

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	As/Pb			Notes
SS1-9	01 A-C	7/29/24	0930	S	3	X	X						X				
SS2-9	02		0940			X	X						X				
~~SS3-9~~						X	X						X				
SS4-9	03 A,C		0950			X	X						X				
SS5-9	04		1000			X	X						X				
SS6-9	05		1005			X	X						X				
SS7-9	06		1020			X								X			
SS8-9	07		1025			X	X						X				
SS9-9	08		1035			X	X						X				
SS10-9	09		1140			X	X						X				

Samples received at 1 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/30/24	
Received by:	Josh Trierweiler	PBS	7/31/24	0845
Relinquished by:				
Received by:	Anh Phan	FBT	07/31/24	08:45

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407453

SAMPLE CHAIN OF CUSTODY

07/31/24

BH/VSAS

Page # 2 of 10

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	As/Pb			Notes
SS1-18	10A-C	7/29/24	0930	S	3	X	X						X				HOLD
SS2-18	11		0940			X	X						X				
~~SS3-18~~						X	X						X				
SS4-18	12A-C		0955			X	X						X				
SS5-18	13		1000			X	X						X				
SS6-18	14		1005			X	X						X				
SS7-18	15		1020			X								X			
SS8-18	16		1025			X	X						X				
SS9-18	17		1035			X	X						X				
SS10-18	18		1140			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
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407453

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 3 of 10

BH/VSAS

Report To Josh Trierweiler
Company PBS Engr
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.3604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	pb			Notes
~~SS11-9~~						X	X						X				
SS12-9	19 A-C	7/29/24	1140	S	3	X	X						X				
SS13-9	20		1145			X	X						X				
SS14-9	21		1125			X								X			
SS15-9	22		1120			X								X			
SS16-9	23		1115			X								X			
SS17-9	24		1115			X	X						X				
~~SS18-9~~						X	X						X				
SS19-9	25 A-C		1145			X	X						X				
SS20-9	26		1150			X	X						X				

Samples received at 1 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	~~7/30/24~~	
Received by:	Josh Trierweiler	PBS	7/31/24	0845
Relinquished by:				
Received by:	Anh Phan	FBI	07/31/24	08:45

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407453

SAMPLE CHAIN OF CUSTODY

07/31/24

B4/VSAB

Page # 4 of 10

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	6 PAHs			Notes
SS12-18	27 A-C	7/29/24	1140	S	3	X	X						X				HOLD
SS13-18	28		1145			X	X						X				
SS14-18	29		1125			X								X			
SS15-18	30		1120			X								X			
SS16-18	31		1115			X								X			
SS17-18	32		1115			X	X						X				
SS19-18	33		1145			X	X						X				
SS20-18	34		1150			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBT	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

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office@friedmanandbruya.com

407453

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 5 of 10

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / AS			Notes
SS21-9	35 A-C	7/29/24	1150	S	3	X	X						X				
SS66-9	36		1330			X								X			
SS67-9	37		1315			X	X						X				
SS68-9	38		1320			X	X						X				
SS69-9	39		1340			X	X						X				
SS70-9	40		1350			X	X						X				
SS71-9	41		1515			X	X						X				
SS72-9	42		1520			X	X						X				
SS73-9	43		1525			X	X						X				
SS75-9	44		1530			X								X			no Gx, no RCRA8

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

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office@friedmanandbruya.com

407453

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 6 of 10

84 / VSAS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Metals	Pb / AS			Notes
SS21-18	45 A-C	7/29/24	1150	S	3	X	X						X				HOLD
SS66-18	46		1330			X								X			
SS67-18	47		1315			X	X						X				
SS68-18	48		1330			X	X						X				
SS69-18	49		1340			X	X						X				
SS70-18	50		1350			X	X						X				
SS71-18	51		1515			X	X						X				
SS72-18	52		1520			X	X						X				
SS73-18	53		1525			X	X						X				
SS75-18	54		1530			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

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office@friedmanandbruya.com

407453

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 1 of 10

B4 / VSA5

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
SS76-9	55A-C	7/29/24	1530	S	3	X	X						X				
SS77-9	56		1510			X	X						X				
SS78-9	57		1350			X	X						X				
SS79-9	58		1355			X	X						X				
SS80-9	59		1400			X	X						X				
SS81-9	60		1430			X	X						X				
SS82-9	61		1420			X	X						X				
SS83-9	62		1405			X	X						X				
SS84-9	63		1405			X								X			
SS85-9	64		1420			X	X						X				

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

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office@friedmanandbruya.com

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 8 of 10

407453

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.776-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	8D/AS			Notes
SS76-18	65A-C	7/29/24	1530	S	3	X	X						X				HOLD
SS77-18	66		1510			X	X						X				
SS78-18	67		1350			X	X						X				
SS79-18	68		1355			X	X						X				
SS80-18	69		1400			X	X						X				
SS81-18	70		1430			X	X						X				
SS82-18	71		1420			X	X						X				
SS83-18	72		1405			X	X						X				
SS84-18	73		1405			X								X			
SS85-18	74		1420			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
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Seattle WA 98108
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office@friedmanandbruya.com

407453

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 9 of 10

BY VSATS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8				Notes
SS86-9	75 A-C	7/29/24	1430	S	3	X	X						X				
SS95-9	76		1425			X	X						X				
SS96-9	77		1420			X	X						X				
SS97-9	78		1410			X	X						X				
SS99-9	79		1425			X	X						X				
SS100-9	80		1425			X	X						X				
SS3-9	81		0950			X	X						X				
SS18-9	82		1100			X	X						X				
SS11-9	83		1050			X	X						X				

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
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office@friedmanandbruya.com

407453

SAMPLE CHAIN OF CUSTODY

07/31/24

BY/VSAS

Page # 10 of 10

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.776.2604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8				Notes
SS86-18	84A-C	7/29/24	1430	S	3	X	X						X				HOLD
SS95-18	85		1425			X	X						X				
SS96-18	86		1420			X	X						X				
SS97-18	87		1410			X	X						X				
SS99-18	88		1425			X	X						X				
SS100-18	89		1425			X	X						X				
SS3-18	90		0950			X	X						X				HOLD
SS18-18	91		1100			X	X						X				HOLD
SS11-18	92		1050			X	X						X				HOLD

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	0845
Received by:	Anh Phan	FBI	07/31/24	08:45
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 407453 CLIENT PBS INITIALS/ DATE: AP 07/31/24

If custody seals are present on cooler, are they intact? ☒ NA ☐ YES ☐ NO

Cooler/Sample temperature 1 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☒ YES ☐ NO

How did samples arrive?
☒ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☒ YES ☐ NO **Initials/ Date:** JBI AP/AWB 7/31
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 2 days

Are the samples clearly identified? (explain "no" answer below) ☒ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☒ YES ☐ NO

Were appropriate sample containers used? ☒ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☒ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☒ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☒ Yes	☐ No	☐ Not on COC/label
Date Sampled	☒ Yes	☐ No	☐ Not on COC/label
Time Sampled	☐ Yes	☒ No	not match COC on 1 voa AWB 7/31 ☐ Not on COC/label
# of Containers	☒ Yes	☐ No	
Relinquished	☒ Yes	☐ No	
Requested analysis	☒ Yes	☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☒ NA ☐ YES ☐ NO

Number of unused TO15 canisters _____ **Number of unused TO17 tubes** _____

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

September 9, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Trierweiler :

Included are the additional results from the testing of material submitted on July 31, 2024 from the A1 Towing 40757.028, F&BI 407472 project. There are 10 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0909R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 31, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 407472 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
407472 -01	SS22-9
407472 -02	SS23-9
407472 -03	SS24-9
407472 -04	SS25-9
407472 -05	SS28-9
407472 -06	SS29-9
407472 -07	SS30-9
407472 -08	SS31-9
407472 -09	SS32-9
407472 -10	SS33-9
407472 -11	SS22-18
407472 -12	SS23-18
407472 -13	SS24-18
407472 -14	SS25-18
407472 -15	SS28-18
407472 -16	SS29-18
407472 -17	SS30-18
407472 -18	SS31-18
407472 -19	SS32-18
407472 -20	SS33-18
407472 -21	SS34-9
407472 -22	SS35-9
407472 -23	SS41-9
407472 -24	SS42-9
407472 -25	SS43-9
407472 -26	SS44-9
407472 -27	SS45-9
407472 -28	SS46-9
407472 -29	SS47-9
407472 -30	SS50-9
407472 -31	SS34-18
407472 -32	SS35-18
407472 -33	SS41-18
407472 -34	SS42-18
407472 -35	SS43-18
407472 -36	SS44-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
407472 -37	SS45-18
407472 -38	SS46-18
407472 -39	SS47-18
407472 -40	SS50-18
407472 -41	SS51-9
407472 -42	SS52-9
407472 -43	SS53-9
407472 -44	SS54-9
407472 -45	SS55-9
407472 -46	SS59-9
407472 -47	SS61-9
407472 -48	SS61-9
407472 -49	SS63-9
407472 -50	SS64-9
407472 -51	SS51-18
407472 -52	SS52-18
407472 -53	SS53-18
407472 -54	SS54-18
407472 -55	SS55-18
407472 -56	SS59-18
407472 -57	SS60-18
407472 -58	SS61-18
407472 -59	SS63-18
407472 -60	SS64-18
407472 -61	SS74-9
407472 -62	SS88-9
407472 -63	SS89-9
407472 -64	SS90-9
407472 -65	SS101-9
407472 -66	SS102-9
407472 -67	SS62-9
407472 -68	SS36-9
407472 -69	SS74-18
407472 -70	SS88-18
407472 -71	SS89-18
407472 -72	SS90-18
407472 -73	SS101-18
407472 -74	SS102-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
407472 -75	SS62-18
407472 -76	SS36-18

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS31-18	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	09/04/24	Lab ID:	407472-18
Date Analyzed:	09/04/24	Data File:	407472-18.055
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.7
Lead	13

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS53-18	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	09/04/24	Lab ID:	407472-53
Date Analyzed:	09/04/24	Data File:	407472-53.056
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Lead	7.9

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS63-18	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	09/04/24	Lab ID:	407472-59
Date Analyzed:	09/04/24	Data File:	407472-59.057
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	19

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS63-18	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	09/04/24	Lab ID:	407472-59 x5
Date Analyzed:	09/06/24	Data File:	407472-59 x5.044
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	87

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	Not Applicable	Project:	A1 Towing 40757.028
Date Extracted:	09/04/24	Lab ID:	I4-723 mb2
Date Analyzed:	09/04/24	Data File:	I4-723 mb2.097
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 09/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408559-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.69	92	88	75-125	4
Lead	mg/kg (ppm)	50	5.14	96	92	75-125	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	97	80-120
Lead	mg/kg (ppm)	50	97	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 1 of 8 B4/USDS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Tuning

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA	Pb / As	Cr VI		Notes
						ANALYSES REQUESTED											(X) per JB 8/9/24 MG
SS22-9	01 A-C	7/30/24	1345	S	3	X	X						X				
SS23-9	02		1350			X	X						X				
SS24-9	03		1400			X	X						X				
SS25-9	04		1405			X	X						X				
SS28-9	05		1410			X	X						X		(X)		
SS29-9	06		1355			X								X			
SS30-9	07		1350			X	X						X				
SS31-9	08		1345			X	X						X				
SS32-9	09		0900			X	X						X				
SS33-9	10		0900			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 2 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing

PO #: 407571.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS22-18	11 A-C	7/30/24	1345	S	3	X	X						X				⊗ per NB MG 8/16 ☒ per NB MG 8/16 HOLD
SS23-18	12		1350			X	X						X	⊗			
SS24-18	13		1400			X	X						X				
SS25-18	14		1405			X	X						X				
SS28-18	15		1410			X	X						X				
SS29-18	16		1355			X								X			
SS30-18	17		1350			X	X						X				
SS31-18	18		1345			X	X						X	☒			
SS32-18	19		0900			X	X						X				
SS33-18	20		0900			X	X						X				

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

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407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 3 of 8 BY/VSBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: #1 Towing

PO # 407527.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
						ANALYSES REQUESTED											
5534-9	21 A-C	7/30/24	0900	S	3	X	X						X				
5535-9	22		0900			X	X						X				
5541-9	23		0910			X	X						X				
5542-9	24		0910			X	X						X				
5543-9	25		0910			X								X			
5544-9	26		0910			X	X						X				
5545-9	27		1210			X	X						X				
5546-9	28		1330			X								X			
5547-9	29		1335			X	X						X				
5550-9	30		1205			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

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office@friedmanandbruya.com

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 4 of 8

Report To Josh Triarwiler
Company PBS
Address 224 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.triarwiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 407572.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As	As		Notes
SS534-18	31 A-C	7/30/24	0900	S	3	X	X						X		(X)		HOLD
SS535-18	32		0900			X	X						X				
SS541-18	33		0910			X	X						X				
SS542-18	34		0910			X	X						X	⊗*			
SS543-18	35		0910			X								X			
SS544-18	36		0910			X	X						X				
SS545-18	37		1210			X	X						X				
SS546-18	38		1330			X								(X)*			
SS547-18	39		1335			X	X						X				
SS550-18	40		1205			X	X						X				

*8/14 MB 8/16

ANALYSES REQUESTED

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office@friedmanandbruya.com

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Josh Triarwiler	PBS	7/31/24	1620
Received by:		Anh Phan	FBI	07/31/24	16:20
Relinquished by:			Samples received at 1 °C		
Received by:					

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 5 of 8

BY VISES

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB / MS	Cr VI		Notes
SS51-9	41 A-C	7/30/24	1200	S	3	X	X						X		(X)		
SS52-9	42		1210			X								X			
SS53-9	43		1220			X	X						X				
SS54-9	44		1040			X	X						X				
SS55-9	45		1030			X	X						X		(X)		
SS59-9	46		1030			X	X						X				
SS60-9	47		1040			X								X			
SS61-9	48		1050			X	X										
SS63-9	49		1050			X								X			
SS64-9	50		1100			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:				
Received by:				

Received at 1 °C

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SAMPLE CHAIN OF CUSTODY

07/31/24

BY VSBS

Page # 6 of 12

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO # 4075028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
						ANALYSES REQUESTED											per MG 8/16
SS51-18	51 A-C	7/30/24	1200	S	3	X	X						X				D-Pb MG 8/9/24 HOLD
SS52-18	52		1210			X								X			
SS53-18	53		1220			X	X						X	[X]			
SS54-18	54		1040			X	X						X				
SS55-18	55		1030			X	X						X				
SS56-18	56		1030			X	Y						X	⊗			
SS60-18	57		1040			X								X			
SS61-18	58		1050			X	X						X				
SS63-18	59		1050			X								[X]			
SS64-18	60		1100			X	X						X				

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office@friedmanandbruya.com

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Josh Trierweiler	PBS	7/31/24	1620
Received by:		Anh Pham	FBI	07/31/24	16:20
Relinquished by:			Samples received at 1 °C		
Received by:					

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 2 of 2

By USPS

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email joshua.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	ZCRA 8	Pb/As			Notes
SS71-9	61 A-C	7/30/24	1110	S	3	X	X						X				
SS88-9	62		1315			X	X						X				
SS89-9	63		1320			X	X						X				
SS90-9	64		1325			X								X			
SS101-9	65		1305			X	X						X				
SS102-9	66		1310			X	X						X				
SS62-9	67	7/31/24	1525	S	3	X	X						X				
SS36-9	68	7/31/24	1545	S	3	X								X			

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Seattle WA 98108
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office@friedmanandbruya.com

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Josh Trierweiler	PBS	7/31/24	1610
Received by:		Anh Phan	FBT	07/31/24	16:20
Relinquished by:					
Received by:			Samples received at 1 °C		

407472

SAMPLE CHAIN OF CUSTODY

07/31/24 — Page # 8 of 8 — BH/VSBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206-766-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 407571.028
REMARKS: Project specific RLs? - Yes / No
INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB/AS				Notes
						ANALYSES REQUESTED												• per NB 8/15/24
SS24-18	69 A-C	7/30/24	1110	S	3	X	X						X					HOLD
SS88-18	70		1315			X	X	•					X					
SS89-18	71		1320			X	X						X					
SS90-18	72		1325			X								(X)				per NB 8/15/24
SS101-18	73		1305			X	X						X					
SS102-18	74		1310			X	X						X					
SS62-18	75	7/31/24	1535			X	X						X					HOLD
SS36-18	76	7/31/24	1550			X								(X)				~~HOLD~~
														↳ analyze per NB 8/15/24				ME

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Pham	FGI	07/31/24	16:20
Relinquished by:			at 1 °C	
Received by:				

Friedman & Bruya, Inc.
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Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 407472 CLIENT PBS INITIALS/ AP DATE: 07/31/24

If custody seals are present on cooler, are they intact? ☒ NA ☐ YES ☐ NO

Cooler/Sample temperature 1 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☒ YES ☐ NO

How did samples arrive?
☒ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☒ YES ☐ NO Initials/ Date: JB AUG 8/1
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 0-1 days

Are the samples clearly identified? (explain "no" answer below) ☒ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☒ YES ☐ NO

Were appropriate sample containers used? ☒ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☒ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☒ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☒ Yes ☐ No	☐ Not on COC/label
Date Sampled	☒ Yes ☐ No	☐ Not on COC/label
Time Sampled	☒ Yes ☐ No	☐ Not on COC/label
# of Containers	☒ Yes ☐ No	
Relinquished	☒ Yes ☐ No	
Requested analysis	☒ Yes ☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☒ NA ☐ YES ☐ NO

Number of unused TO15 canisters _____ Number of unused TO17 tubes _____

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
5500 4th Ave S
Seattle, WA 98108

RE: 407472,
Work Order Number: 2408162

August 15, 2024

Attention Michael Erdahl:

Fremont Analytical, Inc, an Alliance Technical Group company, received 3 sample(s) on 8/9/2024 for the analyses presented in the following report.

Hexavalent Chromium by EPA 7196A
Sample Moisture (Percent Moisture)

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Please note, while the appearance of our logo and branding will update, our commitment to accuracy, speed, and customer service remain values celebrated and shared by Alliance Technical Group. Thank you for the opportunity to serve you.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *08/15/2024*

CLIENT: Friedman & Bruya
Project: 407472
Work Order: 2408162

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2408162-001	SS28-9	07/30/2024 2:10 PM	08/09/2024 4:08 PM
2408162-002	SS51-9	07/30/2024 12:00 PM	08/09/2024 4:08 PM
2408162-003	SS55-9	07/30/2024 10:30 AM	08/09/2024 4:08 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2408162**

Date: **8/15/2024**

CLIENT: Friedman & Bruya

Project: 407472

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

CLIENT: Friedman & Bruya
Project: 407472

Lab ID: 2408162-001 **Collection Date:** 7/30/2024 2:10:00 PM
Client Sample ID: **SS28-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93560		Analyst: DI
Percent Moisture	9.45	0.500		wt%	1	8/12/2024 9:14:53 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44830		Analyst: NR
Chromium, Hexavalent	ND	0.546		mg/Kg-dry	1	8/14/2024 12:51:00 PM

Lab ID: 2408162-002 **Collection Date:** 7/30/2024 12:00:00 PM
Client Sample ID: **SS51-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93560		Analyst: DI
Percent Moisture	10.8	0.500		wt%	1	8/12/2024 9:14:53 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44830		Analyst: NR
Chromium, Hexavalent	0.890	0.551		mg/Kg-dry	1	8/14/2024 12:55:00 PM

Lab ID: 2408162-003 **Collection Date:** 7/30/2024 10:30:00 AM
Client Sample ID: **SS55-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93560		Analyst: DI
Percent Moisture	9.62	0.500		wt%	1	8/12/2024 9:14:53 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44830		Analyst: NR
Chromium, Hexavalent	ND	0.525		mg/Kg-dry	1	8/14/2024 1:15:00 PM

Work Order: 2408162
CLIENT: Friedman & Bruya
Project: 407472

QC SUMMARY REPORT

Hexavalent Chromium by EPA 7196A

Sample ID: **MB-44830**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/13/2024**		RunNo: **93637**		
Client ID: **MBLKS**	Batch ID: **44830**					Analysis Date: **8/14/2024**		SeqNo: **1954941**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-44830**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/13/2024**		RunNo: **93637**		
Client ID: **LCSS**	Batch ID: **44830**					Analysis Date: **8/14/2024**		SeqNo: **1954942**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.8	0.500	12.87	0	83.7	65.3	105.3				

Sample ID: **2408162-002ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/13/2024**		RunNo: **93637**		
Client ID: **SS51-9**	Batch ID: **44830**					Analysis Date: **8/14/2024**		SeqNo: **1954945**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.551						0.8897	47.8	30	

Sample ID: **2408162-002AMS1**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/13/2024**		RunNo: **93637**		
Client ID: **SS51-9**	Batch ID: **44830**					Analysis Date: **8/14/2024**		SeqNo: **1954946**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	12.1	0.557	14.34	0.8897	78.5	32	106				

Sample ID: **2408162-002AMS2**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/13/2024**		RunNo: **93637**		
Client ID: **SS51-9**	Batch ID: **44830**					Analysis Date: **8/14/2024**		SeqNo: **1954947**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.4	0.552	14.21	0.8897	67.2	32	106				

Alliance TECHNICAL GROUP

Sample Log-In Check List

Client Name:	FB	Work Order Number:	2408162
Logged by:	Morgan Wilson	Date Received:	8/9/2024 4:08:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	3.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 5500 4th Ave S

City, State, ZIP Seattle, WA 98108

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER
Alliance Technical Group

PROJECT NAME/NO.	PO #
407472	E-340

REMARKS

EIM 24108162

TURNAROUND TIME
☒ Standard TAT
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Return samples
Will call with instructions

						ANALYSES REQUESTED										
Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	EPH	VPH	Cr VI								Notes
SS28-9		7/30/2024	1410	soil	1			x								
SS51-9		7/30/2024	1200	soil	1			x								
SS55-9		7/30/2024	1030	soil	1			x								

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	8/9/24	1243
Received by:		Jack Hawthorne	ATG	8/9/24	1608
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

October 2, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Trierweiler :

Included is the amended report from the testing of material submitted on July 31, 2024 from the A1 Towing 40757.028, F&BI 407472 project. The sample ID for the 47th sample on the COC has been corrected to SS60-9 from SS61-9.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0809R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
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Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

August 9, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

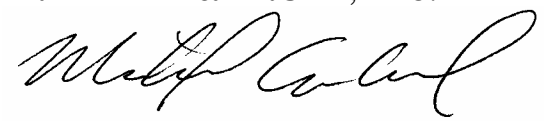
Dear Mr Trierweiler :

Included are the results from the testing of material submitted on July 31, 2024 from the A1 Towing 40757.028, F&BI 407472 project. There are 78 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0809R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 31, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 407472 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
407472 -01	SS22-9
407472 -02	SS23-9
407472 -03	SS24-9
407472 -04	SS25-9
407472 -05	SS28-9
407472 -06	SS29-9
407472 -07	SS30-9
407472 -08	SS31-9
407472 -09	SS32-9
407472 -10	SS33-9
407472 -11	SS22-18
407472 -12	SS23-18
407472 -13	SS24-18
407472 -14	SS25-18
407472 -15	SS28-18
407472 -16	SS29-18
407472 -17	SS30-18
407472 -18	SS31-18
407472 -19	SS32-18
407472 -20	SS33-18
407472 -21	SS34-9
407472 -22	SS35-9
407472 -23	SS41-9
407472 -24	SS42-9
407472 -25	SS43-9
407472 -26	SS44-9
407472 -27	SS45-9
407472 -28	SS46-9
407472 -29	SS47-9
407472 -30	SS50-9
407472 -31	SS34-18
407472 -32	SS35-18
407472 -33	SS41-18
407472 -34	SS42-18
407472 -35	SS43-18
407472 -36	SS44-18
407472 -37	SS45-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
407472 -38	SS46-18
407472 -39	SS47-18
407472 -40	SS50-18
407472 -41	SS51-9
407472 -42	SS52-9
407472 -43	SS53-9
407472 -44	SS54-9
407472 -45	SS55-9
407472 -46	SS59-9
407472 -47	SS60-9
407472 -48	SS61-9
407472 -49	SS63-9
407472 -50	SS64-9
407472 -51	SS51-18
407472 -52	SS52-18
407472 -53	SS53-18
407472 -54	SS54-18
407472 -55	SS55-18
407472 -56	SS59-18
407472 -57	SS60-18
407472 -58	SS61-18
407472 -59	SS63-18
407472 -60	SS64-18
407472 -61	SS74-9
407472 -62	SS88-9
407472 -63	SS89-9
407472 -64	SS90-9
407472 -65	SS101-9
407472 -66	SS102-9
407472 -67	SS62-9
407472 -68	SS36-9
407472 -69	SS74-18
407472 -70	SS88-18
407472 -71	SS89-18
407472 -72	SS90-18
407472 -73	SS101-18
407472 -74	SS102-18
407472 -75	SS62-18
407472 -76	SS36-18

All quality control requirements were acceptable.

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/02/24
Date Analyzed: 08/02/24, 08/03/24, and 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS22-9 407472-01	<5	82
SS23-9 407472-02	<5	83
SS24-9 407472-03	<5	89
SS25-9 407472-04	<5	82
SS28-9 407472-05	<5	83
SS30-9 407472-07	<5	77
SS31-9 407472-08	<5	89
SS32-9 407472-09	<5	77
SS33-9 407472-10	<5	88
SS34-9 407472-21	<5	82

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/02/24
Date Analyzed: 08/02/24, 08/03/24, and 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS35-9 407472-22	<5	81
SS41-9 407472-23	<5	84
SS42-9 407472-24	<5	82
SS44-9 407472-26	<5	84
SS45-9 407472-27	<5	80
SS47-9 407472-29	<5	85
SS50-9 407472-30	<5	85
SS51-9 407472-41	<5	85
SS53-9 407472-43	<5	83
SS54-9 407472-44	<5	94
SS55-9 407472-45	<5	84

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/02/24
Date Analyzed: 08/02/24, 08/03/24, and 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS59-9 407472-46	<5	89
SS61-9 407472-48	<5	86
SS64-9 407472-50	<5	90
SS74-9 407472-61	<5	88
SS88-9 407472-62	<5	83
SS89-9 407472-63 1/0.83	<5	81
SS101-9 407472-65	<5	88
SS102-9 407472-66	<5	85
SS62-9 407472-67	<5	89
Method Blank 04-1728 MB	<5	83
Method Blank 04-1729 MB	<5	85

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/01/24
Date Analyzed: 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS22-9 407472-01	<50	<250	110
SS23-9 407472-02	<50	<250	109
SS24-9 407472-03	<50	<250	106
SS25-9 407472-04	<50	<250	110
SS28-9 407472-05	<50	<250	111
SS29-9 407472-06	<50	<250	107
SS30-9 407472-07	<50	<250	111
SS31-9 407472-08	81 x	<250	115
SS32-9 407472-09	<50	<250	121
SS33-9 407472-10	<50	<250	118
SS34-9 407472-21	<50	<250	114
SS35-9 407472-22	<50	<250	111

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/01/24
Date Analyzed: 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS41-9 407472-23	<50	<250	114
SS42-9 407472-24	<50	<250	112
SS43-9 407472-25	<50	<250	108
SS44-9 407472-26	<50	1,300	109
SS45-9 407472-27	<50	<250	112
SS46-9 407472-28	<50	<250	114
SS47-9 407472-29	<50	<250	110
SS50-9 407472-30	<50	<250	118
SS51-9 407472-41	<50	<250	122
SS52-9 407472-42	<50	<250	119
SS53-9 407472-43	<50	<250	117
SS54-9 407472-44	<50	<250	118

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/01/24
Date Analyzed: 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS55-9 407472-45	<50	<250	118
SS59-9 407472-46	<50	<250	120
SS60-9 407472-47	<50	<250	117
SS61-9 407472-48	<50	<250	117
SS63-9 407472-49	<50	<250	121
SS64-9 407472-50	<50	<250	120
SS74-9 407472-61	<50	<250	119
SS88-9 407472-62	<50	<250	114
SS89-9 407472-63	<50	<250	122
SS90-9 407472-64	<50	<250	120
SS101-9 407472-65	<50	<250	118
SS102-9 407472-66	<50	<250	120

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/01/24
Date Analyzed: 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS62-9 407472-67	<50	<250	115
SS36-9 407472-68	<50	<250	119
Method Blank 04-1798 MB	<50	<250	107
Method Blank 04-1799 MB	<50	<250	124

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS22-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-01
Date Analyzed:	08/01/24	Data File:	407472-01.129
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.8
Barium	72
Cadmium	<1
Lead	16
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS22-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-01 x5
Date Analyzed:	08/01/24	Data File:	407472-01 x5.132
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	22

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS23-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-02
Date Analyzed:	08/01/24	Data File:	407472-02.135
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	14
Barium	81
Cadmium	<1
Lead	27
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS23-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-02 x5
Date Analyzed:	08/05/24	Data File:	407472-02 x5.245
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	21

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS24-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-03
Date Analyzed:	08/01/24	Data File:	407472-03.136
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Barium	82
Cadmium	<1
Lead	6.6
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS24-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-03 x5
Date Analyzed:	08/05/24	Data File:	407472-03 x5.248
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	35

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS25-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-04
Date Analyzed:	08/01/24	Data File:	407472-04.137
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.9
Barium	54
Cadmium	<1
Chromium	15
Lead	41
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS28-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-05
Date Analyzed:	08/01/24	Data File:	407472-05.138
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.7
Barium	75
Cadmium	<1
Lead	15
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS28-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-05 x5
Date Analyzed:	08/05/24	Data File:	407472-05 x5.249
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	30

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS29-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-06
Date Analyzed:	08/01/24	Data File:	407472-06.141
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.0
Lead	8.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS30-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-07
Date Analyzed:	08/01/24	Data File:	407472-07.142
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.9
Barium	48
Cadmium	<1
Chromium	13
Lead	13
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS31-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-08
Date Analyzed:	08/01/24	Data File:	407472-08.143
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.2
Barium	47
Cadmium	<1
Chromium	14
Lead	9.6
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS32-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-09
Date Analyzed:	08/01/24	Data File:	407472-09.144
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.1
Barium	79
Cadmium	<1
Lead	6.4
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS32-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-09 x5
Date Analyzed:	08/05/24	Data File:	407472-09 x5.250
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	38

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS33-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-10
Date Analyzed:	08/01/24	Data File:	407472-10.145
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Barium	89
Cadmium	<1
Lead	7.1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS33-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-10 x5
Date Analyzed:	08/05/24	Data File:	407472-10 x5.251
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	36

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS34-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-21
Date Analyzed:	08/01/24	Data File:	407472-21.146
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	21
Barium	91
Cadmium	<1
Chromium	30
Lead	30
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS35-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-22
Date Analyzed:	08/01/24	Data File:	407472-22.147
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.0
Barium	80
Cadmium	<1
Lead	39
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS35-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-22 x5
Date Analyzed:	08/05/24	Data File:	407472-22 x5.252
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	25

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS41-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-23
Date Analyzed:	08/01/24	Data File:	407472-23.148
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.4
Barium	65
Cadmium	<1
Chromium	26
Lead	93
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS42-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-24
Date Analyzed:	08/01/24	Data File:	407472-24.149
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.9
Barium	78
Cadmium	<1
Lead	5.7
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS42-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-24 x5
Date Analyzed:	08/05/24	Data File:	407472-24 x5.253
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	30

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS43-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-25
Date Analyzed:	08/01/24	Data File:	407472-25.150
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.1
Lead	7.2

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS44-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-26
Date Analyzed:	08/01/24	Data File:	407472-26.153
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.7
Barium	25
Cadmium	<1
Chromium	10
Lead	4.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS45-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-27
Date Analyzed:	08/01/24	Data File:	407472-27.154
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.9
Barium	84
Cadmium	<1
Lead	5.4
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS45-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-27 x5
Date Analyzed:	08/05/24	Data File:	407472-27 x5.254
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	37

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS46-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-28
Date Analyzed:	08/01/24	Data File:	407472-28.155
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	12
Lead	39

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS47-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-29
Date Analyzed:	08/01/24	Data File:	407472-29.156
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.4
Barium	74
Cadmium	<1
Lead	6.2
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS47-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-29 x5
Date Analyzed:	08/05/24	Data File:	407472-29 x5.255
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	31

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS50-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-30
Date Analyzed:	08/01/24	Data File:	407472-30.157
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.1
Barium	86
Cadmium	<1
Lead	11
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS50-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-30 x5
Date Analyzed:	08/05/24	Data File:	407472-30 x5.256
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	32

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS51-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-41
Date Analyzed:	08/01/24	Data File:	407472-41.171
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.6
Barium	89
Cadmium	<1
Lead	5.3
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS51-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-41 x5
Date Analyzed:	08/01/24	Data File:	407472-41 x5.176
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	39

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS52-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-42
Date Analyzed:	08/01/24	Data File:	407472-42.179
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Lead	9.2

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS53-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-43
Date Analyzed:	08/01/24	Data File:	407472-43.180
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.1
Barium	83
Cadmium	<1
Lead	9.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS53-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-43 x5
Date Analyzed:	08/05/24	Data File:	407472-43 x5.257
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	33

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS54-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-44
Date Analyzed:	08/01/24	Data File:	407472-44.181
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.9
Barium	81
Cadmium	<1
Lead	4.9
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS54-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-44 x5
Date Analyzed:	08/05/24	Data File:	407472-44 x5.260
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	36

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS55-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-45
Date Analyzed:	08/01/24	Data File:	407472-45.182
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.4
Barium	90
Cadmium	<1
Lead	8.1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS55-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-45 x5
Date Analyzed:	08/06/24	Data File:	407472-45 x5.261
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	36

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS59-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-46
Date Analyzed:	08/01/24	Data File:	407472-46.183
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.1
Barium	110
Cadmium	<1
Lead	11
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS59-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-46 x5
Date Analyzed:	08/06/24	Data File:	407472-46 x5.262
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	35

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS60-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-47
Date Analyzed:	08/01/24	Data File:	407472-47.184
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.1
Lead	12

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS63-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-49
Date Analyzed:	08/01/24	Data File:	407472-49.188
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.8
Lead	7.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS64-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-50
Date Analyzed:	08/01/24	Data File:	407472-50.189
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.1
Barium	81
Cadmium	<1
Lead	14
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS64-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-50 x5
Date Analyzed:	08/06/24	Data File:	407472-50 x5.264
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	30

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS74-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-61
Date Analyzed:	08/01/24	Data File:	407472-61.190
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	17
Barium	85
Cadmium	<1
Lead	29
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS74-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-61 x5
Date Analyzed:	08/06/24	Data File:	407472-61 x5.265
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	13

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS88-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-62
Date Analyzed:	08/01/24	Data File:	407472-62.191
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.6
Barium	52
Cadmium	<1
Lead	18
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS88-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-62 x5
Date Analyzed:	08/06/24	Data File:	407472-62 x5.266
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	18

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS89-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-63
Date Analyzed:	08/01/24	Data File:	407472-63.192
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.8
Barium	76
Cadmium	1.7
Lead	55
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS89-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-63 x5
Date Analyzed:	08/06/24	Data File:	407472-63 x5.267
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	31

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS90-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-64
Date Analyzed:	08/01/24	Data File:	407472-64.193
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.7
Lead	4.9

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS101-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-65
Date Analyzed:	08/01/24	Data File:	407472-65.194
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.2
Barium	41
Cadmium	<1
Lead	8.4
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS101-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-65 x5
Date Analyzed:	08/06/24	Data File:	407472-65 x5.268
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	20

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS102-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-66
Date Analyzed:	08/01/24	Data File:	407472-66.195
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Barium	58
Cadmium	<1
Lead	13
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS102-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-66 x5
Date Analyzed:	08/06/24	Data File:	407472-66 x5.269
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	28

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS62-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-67
Date Analyzed:	08/01/24	Data File:	407472-67.196
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.8
Barium	80
Cadmium	<1
Lead	18
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS62-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-67 x5
Date Analyzed:	08/06/24	Data File:	407472-67 x5.272
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	16

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS36-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-68
Date Analyzed:	08/01/24	Data File:	407472-68.197
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	11
Lead	130

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	I4-622 mb
Date Analyzed:	08/01/24	Data File:	I4-622 mb.097
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	I4-623 mb
Date Analyzed:	08/01/24	Data File:	I4-623 mb.099
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 407472-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	87	70-130

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 407472-23 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	87	70-130

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 407472-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	98	106	64-136	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	112	78-121

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 407472-41 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	112	64-136	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	106	78-121

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 407472-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	6.00	104 b	104 b	75-125	0 b
Barium	mg/kg (ppm)	50	65.5	109 b	106 b	75-125	3 b
Cadmium	mg/kg (ppm)	10	<5	101	104	75-125	3
Chromium	mg/kg (ppm)	50	19.9	97 b	93 b	75-125	4 b
Lead	mg/kg (ppm)	50	14.4	112 b	108 b	75-125	4 b
Mercury	mg/kg (ppm	5	<5	94	95	75-125	1
Selenium	mg/kg (ppm)	5	<5	87	90	75-125	3
Silver	mg/kg (ppm)	10	<5	99	104	75-125	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	94	80-120
Barium	mg/kg (ppm)	50	92	80-120
Cadmium	mg/kg (ppm)	10	99	80-120
Chromium	mg/kg (ppm)	50	96	80-120
Lead	mg/kg (ppm)	50	96	80-120
Mercury	mg/kg (ppm)	5	95	80-120
Selenium	mg/kg (ppm)	5	98	80-120
Silver	mg/kg (ppm)	10	100	80-120

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 407472-41 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<5	82	82	75-125	0
Barium	mg/kg (ppm)	50	78.0	112 b	102 b	75-125	9 b
Cadmium	mg/kg (ppm)	10	<5	88	87	75-125	1
Chromium	mg/kg (ppm)	50	34.5	100 b	93 b	75-125	7 b
Lead	mg/kg (ppm)	50	<5	102	100	75-125	2
Mercury	mg/kg (ppm	5	<5	100	98	75-125	2
Selenium	mg/kg (ppm)	5	<5	84	87	75-125	4
Silver	mg/kg (ppm)	10	<5	89	88	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	93	80-120
Barium	mg/kg (ppm)	50	90	80-120
Cadmium	mg/kg (ppm)	10	99	80-120
Chromium	mg/kg (ppm)	50	95	80-120
Lead	mg/kg (ppm)	50	96	80-120
Mercury	mg/kg (ppm)	5	93	80-120
Selenium	mg/kg (ppm)	5	95	80-120
Silver	mg/kg (ppm)	10	99	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 1 of 8 B4/USDS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Tuning

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA	Pb / As	Cr VI		Notes
						ANALYSES REQUESTED											(X) per JB 8/9/24 MG
SS22-9	01 A-C	7/30/24	1345	S	3	X	X						X				
SS23-9	02		1350			X	X						X				
SS24-9	03		1400			X	X						X				
SS25-9	04		1405			X	X						X				
SS28-9	05		1410			X	X						X		(X)		
SS29-9	06		1355			X								X			
SS30-9	07		1350			X	X						X				
SS31-9	08		1345			X	X						X				
SS32-9	09		0900			X	X						X				
SS33-9	10		0900			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
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office@friedmanandbruya.com

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 2 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing

PO #: 407571.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS22-18	11 A-C	7/30/24	1345	S	3	X	X						X				⊗ per NB MG 8/16 ☒ per NB MG 8/16 HOLD
SS23-18	12		1350			X	X						X	⊗			
SS24-18	13		1400			X	X						X				
SS25-18	14		1405			X	X						X				
SS28-18	15		1410			X	X						X				
SS29-18	16		1355			X								X			
SS30-18	17		1350			X	X						X				
SS31-18	18		1345			X	X						X	☒			
SS32-18	19		0900			X	X						X				
SS33-18	20		0900			X	X						X				

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

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407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 3 of 8 BY/VSBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: #1 Towing

PO # 407527.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
						ANALYSES REQUESTED											
5534-9	21 A-C	7/30/24	0900	S	3	X	X						X				
5535-9	22		0900			X	X						X				
5541-9	23		0910			X	X						X				
5542-9	24		0910			X	X						X				
5543-9	25		0910			X								X			
5544-9	26		0910			X	X						X				
5545-9	27		1210			X	X						X				
5546-9	28		1330			X								X			
5547-9	29		1335			X	X						X				
5550-9	30		1205			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

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407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 4 of 8

Report To Josh Triarwiler
Company PBS
Address 224 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.triarwiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 407572.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As	As		Notes
SS534-18	31 A-C	7/30/24	0900	S	3	X	X						X		(X)		HOLD
SS535-18	32		0900			X	X						X				
SS541-18	33		0910			X	X						X				
SS542-18	34		0910			X	X						X	⊗*			
SS543-18	35		0910			X								X			
SS544-18	36		0910			X	X						X				
SS545-18	37		1210			X	X						X				
SS546-18	38		1330			X								(X)*			
SS547-18	39		1335			X	X						X				
SS550-18	40		1205			X	X						X				

*8/14 MB 8/16

ANALYSES REQUESTED

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Josh Triarwiler	PBS	7/31/24	1620
Received by:		Anh Phan	FBI	07/31/24	16:20
Relinquished by:			Samples received at 1 °C		
Received by:					

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 5 of 8

BY VISES

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB / MS	Cr VI		Notes
SS51-9	41 A-C	7/30/24	1200	S	3	X	X						X		(X)		
SS52-9	42		1210			X								X			
SS53-9	43		1220			X	X						X				
SS54-9	44		1040			X	X						X				
SS55-9	45		1030			X	X						X		(X)		
SS59-9	46		1030			X	X						X				
SS60-9	47		1040			X								X			
SS61-9	48		1050			X	X										
SS63-9	49		1050			X								X			
SS64-9	50		1100			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:				
Received by:				

Received at 1 °C

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407472

SAMPLE CHAIN OF CUSTODY

07/31/24

BY VSBS

Page # 6 of 12

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO # 4075028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
						ANALYSES REQUESTED											per MG 8/16
SS51-18	51 A-C	7/30/24	1200	S	3	X	X						X				D-Pb MG 8/9/24 HOLD
SS52-18	52		1210			X								X			
SS53-18	53		1220			X	X						X	[X]			
SS54-18	54		1040			X	X						X				
SS55-18	55		1030			X	X						X				
SS56-18	56		1030			X	Y						X	⊗			
SS60-18	57		1040			X								X			
SS61-18	58		1050			X	X						X				
SS63-18	59		1050			X								[X]			
SS64-18	60		1100			X	X						X				

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Josh Trierweiler	PBS	7/31/24	1620
Received by:		Anh Pham	FBI	07/31/24	16:20
Relinquished by:			Samples received at 1 °C		
Received by:					

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 2 of 2

By USPS

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email joshua.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	ZCRA 8	Pb/As			Notes
SS71-9	61 A-C	7/30/24	1110	S	3	X	X						X				
SS88-9	62		1315			X	X						X				
SS89-9	63		1320			X	X						X				
SS90-9	64		1325			X								X			
SS101-9	65		1305			X	X						X				
SS102-9	66		1310			X	X						X				
SS62-9	67	7/31/24	1525	S	3	X	X						X				
SS36-9	68	7/31/24	1545	S	3	X								X			

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Josh Trierweiler	PBS	7/31/24	1610
Received by:		Anh Phan	FBT	07/31/24	16:20
Relinquished by:					
Received by:			Samples received at 1 °C		

407472

SAMPLE CHAIN OF CUSTODY

07/31/24 — Page # 8 of 8 — BH/VSBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206-766-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 407571.028
REMARKS: Project specific RLs? - Yes / No
INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB/AS				Notes
						ANALYSES REQUESTED												• per NB 8/15/24
SS24-18	69 A-C	7/30/24	1110	S	3	X	X						X					HOLD
SS88-18	70		1315			X	X	•					X					
SS89-18	71		1320			X	X						X					
SS90-18	72		1325			X								(X)				per NB 8/15/24
SS101-18	73		1305			X	X						X					
SS102-18	74		1310			X	X						X					
SS62-18	75	7/31/24	1535			X	X						X					HOLD
SS36-18	76	7/31/24	1550			X								(X)				~~HOLD~~
														↳ analyze per NB 8/15/24				ME

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Pham	FGI	07/31/24	16:20
Relinquished by:			at 1 °C	
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 407472 CLIENT PBS INITIALS/ AP DATE: 07/31/24

If custody seals are present on cooler, are they intact? ☒ NA ☐ YES ☐ NO

Cooler/Sample temperature 1 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☒ YES ☐ NO

How did samples arrive?
☒ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☒ YES ☐ NO Initials/ Date: JB AUG 8/1
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 0-1 days

Are the samples clearly identified? (explain "no" answer below) ☒ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☒ YES ☐ NO

Were appropriate sample containers used? ☒ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☒ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☒ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☒ Yes ☐ No	☐ Not on COC/label
Date Sampled	☒ Yes ☐ No	☐ Not on COC/label
Time Sampled	☒ Yes ☐ No	☐ Not on COC/label
# of Containers	☒ Yes ☐ No	
Relinquished	☒ Yes ☐ No	
Requested analysis	☒ Yes ☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☒ NA ☐ YES ☐ NO

Number of unused TO15 canisters _____ Number of unused TO17 tubes _____

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
5500 4th Ave S
Seattle, WA 98108

RE: 407472,
Work Order Number: 2408162

August 15, 2024

Attention Michael Erdahl:

Fremont Analytical, Inc, an Alliance Technical Group company, received 3 sample(s) on 8/9/2024 for the analyses presented in the following report.

Hexavalent Chromium by EPA 7196A
Sample Moisture (Percent Moisture)

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Please note, while the appearance of our logo and branding will update, our commitment to accuracy, speed, and customer service remain values celebrated and shared by Alliance Technical Group. Thank you for the opportunity to serve you.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *08/15/2024*

CLIENT: Friedman & Bruya
Project: 407472
Work Order: 2408162

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2408162-001	SS28-9	07/30/2024 2:10 PM	08/09/2024 4:08 PM
2408162-002	SS51-9	07/30/2024 12:00 PM	08/09/2024 4:08 PM
2408162-003	SS55-9	07/30/2024 10:30 AM	08/09/2024 4:08 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2408162**

Date: **8/15/2024**

CLIENT: Friedman & Bruya

Project: 407472

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

CLIENT: Friedman & Bruya
Project: 407472

Lab ID: 2408162-001 **Collection Date:** 7/30/2024 2:10:00 PM
Client Sample ID: **SS28-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93560		Analyst: DI
Percent Moisture	9.45	0.500		wt%	1	8/12/2024 9:14:53 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44830		Analyst: NR
Chromium, Hexavalent	ND	0.546		mg/Kg-dry	1	8/14/2024 12:51:00 PM

Lab ID: 2408162-002 **Collection Date:** 7/30/2024 12:00:00 PM
Client Sample ID: **SS51-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93560		Analyst: DI
Percent Moisture	10.8	0.500		wt%	1	8/12/2024 9:14:53 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44830		Analyst: NR
Chromium, Hexavalent	0.890	0.551		mg/Kg-dry	1	8/14/2024 12:55:00 PM

Lab ID: 2408162-003 **Collection Date:** 7/30/2024 10:30:00 AM
Client Sample ID: **SS55-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93560		Analyst: DI
Percent Moisture	9.62	0.500		wt%	1	8/12/2024 9:14:53 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44830		Analyst: NR
Chromium, Hexavalent	ND	0.525		mg/Kg-dry	1	8/14/2024 1:15:00 PM

Work Order: 2408162
CLIENT: Friedman & Bruya
Project: 407472

QC SUMMARY REPORT

Hexavalent Chromium by EPA 7196A

Sample ID: **MB-44830**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/13/2024**		RunNo: **93637**		
Client ID: **MBLKS**	Batch ID: **44830**					Analysis Date: **8/14/2024**		SeqNo: **1954941**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-44830**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/13/2024**		RunNo: **93637**		
Client ID: **LCSS**	Batch ID: **44830**					Analysis Date: **8/14/2024**		SeqNo: **1954942**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.8	0.500	12.87	0	83.7	65.3	105.3				

Sample ID: **2408162-002ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/13/2024**		RunNo: **93637**		
Client ID: **SS51-9**	Batch ID: **44830**					Analysis Date: **8/14/2024**		SeqNo: **1954945**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.551						0.8897	47.8	30	

Sample ID: **2408162-002AMS1**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/13/2024**		RunNo: **93637**		
Client ID: **SS51-9**	Batch ID: **44830**					Analysis Date: **8/14/2024**		SeqNo: **1954946**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	12.1	0.557	14.34	0.8897	78.5	32	106				

Sample ID: **2408162-002AMS2**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/13/2024**		RunNo: **93637**		
Client ID: **SS51-9**	Batch ID: **44830**					Analysis Date: **8/14/2024**		SeqNo: **1954947**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.4	0.552	14.21	0.8897	67.2	32	106				

Alliance TECHNICAL GROUP

Sample Log-In Check List

Client Name:	FB	Work Order Number:	2408162
Logged by:	Morgan Wilson	Date Received:	8/9/2024 4:08:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	3.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 5500 4th Ave S

City, State, ZIP Seattle, WA 98108

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER
Alliance Technical Group

PROJECT NAME/NO.	PO #
407472	E-340

REMARKS

EIM 24108162

TURNAROUND TIME
☒ Standard TAT
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Return samples
Will call with instructions

						ANALYSES REQUESTED										
Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	EPH	VPH	Cr VI								Notes
SS28-9		7/30/2024	1410	soil	1			x								
SS51-9		7/30/2024	1200	soil	1			x								
SS55-9		7/30/2024	1030	soil	1			x								

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	8/9/24	1243
Received by:		Jack Hawthorne	ATG	8/9/24	1608
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

August 9, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

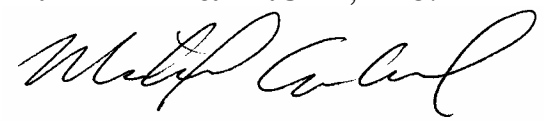
Dear Mr Trierweiler :

Included are the results from the testing of material submitted on July 31, 2024 from the A1 Towing 40757.028, F&BI 407472 project. There are 78 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0809R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 31, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 407472 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
407472 -01	SS22-9
407472 -02	SS23-9
407472 -03	SS24-9
407472 -04	SS25-9
407472 -05	SS28-9
407472 -06	SS29-9
407472 -07	SS30-9
407472 -08	SS31-9
407472 -09	SS32-9
407472 -10	SS33-9
407472 -11	SS22-18
407472 -12	SS23-18
407472 -13	SS24-18
407472 -14	SS25-18
407472 -15	SS28-18
407472 -16	SS29-18
407472 -17	SS30-18
407472 -18	SS31-18
407472 -19	SS32-18
407472 -20	SS33-18
407472 -21	SS34-9
407472 -22	SS35-9
407472 -23	SS41-9
407472 -24	SS42-9
407472 -25	SS43-9
407472 -26	SS44-9
407472 -27	SS45-9
407472 -28	SS46-9
407472 -29	SS47-9
407472 -30	SS50-9
407472 -31	SS34-18
407472 -32	SS35-18
407472 -33	SS41-18
407472 -34	SS42-18
407472 -35	SS43-18
407472 -36	SS44-18
407472 -37	SS45-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
407472 -38	SS46-18
407472 -39	SS47-18
407472 -40	SS50-18
407472 -41	SS51-9
407472 -42	SS52-9
407472 -43	SS53-9
407472 -44	SS54-9
407472 -45	SS55-9
407472 -46	SS59-9
407472 -47	SS61-9
407472 -48	SS61-9
407472 -49	SS63-9
407472 -50	SS64-9
407472 -51	SS51-18
407472 -52	SS52-18
407472 -53	SS53-18
407472 -54	SS54-18
407472 -55	SS55-18
407472 -56	SS59-18
407472 -57	SS60-18
407472 -58	SS61-18
407472 -59	SS63-18
407472 -60	SS64-18
407472 -61	SS74-9
407472 -62	SS88-9
407472 -63	SS89-9
407472 -64	SS90-9
407472 -65	SS101-9
407472 -66	SS102-9
407472 -67	SS62-9
407472 -68	SS36-9
407472 -69	SS74-18
407472 -70	SS88-18
407472 -71	SS89-18
407472 -72	SS90-18
407472 -73	SS101-18
407472 -74	SS102-18
407472 -75	SS62-18
407472 -76	SS36-18

All quality control requirements were acceptable.

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/02/24
Date Analyzed: 08/02/24, 08/03/24, and 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS22-9 407472-01	<5	82
SS23-9 407472-02	<5	83
SS24-9 407472-03	<5	89
SS25-9 407472-04	<5	82
SS28-9 407472-05	<5	83
SS30-9 407472-07	<5	77
SS31-9 407472-08	<5	89
SS32-9 407472-09	<5	77
SS33-9 407472-10	<5	88
SS34-9 407472-21	<5	82

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/02/24
Date Analyzed: 08/02/24, 08/03/24, and 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS35-9 407472-22	<5	81
SS41-9 407472-23	<5	84
SS42-9 407472-24	<5	82
SS44-9 407472-26	<5	84
SS45-9 407472-27	<5	80
SS47-9 407472-29	<5	85
SS50-9 407472-30	<5	85
SS51-9 407472-41	<5	85
SS53-9 407472-43	<5	83
SS54-9 407472-44	<5	94
SS55-9 407472-45	<5	84

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/02/24
Date Analyzed: 08/02/24, 08/03/24, and 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS59-9 407472-46	<5	89
SS61-9 407472-48	<5	86
SS64-9 407472-50	<5	90
SS74-9 407472-61	<5	88
SS88-9 407472-62	<5	83
SS89-9 407472-63 1/0.83	<5	81
SS101-9 407472-65	<5	88
SS102-9 407472-66	<5	85
SS62-9 407472-67	<5	89
Method Blank 04-1728 MB	<5	83
Method Blank 04-1729 MB	<5	85

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/01/24
Date Analyzed: 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS22-9 407472-01	<50	<250	110
SS23-9 407472-02	<50	<250	109
SS24-9 407472-03	<50	<250	106
SS25-9 407472-04	<50	<250	110
SS28-9 407472-05	<50	<250	111
SS29-9 407472-06	<50	<250	107
SS30-9 407472-07	<50	<250	111
SS31-9 407472-08	81 x	<250	115
SS32-9 407472-09	<50	<250	121
SS33-9 407472-10	<50	<250	118
SS34-9 407472-21	<50	<250	114
SS35-9 407472-22	<50	<250	111

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/01/24
Date Analyzed: 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS41-9 407472-23	<50	<250	114
SS42-9 407472-24	<50	<250	112
SS43-9 407472-25	<50	<250	108
SS44-9 407472-26	<50	1,300	109
SS45-9 407472-27	<50	<250	112
SS46-9 407472-28	<50	<250	114
SS47-9 407472-29	<50	<250	110
SS50-9 407472-30	<50	<250	118
SS51-9 407472-41	<50	<250	122
SS52-9 407472-42	<50	<250	119
SS53-9 407472-43	<50	<250	117
SS54-9 407472-44	<50	<250	118

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/01/24
Date Analyzed: 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS55-9 407472-45	<50	<250	118
SS59-9 407472-46	<50	<250	120
SS61-9 407472-47	<50	<250	117
SS61-9 407472-48	<50	<250	117
SS63-9 407472-49	<50	<250	121
SS64-9 407472-50	<50	<250	120
SS74-9 407472-61	<50	<250	119
SS88-9 407472-62	<50	<250	114
SS89-9 407472-63	<50	<250	122
SS90-9 407472-64	<50	<250	120
SS101-9 407472-65	<50	<250	118
SS102-9 407472-66	<50	<250	120

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472
Date Extracted: 08/01/24
Date Analyzed: 08/02/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS62-9 407472-67	<50	<250	115
SS36-9 407472-68	<50	<250	119
Method Blank 04-1798 MB	<50	<250	107
Method Blank 04-1799 MB	<50	<250	124

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS22-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-01
Date Analyzed:	08/01/24	Data File:	407472-01.129
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.8
Barium	72
Cadmium	<1
Lead	16
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS22-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-01 x5
Date Analyzed:	08/01/24	Data File:	407472-01 x5.132
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	22

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS23-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-02
Date Analyzed:	08/01/24	Data File:	407472-02.135
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	14
Barium	81
Cadmium	<1
Lead	27
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS23-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-02 x5
Date Analyzed:	08/05/24	Data File:	407472-02 x5.245
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	21

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS24-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-03
Date Analyzed:	08/01/24	Data File:	407472-03.136
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Barium	82
Cadmium	<1
Lead	6.6
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS24-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-03 x5
Date Analyzed:	08/05/24	Data File:	407472-03 x5.248
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	35

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS25-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-04
Date Analyzed:	08/01/24	Data File:	407472-04.137
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.9
Barium	54
Cadmium	<1
Chromium	15
Lead	41
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS28-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-05
Date Analyzed:	08/01/24	Data File:	407472-05.138
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.7
Barium	75
Cadmium	<1
Lead	15
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS28-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-05 x5
Date Analyzed:	08/05/24	Data File:	407472-05 x5.249
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	30

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS29-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-06
Date Analyzed:	08/01/24	Data File:	407472-06.141
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.0
Lead	8.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS30-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-07
Date Analyzed:	08/01/24	Data File:	407472-07.142
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.9
Barium	48
Cadmium	<1
Chromium	13
Lead	13
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS31-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-08
Date Analyzed:	08/01/24	Data File:	407472-08.143
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.2
Barium	47
Cadmium	<1
Chromium	14
Lead	9.6
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS32-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-09
Date Analyzed:	08/01/24	Data File:	407472-09.144
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.1
Barium	79
Cadmium	<1
Lead	6.4
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS32-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-09 x5
Date Analyzed:	08/05/24	Data File:	407472-09 x5.250
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	38

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS33-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-10
Date Analyzed:	08/01/24	Data File:	407472-10.145
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Barium	89
Cadmium	<1
Lead	7.1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS33-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-10 x5
Date Analyzed:	08/05/24	Data File:	407472-10 x5.251
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	36

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS34-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-21
Date Analyzed:	08/01/24	Data File:	407472-21.146
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	21
Barium	91
Cadmium	<1
Chromium	30
Lead	30
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS35-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-22
Date Analyzed:	08/01/24	Data File:	407472-22.147
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.0
Barium	80
Cadmium	<1
Lead	39
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS35-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-22 x5
Date Analyzed:	08/05/24	Data File:	407472-22 x5.252
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	25

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS41-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-23
Date Analyzed:	08/01/24	Data File:	407472-23.148
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.4
Barium	65
Cadmium	<1
Chromium	26
Lead	93
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS42-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-24
Date Analyzed:	08/01/24	Data File:	407472-24.149
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.9
Barium	78
Cadmium	<1
Lead	5.7
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS42-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-24 x5
Date Analyzed:	08/05/24	Data File:	407472-24 x5.253
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	30

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS43-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-25
Date Analyzed:	08/01/24	Data File:	407472-25.150
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.1
Lead	7.2

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS44-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-26
Date Analyzed:	08/01/24	Data File:	407472-26.153
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.7
Barium	25
Cadmium	<1
Chromium	10
Lead	4.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS45-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-27
Date Analyzed:	08/01/24	Data File:	407472-27.154
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.9
Barium	84
Cadmium	<1
Lead	5.4
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS45-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-27 x5
Date Analyzed:	08/05/24	Data File:	407472-27 x5.254
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	37

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS46-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-28
Date Analyzed:	08/01/24	Data File:	407472-28.155
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	12
Lead	39

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS47-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-29
Date Analyzed:	08/01/24	Data File:	407472-29.156
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.4
Barium	74
Cadmium	<1
Lead	6.2
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS47-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-29 x5
Date Analyzed:	08/05/24	Data File:	407472-29 x5.255
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	31

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS50-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-30
Date Analyzed:	08/01/24	Data File:	407472-30.157
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.1
Barium	86
Cadmium	<1
Lead	11
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS50-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-30 x5
Date Analyzed:	08/05/24	Data File:	407472-30 x5.256
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	32

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS51-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-41
Date Analyzed:	08/01/24	Data File:	407472-41.171
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.6
Barium	89
Cadmium	<1
Lead	5.3
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS51-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-41 x5
Date Analyzed:	08/01/24	Data File:	407472-41 x5.176
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	39

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS52-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-42
Date Analyzed:	08/01/24	Data File:	407472-42.179
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Lead	9.2

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS53-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-43
Date Analyzed:	08/01/24	Data File:	407472-43.180
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.1
Barium	83
Cadmium	<1
Lead	9.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS53-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-43 x5
Date Analyzed:	08/05/24	Data File:	407472-43 x5.257
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	33

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS54-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-44
Date Analyzed:	08/01/24	Data File:	407472-44.181
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.9
Barium	81
Cadmium	<1
Lead	4.9
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS54-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-44 x5
Date Analyzed:	08/05/24	Data File:	407472-44 x5.260
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	36

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS55-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-45
Date Analyzed:	08/01/24	Data File:	407472-45.182
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.4
Barium	90
Cadmium	<1
Lead	8.1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS55-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-45 x5
Date Analyzed:	08/06/24	Data File:	407472-45 x5.261
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	36

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS59-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-46
Date Analyzed:	08/01/24	Data File:	407472-46.183
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.1
Barium	110
Cadmium	<1
Lead	11
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS59-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-46 x5
Date Analyzed:	08/06/24	Data File:	407472-46 x5.262
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	35

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS61-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-47
Date Analyzed:	08/01/24	Data File:	407472-47.184
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.1
Lead	12

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS63-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-49
Date Analyzed:	08/01/24	Data File:	407472-49.188
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.8
Lead	7.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS64-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-50
Date Analyzed:	08/01/24	Data File:	407472-50.189
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.1
Barium	81
Cadmium	<1
Lead	14
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS64-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-50 x5
Date Analyzed:	08/06/24	Data File:	407472-50 x5.264
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	30

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS74-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-61
Date Analyzed:	08/01/24	Data File:	407472-61.190
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	17
Barium	85
Cadmium	<1
Lead	29
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS74-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-61 x5
Date Analyzed:	08/06/24	Data File:	407472-61 x5.265
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	13

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS88-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-62
Date Analyzed:	08/01/24	Data File:	407472-62.191
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.6
Barium	52
Cadmium	<1
Lead	18
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS88-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-62 x5
Date Analyzed:	08/06/24	Data File:	407472-62 x5.266
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	18

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS89-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-63
Date Analyzed:	08/01/24	Data File:	407472-63.192
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.8
Barium	76
Cadmium	1.7
Lead	55
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS89-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-63 x5
Date Analyzed:	08/06/24	Data File:	407472-63 x5.267
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	31

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS90-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-64
Date Analyzed:	08/01/24	Data File:	407472-64.193
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.7
Lead	4.9

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS101-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-65
Date Analyzed:	08/01/24	Data File:	407472-65.194
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.2
Barium	41
Cadmium	<1
Lead	8.4
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS101-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-65 x5
Date Analyzed:	08/06/24	Data File:	407472-65 x5.268
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	20

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS102-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-66
Date Analyzed:	08/01/24	Data File:	407472-66.195
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Barium	58
Cadmium	<1
Lead	13
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS102-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-66 x5
Date Analyzed:	08/06/24	Data File:	407472-66 x5.269
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	28

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS62-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-67
Date Analyzed:	08/01/24	Data File:	407472-67.196
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.8
Barium	80
Cadmium	<1
Lead	18
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS62-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-67 x5
Date Analyzed:	08/06/24	Data File:	407472-67 x5.272
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	16

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS36-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-68
Date Analyzed:	08/01/24	Data File:	407472-68.197
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	11
Lead	130

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	I4-622 mb
Date Analyzed:	08/01/24	Data File:	I4-622 mb.097
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	I4-623 mb
Date Analyzed:	08/01/24	Data File:	I4-623 mb.099
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 407472-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	87	70-130

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 407472-23 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	87	70-130

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 407472-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	98	106	64-136	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	112	78-121

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 407472-41 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	112	64-136	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	106	78-121

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 407472-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	6.00	104 b	104 b	75-125	0 b
Barium	mg/kg (ppm)	50	65.5	109 b	106 b	75-125	3 b
Cadmium	mg/kg (ppm)	10	<5	101	104	75-125	3
Chromium	mg/kg (ppm)	50	19.9	97 b	93 b	75-125	4 b
Lead	mg/kg (ppm)	50	14.4	112 b	108 b	75-125	4 b
Mercury	mg/kg (ppm	5	<5	94	95	75-125	1
Selenium	mg/kg (ppm)	5	<5	87	90	75-125	3
Silver	mg/kg (ppm)	10	<5	99	104	75-125	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	94	80-120
Barium	mg/kg (ppm)	50	92	80-120
Cadmium	mg/kg (ppm)	10	99	80-120
Chromium	mg/kg (ppm)	50	96	80-120
Lead	mg/kg (ppm)	50	96	80-120
Mercury	mg/kg (ppm)	5	95	80-120
Selenium	mg/kg (ppm)	5	98	80-120
Silver	mg/kg (ppm)	10	100	80-120

Date of Report: 08/09/24
Date Received: 07/31/24
Project: A1 Towing 40757.028, F&BI 407472

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 407472-41 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<5	82	82	75-125	0
Barium	mg/kg (ppm)	50	78.0	112 b	102 b	75-125	9 b
Cadmium	mg/kg (ppm)	10	<5	88	87	75-125	1
Chromium	mg/kg (ppm)	50	34.5	100 b	93 b	75-125	7 b
Lead	mg/kg (ppm)	50	<5	102	100	75-125	2
Mercury	mg/kg (ppm	5	<5	100	98	75-125	2
Selenium	mg/kg (ppm)	5	<5	84	87	75-125	4
Silver	mg/kg (ppm)	10	<5	89	88	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	93	80-120
Barium	mg/kg (ppm)	50	90	80-120
Cadmium	mg/kg (ppm)	10	99	80-120
Chromium	mg/kg (ppm)	50	95	80-120
Lead	mg/kg (ppm)	50	96	80-120
Mercury	mg/kg (ppm)	5	93	80-120
Selenium	mg/kg (ppm)	5	95	80-120
Silver	mg/kg (ppm)	10	99	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 1 of 8 B4/VSBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
						ANALYSES REQUESTED											
SS22-9	01 A-C	7/30/24	1345	S	3	X	X						X				
SS23-9	02		1350			X	X						X				
SS24-9	03		1400			X	X						X				
SS25-9	04		1405			X	X						X				
SS28-9	05		1410			X	X						X				
SS29-9	06		1355			X								X			
SS30-9	07		1350			X	X						X				
SS31-9	08		1345			X	X						X				
SS32-9	09		0900			X	X						X				
SS33-9	10		0900			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

BY/VS BS

Page # 2 of 8

Report To Josh Trierweiler

Company FBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME

☑ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / MS			Notes
SS22-18	11 A-C	7/30/24	1345	S	3	X	X						X				HOLD
SS23-18	12		1350			X	X						X				
SS24-18	13		1400			X	X						X				
SS25-18	14		1405			X	X						X				
SS28-18	15		1410			X	X						X				
SS29-18	16		1355			X								X			
SS30-18	17		1350			X	X						X				
SS31-18	18		1345			X	X						X				
SS32-18	19		0900			X	X						X				
SS33-18	20		0900			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	FBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 3 of 8

B4/VSBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.566.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: #1 Towing

PO #: 240757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
SS34-9	21 A-C	7/30/24	0900	S	3	X	X						X				
SS35-9	22		0900			X	X						X				
SS41-9	23		0910			X	X						X				
SS42-9	24		0910			X	X						X				
SS43-9	25		0910			X								X			
SS44-9	26		0910			X	X						X				
SS45-9	27		1210			X	X						X				
SS46-9	28		1330			X								X			
SS47-9	29		1335			X	X						X				
SS50-9	30		1205			X	X						X				

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

407472

SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 4 of 8 (B4/VSBS)

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
A1 Towing	40757.028
REMARKS Project specific RLs? - Yes / No	INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
SS34-18	31 A-C	7/30/24	0900	S	3	X	X						X				HOLD
SS35-18	32		0900			X	X						X				
SS41-18	33		0910			X	X						X				
SS42-18	34		0910			X	X						X				
SS43-18	35		0910			X								X			
SS44-18	36		0910			X	X						X				
SS45-18	37		1210			X	X						X				
SS46-18	38		1330			X								X			
SS47-18	39		1335			X	X						X				
SS50-18	40		1205			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
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office@friedmanandbruya.com

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SAMPLE CHAIN OF CUSTODY

07/31/24

BY VSBS

Page # 5 of 8

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / MTS			Notes
SS51-9	41 A-C	7/30/24	1200	S	3	X	X						X				
SS52-9	42		1210			X								X			
SS53-9	43		1220			X	X						X				
SS54-9	44		1040			X	X						X				
SS55-9	45		1030			X	X						X				
SS59-9	46		1030			X	X						X				
SS60-9	47		1040			X								X			
SS61-9	48		1050			X	X										
SS63-9	49		1050			X								X			
SS64-9	50		1100			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:				
Received by:				

Temp blank received at 1 °C

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office@friedmanandbruya.com

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SAMPLE CHAIN OF CUSTODY

07/31/24

BY VSBS

Page # 6 of 12

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 407547.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	TB/AS			Notes
SS51-18	51 A-C	7/30/24	1200	S	3	X	X						X				HOLD
SS52-18	52		1210			X								X			
SS53-18	53		1220			X	X						X				
SS54-18	54		1040			X	X						X				
SS55-18	55		1030			X	X						X				
SS59-18	56		1030			X	X						X				
SS60-18	57		1040			X								X			
SS61-18	58		1050			X	X						X				
SS63-18	59		1050			X								X			
SS64-18	60		1100			X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 oC		
Received by:				

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office@friedmanandbruya.com

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SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 7 of 8

BM/USBO

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email joshua.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
5574-9	61 A-C	7/30/24	1110	S	3	X	X						X				
5588-9	62		1315			X	X						X				
5589-9	63		1320			X	X						X				
5590-9	64		1325			X								X			
55101-9	65		1305			X	X						X				
55102-9	66		1310			X	X						X				
5562-9	67	7/31/24	1525	S	3	X	X						X				
5536-9	68	7/31/24	1545	S	3	X								X			

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:				
Received by:		Samples received at 1 °C		

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SAMPLE CHAIN OF CUSTODY

07/31/24

Page # 8 of 8

BH/VSBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
A1 Towing	40757.028
REMARKS Project specific RLs? - Yes / No	INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb 145			Notes
SS74-18	69 A-C	7/30/24	1110	S	3	X	X						X				HOLD
SS88-18	70		1315			X	X						X				
SS89-18	71		1320			X	X						X				
SS90-18	72		1325			X								X			
SS101-18	73		1305			X	X						X				
SS102-18	74		1310			X	X						X				
SS62-18	75	7/31/24	1535			X	X						X				HOLD
SS36-18	76	7/31/24	1550			X								X			HOLD

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	7/31/24	1620
Received by:	Anh Phan	FBI	07/31/24	16:20
Relinquished by:		Samples received at 1 °C		
Received by:				

Friedman & Bruya, Inc.
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(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 407472 CLIENT PBS INITIALS/ AP DATE: 07/31/24

If custody seals are present on cooler, are they intact? ☒ NA ☐ YES ☐ NO

Cooler/Sample temperature 1 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☒ YES ☐ NO

How did samples arrive?
☒ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☒ YES ☐ NO Initials/ Date: JB AUG 8/1
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 0-1 days

Are the samples clearly identified? (explain "no" answer below) ☒ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☒ YES ☐ NO

Were appropriate sample containers used? ☒ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☒ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☒ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☐ Yes ☐ No	☐ Not on COC/label
Date Sampled	☐ Yes ☐ No	☐ Not on COC/label
Time Sampled	☐ Yes ☐ No	☐ Not on COC/label
# of Containers	☐ Yes ☐ No	
Relinquished	☐ Yes ☐ No	
Requested analysis	☐ Yes ☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☒ NA ☐ YES ☐ NO

Number of unused TO15 canisters _____ **Number of unused TO17 tubes** _____

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

August 26, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Trierweiler:

Included are the additional results from the testing of material submitted on August 2, 2024 from the A1 Towing 40757.028, F&BI 408036 project. There are 18 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0826R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 2, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 408036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
408036 -01	SS37-9
408036 -02	SS38-9
408036 -03	SS39-9
408036 -04	SS40-9
408036 -05	SS26-9
408036 -06	SS27-9
408036 -07	SS48-9
408036 -08	SS49-9
408036 -09	SS56-9
408036 -10	SS57-9
408036 -11	SS26-18
408036 -12	SS27-18
408036 -13	SS37-18
408036 -14	SS28-18
408036 -15	SS39-18
408036 -16	SS40-18
408036 -17	SS48-18
408036 -18	SS49-18
408036 -19	SS56-18
408036 -20	SS57-18
408036 -21	SS58-9
408036 -22	SS65-9
408036 -23	SS87-9
408036 -24	SS94-9
408036 -25	SS93-9
408036 -26	SS92-9
408036 -27	SS91-9
408036 -28	SS98-9
408036 -29	SS103-9
408036 -30	SS104-9
408036 -31	SS58-18
408036 -32	SS65-18
408036 -33	SS87-18
408036 -34	SS94-18
408036 -35	SS93-18
408036 -36	SS92-18
408036 -37	SS91-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
408036 -38	SS98-18
408036 -39	SS103-18
408036 -40	SS104-18
408036 -41	SS105-9
408036 -42	SS106-9
408036 -43	SS107-9
408036 -44	SS108-9
408036 -45	SS109-9
408036 -46	SS110-9
408036 -47	SS111-9
408036 -48	SS112-9
408036 -49	SS113-9
408036 -50	SS114-9
408036 -51	SS105-18
408036 -52	SS106-18
408036 -53	SS107-18
408036 -54	SS108-18
408036 -55	SS109-18
408036 -56	SS110-18
408036 -57	SS111-18
408036 -58	SS112-18
408036 -59	SS113-18
408036 -60	SS114-18
408036 -61	SS115-9
408036 -62	SS115-18

Sample SS113-9 were sent to Alliance Technical Group for hexavalent chromium analysis. The report is enclosed.

The 8021B BTEX analysis of samples SS98-18 and SS112-18 were requested outside of the holding time. The data were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 08/26/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/22/24
Date Analyzed: 08/23/24

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES
USING EPA METHOD 8021B**

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Surrogate (% Recovery) (Limit 50-150)
SS98-18 ht 408036-38	<0.02	<0.02	<0.02	<0.06	97
SS112-18 ht 408036-58	<0.02	<0.02	<0.02	<0.06	90
Method Blank 04-1948 MB	<0.02	<0.02	<0.02	<0.06	101

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/19/24	Lab ID:	408036-33
Date Analyzed:	08/19/24	Data File:	408036-33.106
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	1.9

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS105-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/16/24	Lab ID:	408036-51
Date Analyzed:	08/16/24	Data File:	408036-51.113
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	11
Lead	18

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS109-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/16/24	Lab ID:	408036-55
Date Analyzed:	08/19/24	Data File:	408036-55.085
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.7
Lead	11

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS113-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/13/24	Lab ID:	408036-59
Date Analyzed:	08/13/24	Data File:	408036-59.167
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	76

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS115-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/16/24	Lab ID:	408036-62
Date Analyzed:	08/16/24	Data File:	408036-62.114
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.0
Lead	5.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/14/24	Lab ID:	I4-668 mb
Date Analyzed:	08/13/24	Data File:	I4-668 mb.137
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/16/24	Lab ID:	I4-678 mb
Date Analyzed:	08/16/24	Data File:	I4-678 mb.096
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/16/24	Lab ID:	I4-678 mb
Date Analyzed:	08/16/24	Data File:	I4-678 mb.096
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/19/24	Lab ID:	I4-682 mb
Date Analyzed:	08/19/24	Data File:	I4-682 mb.072
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1

Date of Report: 08/26/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES USING EPA METHOD 8021B

Laboratory Code: 408228-05 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1.0	100	70-130
Toluene	mg/kg (ppm)	1.0	89	70-130
Ethylbenzene	mg/kg (ppm)	1.0	90	70-130
Xylenes	mg/kg (ppm)	3.0	90	70-130

Date of Report: 08/26/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408199-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	13.0	96 b	100 b	75-125	4 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	96	80-120

Date of Report: 08/26/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 407472-12 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	9.16	78 b	72 b	75-125	8 b
Lead	mg/kg (ppm)	50	9.60	89	86	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	93	80-120
Lead	mg/kg (ppm)	50	96	80-120

Date of Report: 08/26/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 407472-12 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	9.16	78 b	72 b	75-125	8 b
Lead	mg/kg (ppm)	50	9.60	89	86	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	93	80-120
Lead	mg/kg (ppm)	50	96	80-120

Date of Report: 08/26/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408188-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Cadmium	mg/kg (ppm)	10	<1	81	90	75-125	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Cadmium	mg/kg (ppm)	10	93	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/VSBS

Page # 1 of 8

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address PBS

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 4057.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
5537-9	01A-C	8/1/24	1020	5	3	X								X			
5538-9	02		1030			X								X			
5539-9	03		1045			X								X			
5540-9	04		1055			X								X			
5526-9	05		1255			X	X						X				
5527-9	06		1310			X	X						X				
5548-9	07		1320			X	X						X				
5549-9	08		1335			X								X			Sample labeled 5544-9 EMB 8/2
5556-9	09		1120			X								X			
5557-9	10		1130			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at Ø °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 2 of 8

14/15BS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS26-18	11A-C	8/1/24	~~1020~~ 1300	S	3	X	X						X				HOLD
SS27-18	12		1315			X	X						X				
SS37-18	13		1020			X								X			
SS38-18	14		1035			X								X			
SS39-18	15		1050			X								X			
SS40-18	16		1100			X								X			
SS48-18	17		1325			X	X						X				
SS49-18	18		1335			X								X			
SS56-18	19		1125			X								X			
SS57-18	20		1140			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 3 of 8 — 114/USBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
AI Towing	40757.028
REMARKS Project specific RLs? - Yes / No	INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Metals	Pb			Notes
SS58-9	21A-C	8/1/24	1110	S	3	X								X			
SS65-9	22		1350			X								X			
SS87-9	23		1405			X	X						X				
SS94-9	24		1410			X	X						X				
SS93-9	25		1420			X	X						X				
SS92-9	26		1430			X	X						X				
SS91-9	27		1435			X								X			
SS98-9	28		1455			X								X			
SS103-9	29		1550			X	X						X				
SS104-9	30		1605			X								X			

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Josh Trierweiler	PBS	8/2/24	1020
Received by:		Anh Phan	FBI	08/02/24	10:20
Relinquished by:			Samples received at 0 °C		
Received by:					

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 4 of 8

MW/VSBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@upsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☑ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB/AS	cadmium		● - per NB 08/16/24 Notes STD TAT
5558-18	31A-C	8/1/24	1115	5	3	X								X			HOLD
5565-18	32		1355			X								X			
5587-18	33		1405			X	X						X		●		
5594-18	34		1415			X	X						X				
5593-18	35		1425			X	X						X				
5592-18	36		1430			X	X						X				
5591-18	37		1440			X								X			
5598-18	38		1455			X	●							X			
55103-18	39		1555			X	X						X				
55104-18	40		1610			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 5 of 8

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Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.726.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / AS	Cr VI		Notes
SS105-9	41 A-C	8/1/24	1615	S	3	X								X			A-Cr VI per
SS106-9	42		1625			X								X			NB 08/14/24 ME
SS107-9	43		1635			X								X			
SS108-9	44		1700			X								X			
SS109-9	45		1645			X								X			
SS110-9	46		1540			X								X			
SS111-9	47		1750			X	X						X				
SS112-9	48		1740			X								X			
SS113-9	49		1730			X	X						X		A		
SS114-9	50		1720			X								X			

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	F&T	08/02/24	10:20
Relinquished by:		Samples received at 8 °C		
Received by:				

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SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 6 of 8

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7609 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS105-18	51A-C	8/1/24	1615	S	3	X								X*			HOLD
SS106-18	52		1630			X								X			
SS107-18	53		1635			X								X			
SS108-18	54		1700			X								X			
SS109-18	55		1650			X								(X)			- analyze per NB
SS110-18	5C		~~1540~~ 1545			X								X			8/15/24 at
SS111-18	57		1750			X	X						X				
SS112-18	58		1740			X		●						X			
SS113-18	59		1735			X	X						X	✓			
SS114-18	60		1725			X								X			

ANALYSES REQUESTED

✓ - Lead per NB

Notes: 8/12 5 DD TAT; 8/16

• - per NB 8/12/24

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FDI	08/02/24	10:20
Relinquished by:		Samples received at ∅ °C		
Received by:				

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SAMPLE CHAIN OF CUSTODY

08/04/24
02

Page # 7 of 14/1985

Report To Josh Trierweiler
Company PBS
Address 214 E Baker St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8				Notes
55115-9	61A-C	8/1/24	1710	S	3	X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 8 of 8 M4/VS85

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA-8	1S/PB			⊗M6 8/16 Notes
SS115-18	62A-C	8/1/24	1715	S	3	X	X							⊗			HOLD

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FDI	08/02/24	10:20
Relinquished by:		Samples received at Ø °C		
Received by:				

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info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
5500 4th Ave S
Seattle, WA 98108

RE: 408036,
Work Order Number: 2408262

August 21, 2024

Attention Michael Erdahl:

Fremont Analytical, Inc, an Alliance Technical Group company, received 1 sample(s) on 8/15/2024 for the analyses presented in the following report.

Hexavalent Chromium by EPA 7196A
Sample Moisture (Percent Moisture)

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Please note, while the appearance of our logo and branding will update, our commitment to accuracy, speed, and customer service remain values celebrated and shared by Alliance Technical Group. Thank you for the opportunity to serve you.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *08/21/2024*

CLIENT: Friedman & Bruya
Project: 408036
Work Order: 2408262

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2408262-001	SS113-9	08/01/2024 5:30 PM	08/15/2024 1:39 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2408262**

Date: **8/21/2024**

CLIENT: Friedman & Bruya

Project: 408036

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2408262**
Date Reported: **8/21/2024**

CLIENT: Friedman & Bruya
Project: 408036

Lab ID: 2408262-001 **Collection Date:** 8/1/2024 5:30:00 PM
Client Sample ID: **SS113-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93745		Analyst: EC
Percent Moisture	7.36	0.500		wt%	1	8/20/2024 8:35:27 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44892		Analyst: NR
Chromium, Hexavalent	ND	0.524		mg/Kg-dry	1	8/19/2024 4:40:00 PM

Work Order: 2408262
CLIENT: Friedman & Bruya
Project: 408036

QC SUMMARY REPORT

Hexavalent Chromium by EPA 7196A

Sample ID: **MB-44892**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **MBLKS**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957574**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-44892**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **LCSS**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957575**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.8	0.500	12.87	0	83.5	65.3	105.3				

Sample ID: **2408218-013ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957577**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.677						0		30	

Sample ID: **2408218-013AMS1**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957578**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	13.3	0.666	17.14	0	77.8	32	106				

Sample ID: **2408218-013AMS2**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957579**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	12.3	0.679	17.48	0	70.6	32	106				

Sample Log-In Check List

Client Name:	FB	Work Order Number:	2408262
Logged by:	Lyann Rivera	Date Received:	8/15/2024 1:39:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	6.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2408262

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 5500 4th Ave S

City, State, ZIP Seattle, WA 98108

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER
Alliance Technical Group

PROJECT NAME/NO.	PO #
408036	E-344

REMARKS

EIM and EQuIS 4

TURNAROUND TIME
☒ Standard TAT
☐ RUSH____
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Return samples
Will call with instructions

						ANALYSES REQUESTED										
Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	EPH	VPH	Cr VI								Notes
SS113-9		8/1/2024	1730	soil	1			x								

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	8/15/24	09:12
Received by:		Briana Ballard	ATG	8/15	1:39 PM
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

September 17, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Trierweiler :

Included are the additional results from the testing of material submitted on August 2, 2024 from the A1 Towing 40757.028, F&BI 408036 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0917R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 2, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 408036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
408036 -01	SS37-9
408036 -02	SS38-9
408036 -03	SS39-9
408036 -04	SS40-9
408036 -05	SS26-9
408036 -06	SS27-9
408036 -07	SS48-9
408036 -08	SS49-9
408036 -09	SS56-9
408036 -10	SS57-9
408036 -11	SS26-18
408036 -12	SS27-18
408036 -13	SS37-18
408036 -14	SS28-18
408036 -15	SS39-18
408036 -16	SS40-18
408036 -17	SS48-18
408036 -18	SS49-18
408036 -19	SS56-18
408036 -20	SS57-18
408036 -21	SS58-9
408036 -22	SS65-9
408036 -23	SS87-9
408036 -24	SS94-9
408036 -25	SS93-9
408036 -26	SS92-9
408036 -27	SS91-9
408036 -28	SS98-9
408036 -29	SS103-9
408036 -30	SS104-9
408036 -31	SS58-18
408036 -32	SS65-18
408036 -33	SS87-18
408036 -34	SS94-18
408036 -35	SS93-18
408036 -36	SS92-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
408036 -37	SS91-18
408036 -38	SS98-18
408036 -39	SS103-18
408036 -40	SS104-18
408036 -41	SS105-9
408036 -42	SS106-9
408036 -43	SS107-9
408036 -44	SS108-9
408036 -45	SS109-9
408036 -46	SS110-9
408036 -47	SS111-9
408036 -48	SS112-9
408036 -49	SS113-9
408036 -50	SS114-9
408036 -51	SS105-18
408036 -52	SS106-18
408036 -53	SS107-18
408036 -54	SS108-18
408036 -55	SS109-18
408036 -56	SS110-18
408036 -57	SS111-18
408036 -58	SS112-18
408036 -59	SS113-18
408036 -60	SS114-18
408036 -61	SS115-9
408036 -62	SS115-18

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS49-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-18
Date Analyzed:	09/11/24	Data File:	408036-18.080
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.4
Lead	7.4

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS57-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-20
Date Analyzed:	09/11/24	Data File:	408036-20.088
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.4
Lead	6.7

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-33 x5
Date Analyzed:	09/12/24	Data File:	408036-33 x5.146
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	14
Lead	94

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS94-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-34
Date Analyzed:	09/11/24	Data File:	408036-34.090
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.3
Lead	4.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	Not Applicable	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	I4-740 mb2
Date Analyzed:	09/11/24	Data File:	I4-740 mb2.078
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 09/17/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 409096-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	5.56	137 b	117 b	75-125	16 b
Lead	mg/kg (ppm)	50	39.8	118 b	75 b	75-125	45 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	98	80-120
Lead	mg/kg (ppm)	50	95	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/USB5

Page # 1 of 8

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address PBS

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 4057.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb			Notes
						ANALYSES REQUESTED											
5537-9	01A-C	8/1/24	1020	5	3	X								X			per NB 9/10/24 ME
5538-9	02		1030			X								X			
5539-9	03		1045			X								X			
5540-9	04		1055			X								X			
5526-9	05		1255			X	X						X				
5527-9	06		1310			X	X						X				
5548-9	07		1320			X	X						X				
5549-9	08		1335			X								X			Sample labeled 5544-9 EMB 8/2
5556-9	09		1120			X								X			
5557-9	10		1130			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 2 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@globusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 407577.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS26-18	11A-C	8/1/24	~~1020~~ 1300	S	3	X	X						X				HOLD
SS27-18	12		1315			X	X						X	⊗			
SS37-18	13		1020			X								X			
SS38-18	14		1035			X								X			
SS39-18	15		1050			X								X			
SS40-18	16		1100			X								X			
SS48-18	17		1325			X	X						X				
SS49-18	18		1335			X								●			
SS56-18	19		1125			X								X			
SS57-18	20		1140			X								●			

ANALYSES REQUESTED

⊗ MS-Pb, NWTPH-Dx/Gx

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 3 of 8 M4/USBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Metals	Pb			Notes
SS58-9	21A-C	8/1/24	1110	S	3	X								X			
SS65-9	22		1350			X								X			
SS87-9	23		1405			X	X						X				
SS94-9	24		1410			X	X						X				
SS93-9	25		1420			X	X						X				
SS92-9	26		1430			X	X						X				
SS91-9	27		1435			X								X			
SS98-9	28		1455			X								X			
SS103-9	29		1550			X	X						X				
SS104-9	30		1605			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

MH/VSBS

Page # 4 of 8

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@ppsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB/AS			Notes
SS58-18	31A-C	8/1/24	1115	S	3	X								X			HOLD
SS65-18	32		1355			X								X			
SS87-18	33		1405			X	X						X	●			
SS94-18	34		1415			X	X						X	●			
SS93-18	35		1435			X	X						X				
SS92-18	36		1430			X	X						X				
SS91-18	37		1440			X								X			
SS98-18	38		1455			X								X			
SS103-18	39		1555			X	X						X				
SS104-18	40		1610			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 5 of 8 (44/1585)

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757.028
REMARKS: Project specific RLs? - Yes / No
INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	8 PP/AS			Notes
SS105-9	41A-C	8/1/24	1625	S	3	X								X			
SS106-9	42		1625			X								X			
SS107-9	43		1635			X								X			
SS108-9	44		1700			X								X			
SS109-9	45		1645			X								X			
SS110-9	46		1540			X								X			
SS111-9	47		1750			X	X						X				
SS112-9	48		1740			X								X			
SS113-9	49		1730			X	X						X				
SS114-9	50		1720			X								X			

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	~~PBS~~	8/2/24	1020
Received by:	Anh Phan	F&T	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

MH/NSBS

Page # 6 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7609 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
SS105-18	51A-C	8/1/24	1615	S	3	X								X			HOLD
SS106-18	52		1630			X								X			
SS107-18	53		1635			X								X			
SS108-18	54		1700			X								X			
SS109-18	55		1650			X								X			
SS110-18	56		~~1545~~ 1545			X								X			
SS111-18	57		1750			X	X						X				
SS112-18	58		1740			X								X			
SS113-18	59		1735			X	X						X				
SS114-18	60		1725			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
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office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 7 of 8

M4/US85

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 6				Notes
SS115-9	61A-C	8/1/24	1710	S	3	X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 8 of 8 MH/USBS

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA-8				Notes
SS115-18	62A-C	8/1/24	1715	S	3	X	X										HOLD

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FDI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 408036 CLIENT PBS INITIALS/ DATE: AP 08/02/24

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 0 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☑ YES ☐ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/ Date: EMB 8/2
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 1 days

Are the samples clearly identified? (explain "no" answer below) ☐ YES ☑ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☑ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label? (explain "no" answer below)

Sample ID's	☐ Yes ☑ No	-08 Sample labelled SS44-9 - used time to ID	☐ Not on COC/label
Date Sampled	☑ Yes ☐ No		☐ Not on COC/label
Time Sampled	☑ Yes ☐ No		☐ Not on COC/label
# of Containers	☑ Yes ☐ No		
Relinquished	☑ Yes ☐ No		
Requested analysis	☑ Yes ☐ On Hold		

Other comments (use a separate page if needed)
-08

Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ Number of unused TO17 tubes _____
**Fill out Green manifolds billing sheet

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
5500 4th Ave S
Seattle, WA 98108

RE: 408036,
Work Order Number: 2408262

August 21, 2024

Attention Michael Erdahl:

Fremont Analytical, Inc, an Alliance Technical Group company, received 1 sample(s) on 8/15/2024 for the analyses presented in the following report.

Hexavalent Chromium by EPA 7196A
Sample Moisture (Percent Moisture)

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Please note, while the appearance of our logo and branding will update, our commitment to accuracy, speed, and customer service remain values celebrated and shared by Alliance Technical Group. Thank you for the opportunity to serve you.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *08/21/2024*

CLIENT: Friedman & Bruya
Project: 408036
Work Order: 2408262

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2408262-001	SS113-9	08/01/2024 5:30 PM	08/15/2024 1:39 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2408262**

Date: **8/21/2024**

CLIENT: Friedman & Bruya

Project: 408036

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2408262**
Date Reported: **8/21/2024**

CLIENT: Friedman & Bruya
Project: 408036

Lab ID: 2408262-001 **Collection Date:** 8/1/2024 5:30:00 PM
Client Sample ID: **SS113-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93745		Analyst: EC
Percent Moisture	7.36	0.500		wt%	1	8/20/2024 8:35:27 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44892		Analyst: NR
Chromium, Hexavalent	ND	0.524		mg/Kg-dry	1	8/19/2024 4:40:00 PM

Work Order: 2408262
CLIENT: Friedman & Bruya
Project: 408036

QC SUMMARY REPORT

Hexavalent Chromium by EPA 7196A

Sample ID: **MB-44892**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **MBLKS**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957574**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-44892**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **LCSS**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957575**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.8	0.500	12.87	0	83.5	65.3	105.3				

Sample ID: **2408218-013ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957577**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.677						0		30	

Sample ID: **2408218-013AMS1**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957578**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	13.3	0.666	17.14	0	77.8	32	106				

Sample ID: **2408218-013AMS2**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957579**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	12.3	0.679	17.48	0	70.6	32	106				

Sample Log-In Check List

Client Name:	FB	Work Order Number:	2408262
Logged by:	Lyann Rivera	Date Received:	8/15/2024 1:39:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	6.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2408262

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 5500 4th Ave S

City, State, ZIP Seattle, WA 98108

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER
Alliance Technical Group

PROJECT NAME/NO.	PO #
408036	E-344

REMARKS

EIM and EQuIS 4

TURNAROUND TIME
☒ Standard TAT
☐ RUSH____
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Return samples
Will call with instructions

						ANALYSES REQUESTED										
Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	EPH	VPH	Cr VI								Notes
SS113-9		8/1/2024	1730	soil	1			x								

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	8/15/24	09:12
Received by:		Briana Ballard	ATG	8/15	1:39 PM
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

September 17, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Trierweiler :

Included are the additional results from the testing of material submitted on August 2, 2024 from the A1 Towing 40757.028, F&BI 408036 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0917R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 2, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 408036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
408036 -01	SS37-9
408036 -02	SS38-9
408036 -03	SS39-9
408036 -04	SS40-9
408036 -05	SS26-9
408036 -06	SS27-9
408036 -07	SS48-9
408036 -08	SS49-9
408036 -09	SS56-9
408036 -10	SS57-9
408036 -11	SS26-18
408036 -12	SS27-18
408036 -13	SS37-18
408036 -14	SS28-18
408036 -15	SS39-18
408036 -16	SS40-18
408036 -17	SS48-18
408036 -18	SS49-18
408036 -19	SS56-18
408036 -20	SS57-18
408036 -21	SS58-9
408036 -22	SS65-9
408036 -23	SS87-9
408036 -24	SS94-9
408036 -25	SS93-9
408036 -26	SS92-9
408036 -27	SS91-9
408036 -28	SS98-9
408036 -29	SS103-9
408036 -30	SS104-9
408036 -31	SS58-18
408036 -32	SS65-18
408036 -33	SS87-18
408036 -34	SS94-18
408036 -35	SS93-18
408036 -36	SS92-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
408036 -37	SS91-18
408036 -38	SS98-18
408036 -39	SS103-18
408036 -40	SS104-18
408036 -41	SS105-9
408036 -42	SS106-9
408036 -43	SS107-9
408036 -44	SS108-9
408036 -45	SS109-9
408036 -46	SS110-9
408036 -47	SS111-9
408036 -48	SS112-9
408036 -49	SS113-9
408036 -50	SS114-9
408036 -51	SS105-18
408036 -52	SS106-18
408036 -53	SS107-18
408036 -54	SS108-18
408036 -55	SS109-18
408036 -56	SS110-18
408036 -57	SS111-18
408036 -58	SS112-18
408036 -59	SS113-18
408036 -60	SS114-18
408036 -61	SS115-9
408036 -62	SS115-18

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS49-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-18
Date Analyzed:	09/11/24	Data File:	408036-18.080
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.4
Lead	7.4

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS57-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-20
Date Analyzed:	09/11/24	Data File:	408036-20.088
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.4
Lead	6.7

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-33 x5
Date Analyzed:	09/12/24	Data File:	408036-33 x5.146
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	14
Lead	94

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS94-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-34
Date Analyzed:	09/11/24	Data File:	408036-34.090
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.3
Lead	4.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	Not Applicable	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	I4-740 mb2
Date Analyzed:	09/11/24	Data File:	I4-740 mb2.078
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 09/17/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 409096-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	5.56	137 b	117 b	75-125	16 b
Lead	mg/kg (ppm)	50	39.8	118 b	75 b	75-125	45 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	98	80-120
Lead	mg/kg (ppm)	50	95	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/USB5

Page # 1 of 8

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address PBS

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 4057.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb			Notes
						ANALYSES REQUESTED											
5537-9	01A-C	8/1/24	1020	5	3	X								X			per NB 9/10/24 ME
5538-9	02		1030			X								X			
5539-9	03		1045			X								X			
5540-9	04		1055			X								X			
5526-9	05		1255			X	X						X				
5527-9	06		1310			X	X						X				
5548-9	07		1320			X	X						X				
5549-9	08		1335			X								X			Sample labeled 5544-9 EMB 8/2
5556-9	09		1120			X								X			
5557-9	10		1130			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 2 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@globusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 407577.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS26-18	11A-C	8/1/24	~~1020~~ 1300	S	3	X	X						X				HOLD
SS27-18	12		1315			X	X						X	⊗			
SS37-18	13		1020			X								X			
SS38-18	14		1035			X								X			
SS39-18	15		1050			X								X			
SS40-18	16		1100			X								X			
SS48-18	17		1325			X	X						X				
SS49-18	18		1335			X								●			
SS56-18	19		1125			X								X			
SS57-18	20		1140			X								●			

ANALYSES REQUESTED

⊗ MS-Pb, NWTPH-Dx/Gx

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 3 of 8 M4/USBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Metals	Pb			Notes
SS58-9	21A-C	8/1/24	1110	S	3	X								X			
SS65-9	22		1350			X								X			
SS87-9	23		1405			X	X						X				
SS94-9	24		1410			X	X						X				
SS93-9	25		1420			X	X						X				
SS92-9	26		1430			X	X						X				
SS91-9	27		1435			X								X			
SS98-9	28		1455			X								X			
SS103-9	29		1550			X	X						X				
SS104-9	30		1605			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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408036

SAMPLE CHAIN OF CUSTODY

08/02/24

MH/VSBS

Page # 4 of 8

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@ppsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB/AS			Notes
SS58-18	31A-C	8/1/24	1115	S	3	X								X			HOLD
SS65-18	32		1355			X								X			
SS87-18	33		1405			X	X						X	●			
SS94-18	34		1415			X	X						X	●			
SS93-18	35		1435			X	X						X				
SS92-18	36		1430			X	X						X				
SS91-18	37		1440			X								X			
SS98-18	38		1455			X								X			
SS103-18	39		1555			X	X						X				
SS104-18	40		1610			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 5 of 8 (44/1585)

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757.028
REMARKS: Project specific RLs? - Yes / No
INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	8 PP/AS			Notes
SS105-9	41A-C	8/1/24	1625	S	3	X								X			
SS106-9	42		1625			X								X			
SS107-9	43		1635			X								X			
SS108-9	44		1700			X								X			
SS109-9	45		1645			X								X			
SS110-9	46		1540			X								X			
SS111-9	47		1750			X	X						X				
SS112-9	48		1740			X								X			
SS113-9	49		1730			X	X						X				
SS114-9	50		1720			X								X			

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	~~PBS~~	8/2/24	1020
Received by:	Anh Phan	F&T	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

MH/NSBS

Page # 6 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7609 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
SS105-18	51A-C	8/1/24	1615	S	3	X								X			HOLD
SS106-18	52		1630			X								X			
SS107-18	53		1635			X								X			
SS108-18	54		1700			X								X			
SS109-18	55		1650			X								X			
SS110-18	56		~~1545~~ 1545			X								X			
SS111-18	57		1750			X	X						X				
SS112-18	58		1740			X								X			
SS113-18	59		1735			X	X						X				
SS114-18	60		1725			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 7 of 8

M4/US85

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 6				Notes
SS115-9	61A-C	8/1/24	1710	S	3	X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
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408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 8 of 8 MH/USBS

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA-8				Notes
SS115-18	62A-C	8/1/24	1715	S	3	X	X										HOLD

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FDI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
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SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 408036 CLIENT PBS INITIALS/ DATE: AP 08/02/24

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 0 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☑ YES ☐ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/ Date: EMB 8/2
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 1 days

Are the samples clearly identified? (explain "no" answer below) ☐ YES ☑ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☑ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label? (explain "no" answer below)

Sample ID's	☐ Yes ☑ No	-08 Sample labelled SS44-9 - used time to ID	☐ Not on COC/label
Date Sampled	☑ Yes ☐ No		☐ Not on COC/label
Time Sampled	☑ Yes ☐ No		☐ Not on COC/label
# of Containers	☑ Yes ☐ No		
Relinquished	☑ Yes ☐ No		
Requested analysis	☑ Yes ☐ On Hold		

Other comments (use a separate page if needed)
-08

Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ Number of unused TO17 tubes _____
**Fill out Green manifolds billing sheet

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
5500 4th Ave S
Seattle, WA 98108

RE: 408036,
Work Order Number: 2408262

August 21, 2024

Attention Michael Erdahl:

Fremont Analytical, Inc, an Alliance Technical Group company, received 1 sample(s) on 8/15/2024 for the analyses presented in the following report.

Hexavalent Chromium by EPA 7196A
Sample Moisture (Percent Moisture)

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Please note, while the appearance of our logo and branding will update, our commitment to accuracy, speed, and customer service remain values celebrated and shared by Alliance Technical Group. Thank you for the opportunity to serve you.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *08/21/2024*

CLIENT: Friedman & Bruya
Project: 408036
Work Order: 2408262

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2408262-001	SS113-9	08/01/2024 5:30 PM	08/15/2024 1:39 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2408262**

Date: **8/21/2024**

CLIENT: Friedman & Bruya

Project: 408036

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2408262**
Date Reported: **8/21/2024**

CLIENT: Friedman & Bruya
Project: 408036

Lab ID: 2408262-001 **Collection Date:** 8/1/2024 5:30:00 PM
Client Sample ID: **SS113-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93745		Analyst: EC
Percent Moisture	7.36	0.500		wt%	1	8/20/2024 8:35:27 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44892		Analyst: NR
Chromium, Hexavalent	ND	0.524		mg/Kg-dry	1	8/19/2024 4:40:00 PM

Work Order: 2408262
CLIENT: Friedman & Bruya
Project: 408036

QC SUMMARY REPORT

Hexavalent Chromium by EPA 7196A

Sample ID: **MB-44892**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **MBLKS**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957574**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-44892**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **LCSS**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957575**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.8	0.500	12.87	0	83.5	65.3	105.3				

Sample ID: **2408218-013ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957577**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.677						0		30	

Sample ID: **2408218-013AMS1**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957578**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	13.3	0.666	17.14	0	77.8	32	106				

Sample ID: **2408218-013AMS2**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957579**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	12.3	0.679	17.48	0	70.6	32	106				

Sample Log-In Check List

Client Name:	FB	Work Order Number:	2408262
Logged by:	Lyann Rivera	Date Received:	8/15/2024 1:39:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	6.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2408262

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 5500 4th Ave S

City, State, ZIP Seattle, WA 98108

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER
Alliance Technical Group

PROJECT NAME/NO.	PO #
408036	E-344

REMARKS

EIM and EQuIS 4

TURNAROUND TIME
☒ Standard TAT
☐ RUSH____
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Return samples
Will call with instructions

						ANALYSES REQUESTED										
Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	EPH	VPH	Cr VI								Notes
SS113-9		8/1/2024	1730	soil	1			x								

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	8/15/24	09:12
Received by:		Briana Ballard	ATG	8/15	1:39 PM
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

October 3, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Trierweiler:

Included are the additional results from the testing of material submitted on August 2, 2024 from the A1 Towing 40757.028, F&BI 408036 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS1003R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 2, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 408036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
408036 -01	SS37-9
408036 -02	SS38-9
408036 -03	SS39-9
408036 -04	SS40-9
408036 -05	SS26-9
408036 -06	SS27-9
408036 -07	SS48-9
408036 -08	SS49-9
408036 -09	SS56-9
408036 -10	SS57-9
408036 -11	SS26-18
408036 -12	SS27-18
408036 -13	SS37-18
408036 -14	SS28-18
408036 -15	SS39-18
408036 -16	SS40-18
408036 -17	SS48-18
408036 -18	SS49-18
408036 -19	SS56-18
408036 -20	SS57-18
408036 -21	SS58-9
408036 -22	SS65-9
408036 -23	SS87-9
408036 -24	SS94-9
408036 -25	SS93-9
408036 -26	SS92-9
408036 -27	SS91-9
408036 -28	SS98-9
408036 -29	SS103-9
408036 -30	SS104-9
408036 -31	SS58-18
408036 -32	SS65-18
408036 -33	SS87-18
408036 -34	SS94-18
408036 -35	SS93-18
408036 -36	SS92-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
408036 -37	SS91-18
408036 -38	SS98-18
408036 -39	SS103-18
408036 -40	SS104-18
408036 -41	SS105-9
408036 -42	SS106-9
408036 -43	SS107-9
408036 -44	SS108-9
408036 -45	SS109-9
408036 -46	SS110-9
408036 -47	SS111-9
408036 -48	SS112-9
408036 -49	SS113-9
408036 -50	SS114-9
408036 -51	SS105-18
408036 -52	SS106-18
408036 -53	SS107-18
408036 -54	SS108-18
408036 -55	SS109-18
408036 -56	SS110-18
408036 -57	SS111-18
408036 -58	SS112-18
408036 -59	SS113-18
408036 -60	SS114-18
408036 -61	SS115-9
408036 -62	SS115-18

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS113-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/13/24	Lab ID:	408036-59
Date Analyzed:	08/13/24	Data File:	408036-59.167
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	28

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	Not Applicable	Project:	A1 Towing 40757.028
Date Extracted:	08/14/24	Lab ID:	I4-668 mb
Date Analyzed:	08/13/24	Data File:	I4-668 mb.137
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1

Date of Report: 10/03/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408199-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	3.00	102 b	100 b	75-125	2 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	99	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/VSBS

Page # 1 of 8

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address PBS

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 4057.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
5537-9	01A-C	8/1/24	1020	5	3	X								X			
5538-9	02		1030			X								X			
5539-9	03		1045			X								X			
5540-9	04		1055			X								X			
5526-9	05		1255			X	X						X				
5527-9	06		1310			X	X						X				
5548-9	07		1320			X	X						X				
5549-9	08		1335			X								X			Sample labeled 5544-9 EMB 8/2
5556-9	09		1120			X								X			
5557-9	10		1130			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at Ø °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 2 of 8

14/15BS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS26-18	11A-C	8/1/24	~~1020~~ 1300	S	3	X	X						X				HOLD
SS27-18	12		1315			X	X						X				
SS37-18	13		1020			X								X			
SS38-18	14		1035			X								X			
SS39-18	15		1050			X								X			
SS40-18	16		1100			X								X			
SS48-18	17		1325			X	X						X				
SS49-18	18		1335			X								X			
SS56-18	19		1125			X								X			
SS57-18	20		1140			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 3 of 8 — 114/USBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
AI Towing	40757.028
REMARKS Project specific RLs? - Yes / No	INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Metals	Pb			Notes
SS58-9	21A-C	8/1/24	1110	S	3	X								X			
SS65-9	22		1350			X								X			
SS87-9	23		1405			X	X						X				
SS94-9	24		1410			X	X						X				
SS93-9	25		1420			X	X						X				
SS92-9	26		1430			X	X						X				
SS91-9	27		1435			X								X			
SS98-9	28		1455			X								X			
SS103-9	29		1550			X	X						X				
SS104-9	30		1605			X								X			

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Josh Trierweiler	PBS	8/2/24	1020
Received by:		Anh Phan	FBI	08/02/24	10:20
Relinquished by:			Samples received at 0 °C		
Received by:					

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 4 of 8

MW/VSBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@upsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☑ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB/AS	cadmium		● - per NB 08/16/24 Notes STD TAT
5558-18	31A-C	8/1/24	1115	5	3	X								X			HOLD
5565-18	32		1355			X								X			
5587-18	33		1405			X	X						X		●		
5594-18	34		1415			X	X						X				
5593-18	35		1425			X	X						X				
5592-18	36		1430			X	X						X				
5591-18	37		1440			X								X			
5598-18	38		1455			X	●							X			
55103-18	39		1555			X	X						X				
55104-18	40		1610			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 5 of 8

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Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.726.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / AS	Cr VI		Notes
SS105-9	41 A-C	8/1/24	1615	S	3	X								X			A-Cr VI per
SS106-9	42		1625			X								X			NB 08/14/24 ME
SS107-9	43		1635			X								X			
SS108-9	44		1700			X								X			
SS109-9	45		1645			X								X			
SS110-9	46		1540			X								X			
SS111-9	47		1750			X	X						X				
SS112-9	48		1740			X								X			
SS113-9	49		1730			X	X						X		A		
SS114-9	50		1720			X								X			

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	F&T	08/02/24	10:20
Relinquished by:		Samples received at 8 °C		
Received by:				

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office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 6 of 8

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7609 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS105-18	51A-C	8/1/24	1615	S	3	X								X*			HOLD
SS106-18	52		1630			X								X			
SS107-18	53		1635			X								X			
SS108-18	54		1700			X								X			
SS109-18	55		1650			X								(X)			- analyze per NB
SS110-18	5C		~~1540~~ 1545			X								X			8/15/24 at
SS111-18	57		1750			X	X						X				
SS112-18	58		1740			X		●						X			
SS113-18	59		1735			X	X						X	✓			
SS114-18	60		1725			X								X			

ANALYSES REQUESTED

✓ - Lead per NB

Notes: 8/12 5 DD TAT; 8/16

• - per NB 8/12/24

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FDI	08/02/24	10:20
Relinquished by:		Samples received at ∅ °C		
Received by:				

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408036

SAMPLE CHAIN OF CUSTODY

08/04/24
02

Page # 7 of 14/1985

Report To Josh Trierweiler
Company PBS
Address 214 E Baker St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8				Notes
55115-9	61A-C	8/1/24	1710	S	3	X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 8 of 8 M4/VS85

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA-8	1S/PB			⊗M6 8/16 Notes
SS115-18	62A-C	8/1/24	1715	S	3	X	X							⊗			HOLD

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FDI	08/02/24	10:20
Relinquished by:		Samples received at Ø °C		
Received by:				

Friedman & Bruya, Inc.
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Seattle, WA 98108-2419
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office@friedmanandbruya.com
www.friedmanandbruya.com

August 12, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

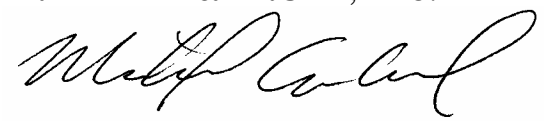
Dear Mr Trierweiler :

Included are the results from the testing of material submitted on August 2, 2024 from the A1 Towing 40757.028, F&BI 408036 project. There are 53 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0812R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 2, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 408036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
408036 -01	SS37-9
408036 -02	SS38-9
408036 -03	SS39-9
408036 -04	SS40-9
408036 -05	SS26-9
408036 -06	SS27-9
408036 -07	SS48-9
408036 -08	SS49-9
408036 -09	SS56-9
408036 -10	SS57-9
408036 -11	SS26-18
408036 -12	SS27-18
408036 -13	SS37-18
408036 -14	SS38-18
408036 -15	SS39-18
408036 -16	SS40-18
408036 -17	SS48-18
408036 -18	SS49-18
408036 -19	SS56-18
408036 -20	SS57-18
408036 -21	SS58-9
408036 -22	SS65-9
408036 -23	SS87-9
408036 -24	SS94-9
408036 -25	SS93-9
408036 -26	SS92-9
408036 -27	SS91-9
408036 -28	SS98-9
408036 -29	SS103-9
408036 -30	SS104-9
408036 -31	SS58-18
408036 -32	SS65-18
408036 -33	SS87-18
408036 -34	SS94-18
408036 -35	SS93-18
408036 -36	SS92-18
408036 -37	SS91-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
408036 -38	SS98-18
408036 -39	SS103-18
408036 -40	SS104-18
408036 -41	SS105-9
408036 -42	SS106-9
408036 -43	SS107-9
408036 -44	SS108-9
408036 -45	SS109-9
408036 -46	SS110-9
408036 -47	SS111-9
408036 -48	SS112-9
408036 -49	SS113-9
408036 -50	SS114-9
408036 -51	SS105-18
408036 -52	SS106-18
408036 -53	SS107-18
408036 -54	SS108-18
408036 -55	SS109-18
408036 -56	SS110-18
408036 -57	SS111-18
408036 -58	SS112-18
408036 -59	SS113-18
408036 -60	SS114-18
408036 -61	SS115-9
408036 -62	SS115-18

Chromium in the 6020B matrix spike duplicate did not meet the acceptance criteria. The laboratory control sample passed the acceptance criteria, therefore the results were due to matrix effect.

All other quality control requirements were acceptable.

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/07/24
Date Analyzed: 08/07/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS26-9 408036-05	<5	82
SS27-9 408036-06	<5	93
SS48-9 408036-07	<5	85
SS87-9 408036-23	<5	82
SS94-9 408036-24	<5	85
SS93-9 408036-25	<5	86
SS92-9 408036-26	<5	93
SS103-9 408036-29	<5	89
SS111-9 408036-47	<5	86
SS113-9 408036-49	<5	95

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/07/24
Date Analyzed: 08/07/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS115-9 408036-61	<5	79
Method Blank 04-1740 MB	<5	95

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/05/24
Date Analyzed: 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS37-9 408036-01	<50	<250	112
SS38-9 408036-02	<50	1,100	110
SS39-9 408036-03	<50	<250	109
SS40-9 408036-04	<50	<250	106
SS26-9 408036-05	<50	<250	110
SS27-9 408036-06	<50	<250	107
SS48-9 408036-07	<50	<250	103
SS49-9 408036-08	<50	<250	109
SS56-9 408036-09	<50	<250	110
SS57-9 408036-10	<50	<250	108
SS58-9 408036-21	140 x	740	112
SS65-9 408036-22	<50	<250	108

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/05/24
Date Analyzed: 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS87-9 408036-23	<50	<250	110
SS94-9 408036-24	<50	<250	111
SS93-9 408036-25	<50	<250	106
SS92-9 408036-26	<50	<250	111
SS91-9 408036-27	<50	<250	109
SS98-9 408036-28	<50	<250	108
SS103-9 408036-29	<50	<250	111
SS104-9 408036-30	<50	<250	113
SS105-9 408036-41	<50	<250	111
SS106-9 408036-42	<50	<250	116
SS107-9 408036-43	<50	<250	113
SS108-9 408036-44	<50	<250	113

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/05/24
Date Analyzed: 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS109-9 408036-45	<50	<250	121
SS110-9 408036-46	<50	<250	120
SS111-9 408036-47	<50	<250	114
SS112-9 408036-48	<50	<250	115
SS113-9 408036-49	180 x	1,100	115
SS114-9 408036-50	<50	<250	114
SS115-9 408036-61	<50	<250	114
Method Blank 04-1869 MB	<50	<250	115
Method Blank 04-1870 MB	<50	<250	111

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS37-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-01
Date Analyzed:	08/08/24	Data File:	408036-01.240
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.2
Lead	23

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS38-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-02
Date Analyzed:	08/08/24	Data File:	408036-02.241
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.9
Lead	36

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS39-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-03
Date Analyzed:	08/08/24	Data File:	408036-03.242
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.1
Lead	18

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS40-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-04
Date Analyzed:	08/08/24	Data File:	408036-04.243
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.4
Lead	1.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS26-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-05
Date Analyzed:	08/08/24	Data File:	408036-05.244
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.1
Barium	71
Cadmium	<1
Lead	12
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS26-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-05 x5
Date Analyzed:	08/09/24	Data File:	408036-05 x5.077
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	29

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS27-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-06
Date Analyzed:	08/08/24	Data File:	408036-06.245
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.5
Barium	80
Cadmium	<1
Lead	11
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS27-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-06 x5
Date Analyzed:	08/09/24	Data File:	408036-06 x5.080
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	28

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS48-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-07
Date Analyzed:	08/08/24	Data File:	408036-07.246
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.8
Barium	79
Cadmium	<1
Lead	7.6
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS48-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-07 x5
Date Analyzed:	08/09/24	Data File:	408036-07 x5.081
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	31

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS49-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-08
Date Analyzed:	08/08/24	Data File:	408036-08.281
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.0
Lead	8.5

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS56-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-09
Date Analyzed:	08/08/24	Data File:	408036-09.282
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.5
Lead	16

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS57-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-10
Date Analyzed:	08/08/24	Data File:	408036-10.283
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.7
Lead	9.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS58-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-21
Date Analyzed:	08/08/24	Data File:	408036-21.286
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.9
Lead	18

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS65-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-22
Date Analyzed:	08/08/24	Data File:	408036-22.287
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	13
Lead	18

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-23
Date Analyzed:	08/08/24	Data File:	408036-23.288
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	14
Barium	76
Cadmium	2.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-23 x5
Date Analyzed:	08/09/24	Data File:	408036-23 x5.085
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	36
Lead	120

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS94-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-24
Date Analyzed:	08/08/24	Data File:	408036-24.289
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.8
Barium	63
Cadmium	<1
Lead	9.5
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS94-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-24 x5
Date Analyzed:	08/09/24	Data File:	408036-24 x5.086
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	24

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS93-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-25
Date Analyzed:	08/08/24	Data File:	408036-25.290
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.0
Barium	62
Cadmium	<1
Chromium	16
Lead	14
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS92-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-26
Date Analyzed:	08/08/24	Data File:	408036-26.293
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.0
Barium	64
Cadmium	<1
Chromium	10
Lead	6.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS91-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-27
Date Analyzed:	08/08/24	Data File:	408036-27.294
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.5
Lead	5.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS98-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-28
Date Analyzed:	08/08/24	Data File:	408036-28.295
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Lead	5.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS103-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-29
Date Analyzed:	08/08/24	Data File:	408036-29.296
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.5
Barium	63
Cadmium	<1
Lead	6.6
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS103-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-29 x5
Date Analyzed:	08/09/24	Data File:	408036-29 x5.088
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	28

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS104-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-30
Date Analyzed:	08/08/24	Data File:	408036-30.297
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.3
Lead	3.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS105-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-41
Date Analyzed:	08/08/24	Data File:	408036-41.298
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.0
Lead	7.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS106-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-42
Date Analyzed:	08/08/24	Data File:	408036-42.299
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.0
Lead	13

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS107-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-43
Date Analyzed:	08/08/24	Data File:	408036-43.300
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Lead	5.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS108-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-44
Date Analyzed:	08/08/24	Data File:	408036-44.301
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.6
Lead	3.1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS109-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-45
Date Analyzed:	08/08/24	Data File:	408036-45.302
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.8
Lead	9.7

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS110-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-46
Date Analyzed:	08/09/24	Data File:	408036-46.094
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.1
Lead	3.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS111-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-47
Date Analyzed:	08/09/24	Data File:	408036-47.095
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.8
Barium	48
Cadmium	<1
Chromium	14
Lead	24
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS112-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-48
Date Analyzed:	08/09/24	Data File:	408036-48.096
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	10
Lead	40

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS113-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-49
Date Analyzed:	08/09/24	Data File:	408036-49.097
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	13
Barium	62
Cadmium	2.0
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS113-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-49 x5
Date Analyzed:	08/09/24	Data File:	408036-49 x5.101
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	63
Lead	280

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS114-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-50
Date Analyzed:	08/09/24	Data File:	408036-50.098
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.4
Barium	51
Cadmium	<1
Chromium	14
Lead	39
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS115-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-61
Date Analyzed:	08/09/24	Data File:	408036-61.099
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.5
Barium	87
Cadmium	<1
Chromium	18
Lead	9.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/02/24	Lab ID:	I4-635 mb
Date Analyzed:	08/05/24	Data File:	I4-635 mb.121
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	I4-636 mb
Date Analyzed:	08/05/24	Data File:	I4-636 mb.125
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 408019-42 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	95	70-130

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 408036-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	54	115	115	64-136	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	126	78-121

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 408036-41 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	124	124	64-136	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	116	78-121

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408036-41 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	4.43	95 b	99 b	75-125	4 b
Barium	mg/kg (ppm)	50	61.2	104 b	102 b	75-125	2 b
Cadmium	mg/kg (ppm)	10	<1	95	94	75-125	1
Chromium	mg/kg (ppm)	50	8.03	75	73 vo	75-125	3
Lead	mg/kg (ppm)	50	6.69	84	84	75-125	0
Mercury	mg/kg (ppm	5	<1	91	88	75-125	3
Selenium	mg/kg (ppm)	5	<1	94	93	75-125	1
Silver	mg/kg (ppm)	10	<1	95	95	75-125	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	95	80-120
Barium	mg/kg (ppm)	50	96	80-120
Cadmium	mg/kg (ppm)	10	99	80-120
Chromium	mg/kg (ppm)	50	104	80-120
Lead	mg/kg (ppm)	50	94	80-120
Mercury	mg/kg (ppm)	5	89	80-120
Selenium	mg/kg (ppm)	5	97	80-120
Silver	mg/kg (ppm)	10	97	80-120

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408036-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	6.73	82 b	87 b	75-125	6 b
Barium	mg/kg (ppm)	50	68.9	58 b	61 b	75-125	5 b
Cadmium	mg/kg (ppm)	10	<1	96	93	75-125	3
Chromium	mg/kg (ppm)	50	14.3	69 b	80 b	75-125	15 b
Lead	mg/kg (ppm)	50	23.3	70 b	72 b	75-125	3 b
Mercury	mg/kg (ppm	5	<1	92	92	75-125	0
Selenium	mg/kg (ppm)	5	<1	95	89	75-125	7
Silver	mg/kg (ppm)	10	<1	98	95	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Barium	mg/kg (ppm)	50	99	80-120
Cadmium	mg/kg (ppm)	10	103	80-120
Chromium	mg/kg (ppm)	50	111	80-120
Lead	mg/kg (ppm)	50	99	80-120
Mercury	mg/kg (ppm)	5	96	80-120
Selenium	mg/kg (ppm)	5	100	80-120
Silver	mg/kg (ppm)	10	102	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/VSB5

Page # 1 of 8

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address PBS

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 4057.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb			Notes
SS37-9	01A-C	8/1/24	1020	5	3	X								X			
SS38-9	02		1030			X								X			
SS39-9	03		1045			X								X			
SS40-9	04		1055			X								X			
SS26-9	05		1255			X	X						X				
SS27-9	06		1310			X	X						X				
SS48-9	07		1320			X	X						X				
SS49-9	08		1335			X								X			Sample labelled SS44-9 EMB 8/2
SS56-9	09		1120			X								X			
SS57-9	10		1130			X								X			

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
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office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/KSBS

Page # 2 of 8

Report To Josh Trierweiler

Company GBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@gbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS26-18	11A-C	8/1/24	~~1020~~ 1300	5	3	X	X						X				HOLD
SS27-18	12		1315			X	X						X				
SS37-18	13		1020			X								X			
SS38-18	14		1035			X								X			
SS39-18	15		1050			X								X			
SS40-18	16		1100			X								X			
SS48-18	17		1325			X	X						X				
SS49-18	18		1335			X								X			
SS56-18	19		1125			X								X			
SS57-18	20		1140			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	GBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

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SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 3 of 8

MA/USBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Metals	Pb			Notes
SS58-9	21A-C	8/1/24	1110	S	3	X								X			
SS65-9	22		1350			X								X			
SS87-9	23		1405			X	X						X				
SS94-9	24		1410			X	X						X				
SS93-9	25		1420			X	X						X				
SS92-9	26		1430			X	X						X				
SS91-9	27		1435			X								X			
SS98-9	28		1455			X								X			
SS103-9	29		1550			X	X						X				
SS104-9	30		1605			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

MH/VSBS

Page # 4 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB/AS			Notes
						ANALYSES REQUESTED											
SS58-18	31A-C	8/1/24	1115	S	3	X								X			HOLD
SS65-18	32		1355			X								X			
SS87-18	33		1405			X	X						X				
SS94-18	34		1415			X	X						X				
SS93-18	35		1425			X	X						X				
SS92-18	36		1430			X	X						X				
SS91-18	37		1440			X								X			
SS98-18	38		1455			X								X			
SS103-18	39		1555			X	X						X				
SS104-18	40		1610			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
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SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 5 of 8

M4/VSBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS105-9	41 A-C	8/1/24	1625	S	3	X								X			
SS106-9	42		1625			X								X			
SS107-9	43		1635			X								X			
SS108-9	44		1700			X								X			
SS109-9	45		1645			X								X			
SS110-9	46		1540			X								X			
SS111-9	47		1750			X	X						X				
SS112-9	48		1740			X								X			
SS113-9	49		1730			X	X						X				
SS114-9	50		1720			X								X			

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office@friedmanandbruya.com

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	F&I	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/NSB5

Page # 6 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7609 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 407570.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
SS105-18	51A-C	8/1/24	1615	S	3	X								X			HOLD
SS106-18	52		1630			X								X			
SS107-18	53		1635			X								X			
SS108-18	54		1700			X								X			
SS109-18	55		1650			X								X			
SS110-18	5C		~~1545~~ 1545			X								X			
SS111-18	57		1750			X	X						X				
SS112-18	58		1740			X								X			
SS113-18	59		1735			X	X						X				
SS114-18	60		1725			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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408036

SAMPLE CHAIN OF CUSTODY

08/04/24 02

Page # 7 of 8 MH/VSBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS: Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 6				Notes
						ANALYSES REQUESTED											
SS115-9	6/A-C	8/1/24	1710	S	3	X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 8 of 8 MH/USBS

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbesa.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
A1 Towing	40757.028
REMARKS Project specific RLs? - Yes / No	INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA-8				Notes
SS115-18	62A<	8/1/24	1715	S	3	X	X										HOLD

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FDI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 408036 CLIENT PBS INITIALS/ DATE: AP 08/02/24

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 0 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☑ YES ☐ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/ Date: EMB 8/2
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 1 days

Are the samples clearly identified? (explain "no" answer below) ☐ YES ☑ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☑ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label? (explain "no" answer below)

Sample ID's	☐ Yes	☑ No	-08 Sample labelled 5544-9 - used time to ID ☐ Not on COC/label
Date Sampled	☑ Yes	☐ No	☐ Not on COC/label
Time Sampled	☑ Yes	☐ No	☐ Not on COC/label
# of Containers	☑ Yes	☐ No	
Relinquished	☑ Yes	☐ No	
Requested analysis	☑ Yes	☐ On Hold	

Other comments (use a separate page if needed)
-08

Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ Number of unused TO17 tubes _____
**Fill out Green manifolds billing sheet

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

September 18, 2024

INVOICE #24PBS0918-2

Accounts Payable
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

RE: Project A1 Towing 40757.028, F&BI 409135 - Results of testing requested by Nasrin Bastami for material submitted on September 11, 2024.

8 samples analyzed for total lead and arsenic by Method 6020 @ $60 per sample	$ 480.00
4 samples analyzed for total cadmium by Method 6020 @ $30 per sample	120.00
Amount Due	$ 600.00

FEDERAL TAX ID #91-1287838

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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September 18, 2024

Nasrin Bastami, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
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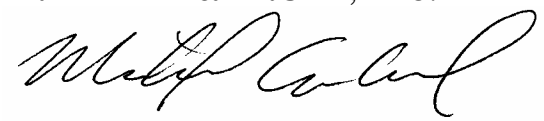
Dear Ms Bastami:

Included are the results from the testing of material submitted on September 11, 2024 from the A1 Towing 40757.028, F&BI 409135 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PBS0918R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 11, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 409135 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
409135 -01	Duff-1
409135 -02	Duff-2
409135 -03	Duff-3
409135 -04	Duff-4
409135 -05	SS6-24
409135 -06	SS6-30
409135 -07	SS9-24
409135 -08	SS9-30
409135 -09	SS15-24
409135 -10	SS15-30
409135 -11	SS69-24
409135 -12	SS69-30
409135 -13	SS87A-9
409135 -14	SS87A-18
409135 -15	SS87B-9
409135 -16	SS87B-18
409135 -17	SS87C-9
409135 -18	SS87C-18
409135 -19	SS87D-9
409135 -20	SS87D-18

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 6020B

Client ID:	Duff-1	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-01
Date Analyzed:	09/12/24	Data File:	409135-01.162
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	10
Lead	21

Analysis For Total Metals By EPA Method 6020B

Client ID:	Duff-2	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-02
Date Analyzed:	09/12/24	Data File:	409135-02.163
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.0
Lead	6.3

Analysis For Total Metals By EPA Method 6020B

Client ID:	Duff-3	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-03
Date Analyzed:	09/12/24	Data File:	409135-03.164
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<2
Lead	1.5

Analysis For Total Metals By EPA Method 6020B

Client ID:	Duff-4	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-04
Date Analyzed:	09/12/24	Data File:	409135-04.165
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.4
Lead	15

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS6-24	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-05 x5
Date Analyzed:	09/13/24	Data File:	409135-05 x5.039
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	22
Lead	65

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS9-24	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-07 x5
Date Analyzed:	09/13/24	Data File:	409135-07 x5.040
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	26
Lead	46

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS15-24	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-09 x5
Date Analyzed:	09/13/24	Data File:	409135-09 x5.041
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	13
Lead	35

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS69-24	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-11
Date Analyzed:	09/12/24	Data File:	409135-11.171
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.8
Lead	25

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87A-9	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-13
Date Analyzed:	09/12/24	Data File:	409135-13.172
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87B-9	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-15
Date Analyzed:	09/12/24	Data File:	409135-15.173
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87C-9	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-17
Date Analyzed:	09/12/24	Data File:	409135-17.181
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87D-9	Client:	PBS Engineering and Environmental
Date Received:	09/11/24	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	409135-19
Date Analyzed:	09/12/24	Data File:	409135-19.184
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	Not Applicable	Project:	A1 Towing 40757.028
Date Extracted:	09/12/24	Lab ID:	I4-754 mb
Date Analyzed:	09/12/24	Data File:	I4-754 mb.157
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Cadmium	<1
Lead	<1

Date of Report: 09/18/24
Date Received: 09/11/24
Project: A1 Towing 40757.028, F&BI 409135

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 409135-17 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	5.80	101 b	91 b	75-125	10 b
Cadmium	mg/kg (ppm)	10	<1	94	95	75-125	1
Lead	mg/kg (ppm)	50	3.92	95	96	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	90	80-120
Cadmium	mg/kg (ppm)	10	92	80-120
Lead	mg/kg (ppm)	50	94	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

409135

SAMPLE CHAIN OF CUSTODY

09-11-24 MH

Page # 1 of 2

Report To Nastin Bastami

Company PBS Engineering

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7636 Email nastin.bastami@pbsusa.com ; josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	SA/ph	Cadmium			Notes
Duff-1	01	9/11/24	1315	Duff	1								X				
Duff-2	02	9/11/24	1320	"	1								X				
Duff-3	03	9/11/24	1325	"	1								X				
Duff-4	04	9/11/24	1330	"	1								X				
SS6-24	05	9/11/24	1200	S	1								X				
SS6-30	06	9/11/24	1200	S	1								X				HOLD
SS9-24	07	9/11/24	1210	S	1								X				
SS9-30	08	9/11/24	1210	S	1								X				HOLD
SS15-24	09	9/11/24	1245	S	1								X				
SS15-30	10	9/11/24	1245	S	1								X				HOLD

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	9/11/24	1500
Received by:	Nhan Phan	FEBI	9/11/24	1500
Relinquished by:				
Received by:		Samples received at 3 °C		

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5500 4th Ave S.
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(206) 285-8282
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409135

SAMPLE CHAIN OF CUSTODY

09-11-24 MH

Page # 2 of 2

Report To Nastin Bastami

Company PBS Engr

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7636 Email nastin.bastami@pbsusa.com; josh.trieweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS: Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID (NP)	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Pb / As	Cadmium			Notes
SS69-24	01 11	9/11/24	1310	S	1								x				
SS69-30	02 12	9/11/24	1310	S	1								x				
SS87A-9	03 13	9/11/24	1350	S	1								x				HOLD
SS87A-18	04 14	9/11/24	1355	S	1									x			
SS87B-9	05 15	9/11/24	1410	S	1									x			HOLD
SS87B-18	06 16	9/11/24	1415	S	1									x			
SS87C-9	07 17	9/11/24	1425	S	1									x			HOLD
SS87C-18	08 18	9/11/24	1430	S	1									x			
SS87D-9	09 19	9/11/24	1440	S	1									x			HOLD
SS87D-18	10 20	9/11/24	1445	S	1									x			HOLD

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trieweiler	PBS	9/11/24	1500
Received by:	Khan Phan	FEBI	9/11/24	1500
Relinquished by:				
Received by:		Samples received at 3 °C		

Friedman & Bruya, Inc.
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Seattle WA 98108
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SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 409135 CLIENT PBS INITIALS: NP DATE: 9-11-24

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 3 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☑ YES ☐ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/Date: NP 9-11-24
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 0 days

Are the samples clearly identified? (explain "no" answer below) ☑ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☑ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☑ Yes	☐ No	☐ Not on COC/label
Date Sampled	☑ Yes	☐ No	☐ Not on COC/label
Time Sampled	☑ Yes	☐ No	☐ Not on COC/label
# of Containers	☑ Yes	☐ No	
Relinquished	☑ Yes	☐ No	
Requested analysis	☑ Yes	☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters _____ **Number of unused TO17 tubes** _____

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS60-9	Client:	PBS Engineering and Environmental
Date Received:	07/31/24	Project:	A1 Towing 40757.028
Date Extracted:	08/01/24	Lab ID:	407472-47
Date Analyzed:	08/01/24	Data File:	407472-47.184
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.1
Lead	12

Appendix D

Soil and Groundwater Management Plan

WSDOT SR 509 Stage 2, New Expressway Project,
Contract No. 9905, King County, Washington, January 2025

Soil and Groundwater Management Plan

WSDOT SR 509 Stage 2
24th Avenue South to South 188th Street – New Expressway Project
Contract no. 9905
King County, Washington

Prepared for:
Atkinson Construction
707 S Grady Way Suite 500
Renton, Washington 98057

January 2025
PBS Project No. 40757.028

PBS
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Figure I: Site Plan
Figure II: WSDOT Hazmat Parcel Map (annotated by PBS)

Attachments

Attachment I: Guidance for Reuse of Petroleum Contaminated Soil: WDOE Tables 12.1 - 12.2

Attachment II: Subsurface Investigation and Phase II ESA Document Excerpts
(Appendices removed for document usability, available on request)

Attachment III: Project Specific Temporary Erosion and Sediment Control (TESC) Plans

Attachment IV: Laboratory Container List and Requirements

Attachment V: Contaminated Media Management Plan

1. INTRODUCTION

This Soil and Groundwater Management Plan (SGMP) provides information and describes procedures regarding the management of contaminated media during the expressway expansion project (Work) taking place along Washington State Department of Transportation (WSDOT) SR 509 from 24th Avenue South to South 188th Street (SR 509 Stage 2 Project). This SGMP was prepared by PBS Engineering and Environmental LLC (PBS) on behalf of Atkinson Construction (Atkinson).

1.1 Background

The purpose of the Project is to build the remaining two miles of new SR 509 Expressway from Burien to Kent, reconfiguring SR 509 interchanges at South 188th and South 160th Streets, adding a southbound auxiliary lane on I-5 between SR 516 and South 272nd Street, and improving service between industrial districts by allowing general purpose traffic and trucks to bypass I-5, SR 99 and local streets. When finished, SR 509 will be a key component of the Seattle and south King County transportation network. Along with the SR 99 tunnel improvements, the project provides a critical north-south alternative to I-5 through Seattle and King County.

Contaminated soils and groundwater have been identified in the project corridor. Investigations by Geoengineers in 2021 and 2022, and Terra Associates, Inc. (Terra) in 2020 identified the following contaminants of potential concern (COPC): total petroleum hydrocarbons (TPH) as gasoline, diesel and heavy oil range, volatile organic compounds (VOCs) including benzene, ethylbenzene, toluene, and xylenes (BTEX), chlorinated halogenated solvents including tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride (VC), and polycyclic aromatic hydrocarbons (PAHs) associated with the known impacted sites. Additional potential contaminants of concern associated with this project include lead and polychlorinated biphenyls (PCBs) associated with overpass bridge coatings, asbestos-containing materials on bridge structural elements, and petrochemicals and metals generated by vehicle traffic and transported by stormwater. Lead and arsenic associated with the Asarco Tacoma smelter plume are also COPC in soil.

1.2 Schedule

February 2024 – January 2025: Design/planning phase.
August 2024 – January 2029: Construction phase.

1.3 Objective

The objective of the SGMP is to provide information regarding the location, type and source of contaminated media (soils and groundwater) present at the site, and to assist Atkinson and its subcontractors with proper media management and disposal, as needed. This SGMP addresses how the known contamination, and any new discoveries of previously unidentified contamination, will be handled safely and to avoid effects to schedule. The SGMP also provides information to enable Atkinson to create a Health and Safety Plan (HASP) that is appropriate to protect site workers from exposure to contaminants.

This SGMP contains:

- Information on current environmental conditions and contaminants of concern;
- Roles and responsibilities of project team members for the SGMP;
- Procedures for the management and sampling of new discoveries of contaminated materials;
- Procedures for the storage of contaminated water in temporary holding tanks or lined ponds awaiting sampling, classification, and disposal;

- Procedures for the storage of contaminated soil or debris in stockpile or staging piles awaiting sampling, classification, load-out, and disposal (should temporary storage occur); and
- Required documentation for contaminated material handling, storage, loading, and disposal.

2. PROJECT INFORMATION

2.1 Project Location

The site includes the new SR 509 Expressway from Burien to Kent, reconfiguring SR 509 interchanges at South 188th and South 160th Streets, adding a southbound auxiliary lane on I-5 between SR 516 and South 272nd Street, and improving service between industrial districts by allowing general purpose traffic and trucks to bypass I-5, SR 99 and local streets.

The work involves the following improvements on SR 509; construction of a new four-lane (two-lane in each direction) expressway between the 24th Avenue South interchange and the South 188th Street/Des Moines Memorial Drive (DMMD) interchange, reconstruct the existing South 188th Street/DMMD interchange, reconstruct the existing South 160th Street interchange, and reconfigure the existing 24th Avenue South interchange. The work also involves the following improvements on I-5; construction of a new southbound auxiliary lane between the South 272nd Street interchange and the SR 516 interchange, construction of a new culvert for the McSorley Creek crossing, construction/extend of new noise walls along southbound I-5, and removal of common borrow and install new pavement along southbound I-5 widening approximately from LW 2235 to LW 2242.

2.2 Contaminants of Potential Concern

Based on the analytical results from samples taken from soil and groundwater on site, the following contaminants of potential concern (COPC) may be encountered within the Project Area:

- Total petroleum hydrocarbons (TPH) as gasoline, diesel and heavy oil range
- Volatile Organic Compounds (VOCs) including benzene, ethylbenzene, toluene, and xylenes (BTEX)
- Chlorinated halogenated solvents including tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride (VC)
- Polycyclic aromatic hydrocarbons (PAHs)
- Arsenic
- Lead

PCBs and lead associated with painting of bridge components may also exist in shallow soils.

2.3 Contaminated Media: Degree and Extent

2.3.1 Soil

- Per the *Tacoma Smelter Plume Model Remedies Guidance* (Ecology, 2019), the Asarco Company operated a copper smelter in the Point Defiance area of Tacoma for almost 100 years. Air pollution from the smelter settled on the surface soils over more than 1,000 square miles of the Puget Sound basin. Arsenic, lead, and other heavy metals are still in the soil because of this pollution. Concentrations of arsenic are known to exist within the aerial plume, which includes the project site, above the MTCA Method A cleanup level of 20 milligrams per kilogram (mg/kg) in soil depths of 0 to 12 inches below ground surface. Ecology's *Dirt Alert Map*

(https://apps.ecology.wa.gov/dirtalert/) maps the majority of the site is within an area of predicted arsenic concentrations in near surface soil of 20 to 40 ppm. The portion of the site to the south of the I-5/SR 516 interchange is mapped by WDOE with a higher expected surface concentration, in the 40 to 100 ppm range. See Appendix V: Contaminated Media Management Plan for site-specific lead and arsenic information.

- According to subsurface investigation and Phase II reports performed by GeoEngineers, and Terra Associates, there are numerous sites (Figures - SR 509-Stage 2/impacted areas), within the project corridor with confirmed concentrations of lead and/or arsenic in shallow soils exceeding MTCA Method A cleanup levels (Terra 2020 and Geoengineers 2022), as a result of on-site activities (i.e. not resulting from the smelter plume).
- Those sources also indicate that there are also numerous sites within the project corridor with known and/or reported petroleum, VOC, metals, and PAH impacts below MTCA Method A cleanup levels (Figures - SR 509-Stage 2/impacted areas).
- Soil with concentrations of TPH, VOCs, PAHs, vinyl chloride and/or Resource Recovery and Conservation Act (RCRA) 8 metals exceeding MTCA Method A cleanup levels was identified at site "A1 Towing, Des Moines" (Geoengineers, 2021).
- Soil with concentrations of TPH, VOCs, PAHs, vinyl chloride and/or RCRA 8 metals exceeding MTCA Method A cleanup levels was identified at site "S&M Machine Shop, SeaTac" (Geoengineers, 2021).
- Soil with concentrations of metals (arsenic) exceeding MTCA Method A cleanup levels was identified at site "Star Lake Crossing" (Terra, 2020).

2.3.2 **Groundwater**

- Subsurface investigation and Phase II reports by GeoEngineers describe groundwater contamination by vinyl chloride exceeding MTCA Method A cleanup level at the site "S&M Machine Shop, SeaTac" (GeoEngineers, 2021).
- Subsurface investigation and Phase II reports also describe groundwater contamination by TPH-D, TPH-HO, and VOCs as acetone and cis-1,2-DCE, as well as metals below MTCA Method A/B cleanup levels at the site "S&M Machine Shop, SeaTac" (GeoEngineers, 2021).

2.3.3 **Soil Vapor**

Impacts to soil vapor have not been evaluated at this site. It may be appropriate to evaluate the soil vapor to indoor air exposure pathway should impacted soil or groundwater be left in place.

3. CONTAMINATED MATERIAL DEFINITIONS

Contaminated soil and water encountered during project work will be characterized for disposal. This section describes the classification and management of the contaminated material as follows:

3.1 Contaminated Material(s) not designated as Dangerous Waste or Toxic Substances Control Act (TSCA) Waste:

Soil/material/debris/liquid of any kind that has contaminant levels above the more stringent of their respective applicable MTCA Method A cleanup level, Method B cleanup level, or Table 749-2 level, all for unrestricted land use per Chapter 173-340 Washington Administrative Code (WAC), but is not designated as a Dangerous Waste or TSCA Waste will be managed in accordance with this section.

Based on the knowledge of known and suspected contaminants of concern on site, along with excavation activities related to the project, there will likely be soil designated as petroleum contaminated soil (PCS). PCS that are not Dangerous Wastes are regulated under the Solid Waste Handling Standards, Chapter

173-350 WAC (State Department of Ecology [Ecology], 2018). The soil laboratory results will also be compared with Tables 12.1 and 12.2 from the *Guidance for Remediation of Petroleum Contaminated Sites* (Ecology, 2016a) to help determine appropriate reuse or disposal options.

Soil not meeting the definitions of a Washington State Dangerous Waste or federal TSCA or hazardous waste can be classified in the following categories for the purpose of re-use or disposal:

1. Reusable Soil 1: Soil that contains no detectable levels of contamination. Reusable Soil 1 can be reused on site or transported offsite for reuse or disposal at an accepting facility. Alternatively, Reusable Soil 1 may be disposed of at any facility willing to accept.
2. Reusable Soil 2: Soil that contains detectable levels of contaminants that are above the applicable Puget Sound background levels and below the MTCA Method A Cleanup Levels. Reusable Soil 2 can be reused onsite in locations that are not laterally or vertically within 10-feet of surface water or disposed of at an accepting facility licensed/permitted to accept it. Soil containing petroleum hydrocarbons *(*gasoline, diesel, heavy oil) must be managed as *"petroleum contaminated soil"* consistent with the Solid Waste Handling Standards (WAC 173-350) and Table 12.1 of the *Guidance for Remediation of Petroleum Contaminated Sites* (Ecology, 2016).
3. Organic Waste: Soil that contains wood waste consisting of peat, timbers, sawdust, or other abundant organics. Organic Waste shall be disposed of at any facility licensed/permitted to accept it based on its characteristics and concentration of components.
4. Contaminated Soil: Soil that contains one or more contaminant(s) at concentrations exceeding their respective MTCA Method A cleanup level. Ecology requires that Contaminated Soil be disposed of at a RCRA Subtitle D facility.

3.2 Dangerous Waste

Soil that meets the definition of Dangerous Waste was not detected in the subsurface explorations and studies conducted for the Project. Soil/material/debris/liquid that has contaminant levels that potentially exceed the Washington State Dangerous Waste per WAC 173-303 would be considered Dangerous Waste. WDOE requires that Dangerous Waste be disposed of at an RCRA Subtitle C facility.

Sites likely to exceed Washington State Dangerous Waste criteria per WAC 173-303 were not identified in previous Phase II ESAs or subsurface investigations performed within the project corridor. However, paint on the bridges may contain lead, and as such is a potential source of dangerous waste. Lead containing paint waste will be characterized to determine if dangerous waste profile analysis may be required as defined in Section 6.1.

4. PRE-EXCAVATION ACTIVITIES

This section describes the activities that will generally be conducted prior to the start of project work. The general contractor should be aware of this work as some of these activities may or will affect the Work.

4.1 Project Team

Prior to site development, management roles will be identified and are detailed in the following table (subject to change):

Title	Name	Affiliation	E-mail	Phone Numbers
Operations Manager	Brandon Dully	Atkinson Construction	brandon.dully@atkn.com	Cell: 206.786.1244
Project Manager	Stuart Moore	Atkinson Construction	stuart.moore@atkn.com	Cell: 360.340.6797
Safety Manager	Chris Murbach	Atkinson Construction	chris.murbach@atkn.com	Cell: 425.473.2677
Construction Manager	Jay Teskey	Atkinson Construction	jay.teskey@atkn.com	Cell: 206.730.7435
Deputy Project Manager	Archie Kollmorgen	Atkinson Construction	archie.kollmorgen@atkn.com	Cell: 206.639.5791
Design-Build Coordinator	Jeremy Puetz	Atkinson Construction	jeremy.puetz@atkn.com	Cell: 425.757.0338
Design Manager	Heather Weeks	Atkinson Construction	heather.weeks@atkn.com	Office: 425.990.6864 Cell: 425.647.5973
Structures Superintendent	Matt Elder	Atkinson Construction	matt.elder@atkn.com	Cell: 425.508.8573
Project Engineer	Andrey Chepel, PE	WSDOT	chepela@wsdot.wa.gov	Office: 206.805.2978 Cell: 253.709.6970
Joint Executive Committee Member	Aleta Borschowa	WSDOT	borscha@wsdot.wa.gov	Cell: 425.892.0200
Environmental Compliance Manager	Kevin Hood	PBS	kevin.hood@pbsusa.com	Cell: 206.459.4465

4.2 Health and Safety Plan

Atkinson will maintain a site-specific Health and Safety Plan (HASP) in accordance with applicable OSHA and Washington Industrial Safety and Health Act (WISHA) regulations. The HASP will provide information for site workers that address the health risks and hazards for each site task, employee training assignments to assure compliance with WISHA, personal protective equipment, site control measures, and decontamination procedures. The HASP will include procedures and controls that are site specific to the identified IHS.

Atkinson is responsible for conducting on-site activities in accordance with the HASP. Atkinson will review the contents of the HASP with on-site workers and will ensure adequate training for on-site workers in accordance with the HASP. Outside contractors or consultants participating in soil management activities have responsibility for their employee's health and safety while on site.

4.3 Waste Profiling

The Contractor may elect to begin the waste profiling process at any time by selecting a receiving landfill. Having PCS profiled and accepted by a facility in advance is recommended as it may prevent delays. Each facility may have differing cost structures and permitting process. Proximity is also a factor the Contractor shall consider. Receiving landfills are likely to require that the Contractor submit waste material sample analytical results so that they can profile the waste. This should be arranged prior to hauling.

5. CONTAMINATED MEDIA REMOVAL AND HANDLING

This section summarizes Work that potentially generates contaminated media requiring proper management and disposal. As part of the Work, the contractor will conduct extensive grading for roadway construction, and the replacement and subsequent demolition of overpass and interchange structures. Additionally, there will be trenching for utility work.

5.1 Activities with the Potential to Generate Contaminated Soil and/or Groundwater

Construction activities that may generate soil or groundwater requiring appropriate management include the following:

- Excavation for utility trenches
- Excavation for footings and other foundation structures
- Embankment alteration
- General grading
- Vegetation clearing, grubbing, and replanting

5.2 Contaminated Soil and Groundwater Management Procedures

Atkinson shall manage contaminated soil in accordance with the established SPCC Plan, Construction Stormwater General Permit (WDOE, 2020), SWPPP/TESC Plan and Solid Waste Handling Standards in WAC 173-350 (WDOE, 2018). Soil disturbance will be limited to the minimum area required to execute project work and any potentially contaminated soils will be protected from contact with stormwater via the use of berms, plastic sheeting and other best management practices (BMPs).

The Environmental Consultant will collect soil samples (see section 5.5) when soils suspected to be contaminated are encountered or prior to removal.

Soil containing observed or detectable levels of petroleum contaminants but not meeting the definition of Contaminated Soil per Section 3.1 will be managed and disposed of in accordance with Table 12.1 of the Guidance for Remediation of Petroleum Contaminated Sites (Attachment I).

Soil stockpiles containing elevated arsenic (40 mg/kg or greater) and/or lead (500 mg/kg or greater) concentrations will be managed for off-site disposal based on results of analytical testing (see Section 5.5) in accordance with Solid Waste Handling Standards in WAC 173-350 (WDOE, 2018).

Soil stockpiles generated at that site will be managed per MTCA, utilizing the MTCA Method A cleanup standards for off-site disposal (20 mg/kg arsenic, 250 mg/kg lead).

Soil that contains other contaminant(s) (other VOCs, cPAHs, etc.) at concentrations that exceed the MTCA Method A cleanup levels (but does not meet Dangerous Waste criteria) shall be disposed of at a RCRA Subtitle D facility.

Atkinson will manage contaminated groundwater in accordance with the established SPCC Plan, Construction Stormwater General Permit (WDOE, 2020), SWPPP, TESC Plan and WAC Chapter 173-201A Water Quality Standards for Surface Waters of the State of Washington (WDOE, 2016c). Groundwater that contains contaminant(s) at concentrations that exceed the MTCA Method A cleanup levels (but does not meet Dangerous Waste criteria) will be disposed of at a RCRA Subtitle D facility and/or infiltrated back into the work area. Ecology has added an Administrative Order to the NPDES CSWGP for the Project. Atkinson is also currently pursuing a sanitary sewer discharge permit from Midway Sewer District for additional groundwater and surface water disposal options.

WSDOT shall notify WDOE in the event of discovery of any unknown or unanticipated contamination.

5.3 Field Screening and Identification

A trained Contractor personnel, Subcontractor foreman or trained designated HAZWOPER certified monitor will be present during excavation activities to provide visual screening of soils.

Soils will be monitored for visual and olfactory evidence of contamination based on location of work, observed discoloration, texture, and odor, or the presence of metal or plastic remnants of tanks or drums. Physical characteristics that may be observed in excavated soils that indicate the need for separate stockpiling and laboratory testing include:

- Soils containing petroleum discoloration or odor;
- Soils or debris containing other unusual or unnatural discoloration or odor;
- Wood or wood fragments (or any other organic materials) exhibiting unusual or unnatural discoloration or odor;
- Drums, tanks or metallic debris encountered in the excavation; and
- Garbage or other debris.

A field instrument that can help to qualitatively assess the presence of contamination is a photoionization detector (PID). A PID will detect the presence of a volatile compound (such as benzene or gasoline) in the air but does not identify the chemical. It is not expected that a PID will be utilized during routine construction activities. If suspected contamination is encountered or could be expected to be encountered (i.e. for work in or near areas with petroleum contamination documented in the subsurface investigation reports produced by Terra Associates, and GeoEngineers), a PID would be useful to help identify and segregate PCS and can be used for worker protection.

The Environmental Compliance Manager (ECM) and Project Manager will be immediately notified if excavated material presents visual or olfactory evidence of contamination. The ECM and Project Manager will notify the WSDOT Project Engineer in accordance with WSDOT Environmental Compliance Assurance Procedures (ECAP). If sampling and analysis indicates that suspect material is contaminated at

concentrations exceeding cleanup levels (CULs), the WSDOT Project Engineer will notify WDOE within 24 hours.

5.4 Stockpiling

The Contractor shall provide proper storage of contaminated soil or debris in stockpiles/staging piles pending sampling, analysis, waste profiling and disposal. Sufficient storage will be required so that the Contractor's operations are not disrupted due to insufficient storage.

General requirements for the temporary stockpile include: (a) prevent intermixing of stockpiled materials with underlying soils or materials from other sources/or with other contaminants; (b) prevent contact with storm water; (c) prevent erosion of stockpiled materials; (d) apply stormwater BMPs as appropriate for stockpile construction and maintenance; (e) maintain daily inventory of stockpile areas and provide information to the Project Engineer, as requested, and (f) appropriate site security such as fence areas to alleviate hazards to the public. The stockpile will be a contained system that may include ready-made structures or facilities, to contain soil and liquids.

Incidental stockpiling of contaminated soil within the boundaries of a known contaminated soil area can be conducted without any liners or controls if soil is located in an area where run-off from the stockpile cannot run-on to a clean area or an area with a different type of contamination.

In circumstances where stockpiling will be required, such as during the temporary storage of contaminated soil in a clean area or area with a different type of contamination, or the discovery of undocumented contamination, stockpiles will adhere to the following:

- Stockpiles will be underlain by plastic sheeting with a minimum thickness of 6 mil, with adjacent sheeting sections overlapping a minimum of 3 feet per Standard Specification 8-01.3(5); The perimeter of the stockpiles shall be surrounded by a berm to prevent run-on and/or run-off of precipitation;
- Stockpiles shall be covered with plastic sheeting when not in use and the cover should be anchored (such as with sandbags or otherwise) to prevent it from being disturbed by wind.

5.5 Soil Sampling and Testing

Trained environmental personnel or Atkinson's Environmental Consultant will perform sampling of excavated materials for characterization of suspected contaminated soils. The following sections describe the procedures for soil sampling.

5.5.1 Sample Collection

Soil samples will be collected by filling laboratory provided containers for specific analysis as presented in the Laboratory Container Requirements table presented in Attachment IV. Soil will be collected in a single 4-oz jar for the for analysis of RCRA-8 metals, TPH-D, and dry weight analyses for that sample. Soil samples for analysis of VOCs or TPH-G will be collected into Volatile Organic Analysis (VOA) vials in accordance with EPA Method 5035A. Attachment IV presents appropriate containers/preservatives by analyte/analytical method. Sampling methods for specific sites are detailed in the site-specific Sampling and Analysis (SAP) and Contaminated Media Management Plans (CMMPs).

All non-disposable components of the sampling equipment (e.g., hand augers, shovels, spoons, or other equipment) used to collect samples that contact the soil will be decontaminated prior to, and in between, collection of individual samples as follows:

- Scrub with potable water containing Alconox/Liquinox detergent
- Potable water rinse/deionized (DI) water rinse

Each sample will be collected and immediately placed in coolers with ice. Chain-of-custody documentation will accompany the samples during transport to the analytical laboratory.

In the case of stockpile sampling, the number of samples collected to characterize a given volume of soil will be based on Table 6.9 of the *Guidance for Remediation of Petroleum Contaminated Sites* (WDOE, 2016a). Soils will be collected from at least 1-ft below the surface of stockpiles.

5.5.2 **Sampling Analysis Procedures**

Samples may be analyzed for the following:

- Total Petroleum Hydrocarbon as Diesel Range by Method NWTPH-Dx;
- Total Petroleum Hydrocarbon as Gasoline Range by Method NWTPH-Gx;
- BTEX / NWTPH-Gx using EPA Method 8021B;
- PAHs by EPA Method 8270/625;
- Total Metals (RCRA-8: arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) by EPA Method 200.8/6020A/1631E;
- Toxicity characteristic leaching procedure (TCLP) of RCRA 8-metals by EPA Methods 6010, 6020, and 200.8; and
- VOCs by EPA Method 8260C.

5.5.3 **Evaluation of Analytical Results**

The analytical results from samples collected will be reviewed by the Environmental Consultant and used to support regulatory reporting and waste profiling for disposal. The analytical results will be compared to the criteria defined for the types of wastes this plan addresses: "Contaminated Material(s) not designated as Dangerous Waste or Toxic Substances Control Act (TSCA) Waste" and "Dangerous Waste".

When analyses of lead, arsenic or other constituent pursuant to WAC 173-303-090 exhibit concentrations that may identify the waste as having characteristic of toxicity (WAC 173-303-090 (8)), then supplemental testing may be required for toxicity characteristic leaching procedure (TCLP). The following industry standard shall be used to determine if a TCLP analysis is required: In the event that a detected concentration in mg/kg exceeds twenty times the subsequent TCLP value (in mg/L) for that constituent as listed in WAC 173-303-090 (8)(c), a TCLP extraction and analysis will be performed. An appropriate number of discrete stockpile samples as determined by Table 6.9 of the *Guidance for Remediation of Petroleum Contaminated Sites* (WDOE, 2016a) will be collected and analyzed for toxicity characteristic leaching procedure (TCLP).

The TCLP data will be compared to the TCLP thresholds established in RCRA to determine if the solid waste is classified as a Washington State Dangerous Waste and/or federal hazardous waste. Any waste that contains contaminants which occur at or above the Dangerous Waste threshold must be designated Dangerous Waste (WAC 173-303-100). Soils that fail a TCLP for metals or constituents such as benzene must be disposed of as Dangerous Waste.

Metals Analysis
The project site is located within the Tacoma Smelter Plume (WDOE, 2016b). The potential for RCRA regulated metals, particularly lead and arsenic, exists in the site soil and work should be undertaken with the assumption of the presence of area-wide contamination of soil. As such, soil considered for export from the project area will be sampled according to Section 5.5.1 for RCRA-8 metals.

- Generally, the analytical results will be compared to criteria defined in regulations such as, but not limited to, WAC 173-340, WAC 173-303, WAC 173-201A and WAC 173-350.
- For sites with known metals contamination resulting from on-site sources (GeoEngineers 2021/2022, A1-Towing Facility), analytical results will be compared to MTCA Method A cleanup standards.

Petroleum and Volatile Organics
For the case of petroleum contamination, results will be compared with Tables 12.1 and 12.2 from the *Guidance for Remediation of Petroleum Contaminated Sites* (WDOE, 2016), which indicate guideline concentrations for disposal and reuse categories for petroleum contaminated soil. Definitions and considerations used in the evaluation of analytical results are further described below:

- Petroleum-contaminated soils that are not otherwise classified as a dangerous waste are regulated under the Solid Waste Handling Standards, Chapter 173-350 WAC (WDOE, 2018) as well as Table 12.1 of the *Guidance for Remediation of Petroleum Contaminated Sites* (WDOE, 2018).
- Persistent Waste Criteria WAC 173-303-100(6): WAC 173-303-100(5) requires wastes/soil with halogenated organic compounds content greater than 100 parts per million (ppm), and PAH content of 10,000 ppm to be handled as Dangerous Waste.

5.6 Contaminated Water Management Procedures

Active groundwater de-watering during site redevelopment is not anticipated as the planned grading and utility work for the development is above the reported water table. However, deep trenches or bridge footings may encounter groundwater and if those activities take place on the "A-1 Towing" site and "S&M Machine Shop" sites, water should be tested and contained before it is discharged off-site, disposed of by the contractor, or infiltrated back into the work area.

Water accumulation related to stormwater management, limited perched groundwater, or incidental rain water that accumulates in excavations will be handled and disposed of in accordance with the Stormwater Pollution Prevention Plan (SWPPP) for the project and in compliance with the Construction General Stormwater Permit. If possible, water should not be discharged from the site in areas with known contamination.

Groundwater pumped from excavations or footings will be managed as follows:

- *Contain and Analyze*: Water generated from dewatering activities at the "A-1 Towing" site and "S&M Machine Shop" sites will be contained and characterized prior to disposal or infiltrated back into the work area. Water suspected to be contaminated with VOCs, metals, or petroleum hydrocarbons due to contact with contaminated soil or from pumped groundwater will be pumped into an appropriate container (temporary tanks or DOT approved drums) and sampled. The samples will be analyzed to assess the correct method of treatment and/or disposal. Laboratory analytical results will be compared to both the Water Quality Standards established in WAC 173-201A (WDOE, 2016c) and the MTCA Method A Cleanup Levels established in WAC 173-

340 (WDOE, 2013), along with standards promulgated by the EPA for arsenic Human Health Criteria for Consumption[1].

- *Halt Work*: If significant indications of contamination are observed in groundwater, then construction work will be halted while analytical testing is conducted to determine options for treatment, disposal and health and safety requirements. In the event that work is halted, the WSDOT Project Engineer will be notified, and stopping procedures will be conducted in general accordance with the ECAP process. Such indicators could include presence of free phase liquids, odor, sheen, or extreme discoloration of the groundwater. If unanticipated contamination is revealed as a result of the analyses, the WSDOT Project Engineer shall notify WDOE.

- *Disposal*: Based on the volume of water generated and the concentrations of the constituents of concern, the groundwater will be disposed by one of the two following methods:

    - Infiltration back into the area from where it was pumped or discharge to storm/sanitary sewer. Any discharge to storm sewer or surface waters or infiltration into the work area must be authorized by WDOE under the National Pollutant Discharge Elimination System (NPDES) permit and the Administrative Order (AO) for the site.

    - Off-site disposal by contacting a vendor to collect the water and transport it to a proper disposal or recycling facility. Groundwater that contains contaminants at concentrations that preclude discharge to storm sewer or infiltration in the work area (per the criteria noted above) shall be hauled offsite to an approved facility coordinated by the Contractor. Disposal shall be at a facility permitted to treat and indirectly discharge wastewater to the public sewer under 40 CFR 437 (centralized waste treatment facility).

5.7 Contaminated Demolition Debris Management Procedures

Demolition debris will be characterized for disposal pursuant to WAC 173-303 (WDOE, 2014) and WAC 173-350 (WDOE, 2018). Demolition debris contaminated with PCBs or heavy metals at concentrations exceeding the adopted cleanup standard should be segregated with appropriate secondary containment (i.e. plastic sheeting with berms, metal container, etc.) for off-site disposal.

5.8 Procedures for Specific Construction Activities

This section describes activities that may result in the generation of waste for off-site disposal.

5.8.1 Utility Trenching

Utility trenching will be necessary to support drainage, traffic information and electrical systems associated with the new overpass structures. In general, utility trenches will be backfilled with the excavated material. Contaminated soil identified (see section 5.3) during trenching or grading operations will be contained, characterized and disposed of off-site at a permitted facility.

[1] TCP Interim Policy 730: Taking Into Account Federal Human Health Surface Water Quality Criteria under MTCA, https://apps.ecology.wa.gov/publications/documents/2009059.pdf

5.8.2 **Grading**

Mass grading will be conducted for the construction of new roadways. In general, grading will reuse soil that is cut and transported within the site. Unless specified otherwise in Section 2.3.1, the reuse of on-site soils for grading purposes is permissible only if the concentrations of lead and arsenic in the soil are within the limits set by regulatory standards. Excavated material will be backfilled where appropriate. Contaminated soil, as identified in Section 5.3, encountered during trenching or grading activities will be contained, characterized, and disposed of off-site at a permitted facility.

5.9 Dust and Odor Control

There is the potential for nuisance dust or odors to be emitted during soil excavation activities. Fugitive/nuisance dust will be managed in accordance with the Associated General Contractor's (AGC's) guide to controlling fugitive dust (included in the Environmental Compliance Plan prepared by PBS/Atkinson).

The goal is to eliminate visible airborne Fugitive Dust. Therefore, state and local regulatory agencies expect that as many of these control techniques be employed as necessary to achieve this goal. Atkinson is required to comply with Chapter 173-400 Washington Administrative Code (WAC), Chapter 70.94 RCW – Washington Clean Air Act, and the Puget Sound Clean Air Agency's Regulation I, Section 9.15, requiring reasonable precautions to avoid dust emissions. Should excessive dust or nuisance odors develop during excavation as determined by visual and olfactory observation by the Contractor, or complaints, the Contractor shall be prepared to implement one or more of the following odor control measures:

- Minimize the open area where high concentrations of contaminants may be present.
- Apply a mist of water over the area as needed to minimize odor and dust. The use of water for dust control will be sufficient to suppress dust but should not be excessive such that surface runoff of water used for dust control is permitted.
- Cover exposed areas with elevated concentrations of contaminants with plastic sheeting at the end of each workday and during periods when excavation activities are not being performed.
- Ensure that stockpiles are covered when not in use to prevent the dispersion of contaminants.

If products other than water are used, they will be approved by WSDOT and WDOE (if chemical treatment is requested) prior to use. Other means of controlling odors may be applicable, and the Contractor should consult with the Environmental Compliance Manager prior to implementation.

5.10 Decontamination Procedures

If contaminated soils are identified within work areas, procedures should be implemented to prevent the spread of such materials. In areas impacted by the Tacoma Smelter Plume (known lead- and arsenic-contaminated soils), as well as areas where oil residue is present on equipment, excavator tracks, or truck tires, cleaning will be conducted using a combination of wet and dry methods. During dry conditions, soil residues will be removed by dry brushing. Soil that cannot be adequately removed by dry methods will be washed off equipment using high-pressure water.

During winter conditions, high-pressure water washing will be used to remove material residues and mud from equipment and tires. If a contaminated area can be delineated that will experience extensive vehicle traffic, a decontamination station will be constructed at an appropriate location on the site. The station will consist of a bermed bed of crushed aggregate rock equipped with a water collection sump. Water generated during decontamination activities will be handled as process water and disposed of to the

sanitary sewer or disposed of off-site at an approved facility. The work areas will be kept clean and free of excessive soil or debris.

5.11 Contingency Plan for Unknown Contamination

Contaminated soils may be encountered during the Work that have not previously been identified or characterized. The equipment operator shall stop work and notify the Environmental Compliance Manager and Project Team if any of the following are encountered:

- Obvious staining, sheen, or colored hues in soil or standing water in locations not previously designated,
- Presence of gasoline- or oil-like vapor or odor or unexpected petroleum products or other chemicals,
- Utility pipe lines with sludge or trapped liquid indicating petroleum or chemical discharge sludge,
- Unexpected buried pipes, conduit, tanks, or unexplained metallic objects or debris,
- Vapors causing eye irritation or nose tingling or burning,
- Clearing and grubbing vegetation for replanting purposes within the known contaminated soil area associated with the Tacoma Smelter Plume. Overgrown vegetation and trees should be classified as organic waste for disposal. However, the forest duff layer and soil associated with in-ground roots, within 2 feet of ground surface, should be tested for arsenic and lead levels to determine appropriate disposal requirements, considering contamination levels.

In the event that suspected contaminated soil or groundwater are observed, the contractor will notify the Environmental Compliance Manager. Soil samples will be field screened by the Environmental Consultant and samples will be collected and analyzed to ensure that the contaminated soil and/or groundwater is removed and properly characterized prior to disposal (see section 5.3). WSDOT shall notify WDOE of the discovery of any unknown or unanticipated contamination.

6. CONTAMINATED SOIL TRANSPORT AND OFF-SITE DISPOSAL

Transport of contaminated media to the appropriate disposal facilities will be performed by haulers licensed to transport that media. The Contractor shall submit a copy of its transporter's permit/qualifications for shipping contaminated soil prior to any waste transfer.

6.1 Waste Profile and Manifest

Prior to transport of PCS or other contaminated material, the waste material must be properly manifested and approved for acceptance by the selected disposal facility. The Contractor shall provide the Environmental Compliance Manager with copies of the waste profile manifest and approval notification from the selected disposal facility 3-days prior to removal of PCS or other contaminated material from the project site.

6.2 Contaminated Soil Transport

Transport of contaminated soil to the appropriate disposal facilities will be performed by haulers licensed to transport the type of contaminated soil. Contaminated soil will be loaded from stockpile or containers directly to the designated vehicle for transport to the approved disposal site. The Contractor shall provide the Environmental Compliance Manager with copies of shipping records (manifest or bill of lading) and quantity tickets for all shipped wastes, indicating each waste shipment has been received at a disposal facility. Provide copies to the Environmental Compliance Manager within 7 working days of removal. The Contractor will provide the City with copies of the shipping manifest or bill of lading indicating the

amount of material hauled to disposal and bearing the disposal site operator's confirmation for receipt of material.

6.3 Off-Site Disposal

Soil with detectable concentrations of petroleum hydrocarbons must be managed as PCS and disposed of at a permitted solid waste facility in accordance with WAC 173-340 (WDOE, 2013). Soil with detectable concentrations of other contamination such as VOCs (including TCE) must be managed according to its waste category (see Section 3.1) and disposed of at a permitted solid waste facility in accordance with WAC 173-350 (WDOE, 2018). The Contractor is responsible for determining waste facility requirements and facilitating additional preliminary waste profiling if required. Sampling for waste profile analysis may be required by the receiving facility prior to approval.

Once a permitted facility is selected, the Contractor will submit copies of the facility permits and environmental approvals to WSDOT for review and approval prior to transport and disposal of material. Example facilities that may be used for disposal of Contaminated Waste include:

- Allied Waste's (Regional Disposal Company) transfer station
- Waste Management's transfer station
- WDOE permitted solid waste facilities
- Other public health department approved facility

7. POST CONSTRUCTION MANAGEMENT

This SGMP was created as guidance related to contamination encountered during the construction period. It is understood that additional management related to contamination may be appropriate once construction is complete. Ongoing management may include inspection, notification, maintenance, and monitoring.

8. REPORTING AND DOCUMENTATION

Atkinson and any subcontractors managing contaminated media will maintain all necessary permits and approvals related to the removal, excavation, management, storage, transportation, and/or treatment/disposal of the contaminated soil or water that might be generated during the project. Permits may include, but are not limited to, excavation permits, transportation permits and manifests, discharge permits and approvals and permits for treatment or disposal of contaminated waste. Copies of permits and disposal receipts should be retained for future reporting by WSDOT.

Procedures for reporting and recordkeeping are addressed under submittals as required by Project. In summary, documentation will include:

- Quantity by volume in cubic yards per WSDOT Standard Specifications M41-10 2018 (WSDOT, 2018),
- Quantity by weight as determined by number of truckloads and disposal facility weight tickets,
- Quantity of water by gallons retained by dewatering activity for discharge or disposal. The destination (discharge or disposal) of the water will be documented. If off-site disposal facility delivery receipts (gallons) shall be retained.
- Physical characteristics including analytical results when applicable,
- Disposal facility for each material disposed,

- Disposal facility receipts,
- Weight / truck tickets,
- Manifests / Bills of Lading,
- Fee receipts,
- Certification from each receiving facility owner that the facility's operating permit conditions were met for materials disposed, and
- Copies of all analytical data will be provided to the landfill operator upon request.

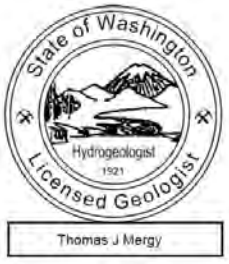
The documentation shall be presented to WSDOT in a report that includes all laboratory data will be attached. An accompanying narrative will describe the soil removal and any deviations to the procedures that occurred. Corrective actions will be identified as needed, and the resolution of any discrepancies will be reported.

9. SIGNATURES

PBS Engineering and Environmental LLC

Thomas Mergy, LHG
Senior Hydrogeologist

Date



REFERENCES

(GeoEngineers, 2021) *Phase II Environmental Site Assessment Report – A-1 Towing, King County Tax Parcel 3223049048, Des Moines, Washington*.

(GeoEngineers, 2021) *Phase II Environmental Site Assessment Report S&M Machine Shop Property, 1122 South 194th Street, SeaTac, Washington*.

(GeoEngineers, 2022) *Well Installation and Groundwater Monitoring Report S&M Machine Shop Property, 1122 South 194th Street, SeaTac, Washington*.

(WDOE, 2013) *Model Toxics Control Act Regulation and Statute,* Washington State Department of Ecology, Publication No. 94-06, revised 2013.

(WDOE, 2014) *Dangerous Waste Regulations WAC 173-303,* Washington State Department of Ecology, December 2014.

(WDOE, 2016a) *Guidance for Remediation of Petroleum Contaminated Sites,* Washington State Department of Ecology, June 2016.

(WDOE, 2016b) *Tacoma Smelter Plume Model Remedies Guidance: Sampling and cleanup of arsenic and lead contaminated soils*, Washington State Department of Ecology, November 2016.

(WDOE, 2016c) *Water Quality Standards for Surface Waters of the State of Washington,* Washington State Department of Ecology, August 2016.

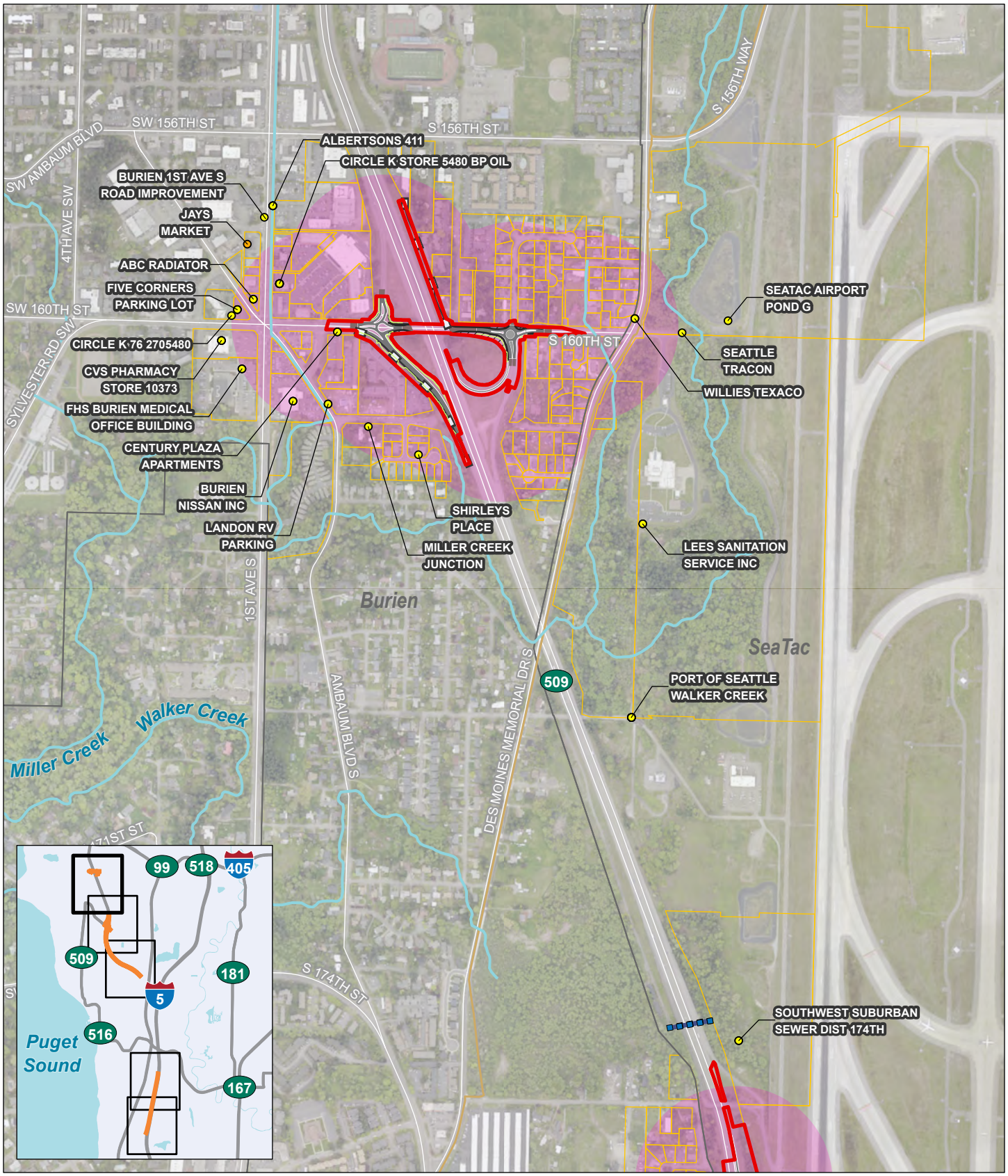
(WDOE, 2018) *Solid Waste Handling Standards WAC 173-350,* Washington State Department of Ecology, September 2018.

(WSDOT, 2018) *Standard Specifications for Road, Bridge, and Municipal Construction,* 2018.

(WDOE, 2020) *Construction Stormwater General Permit, National Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Stormwater Discharges Associated with Construction Activity,* Washington State Department of Ecology, November 2020.



Figure 1.
Project Overview
SR 509 Stage 2 Project – NEPA Reevaluation

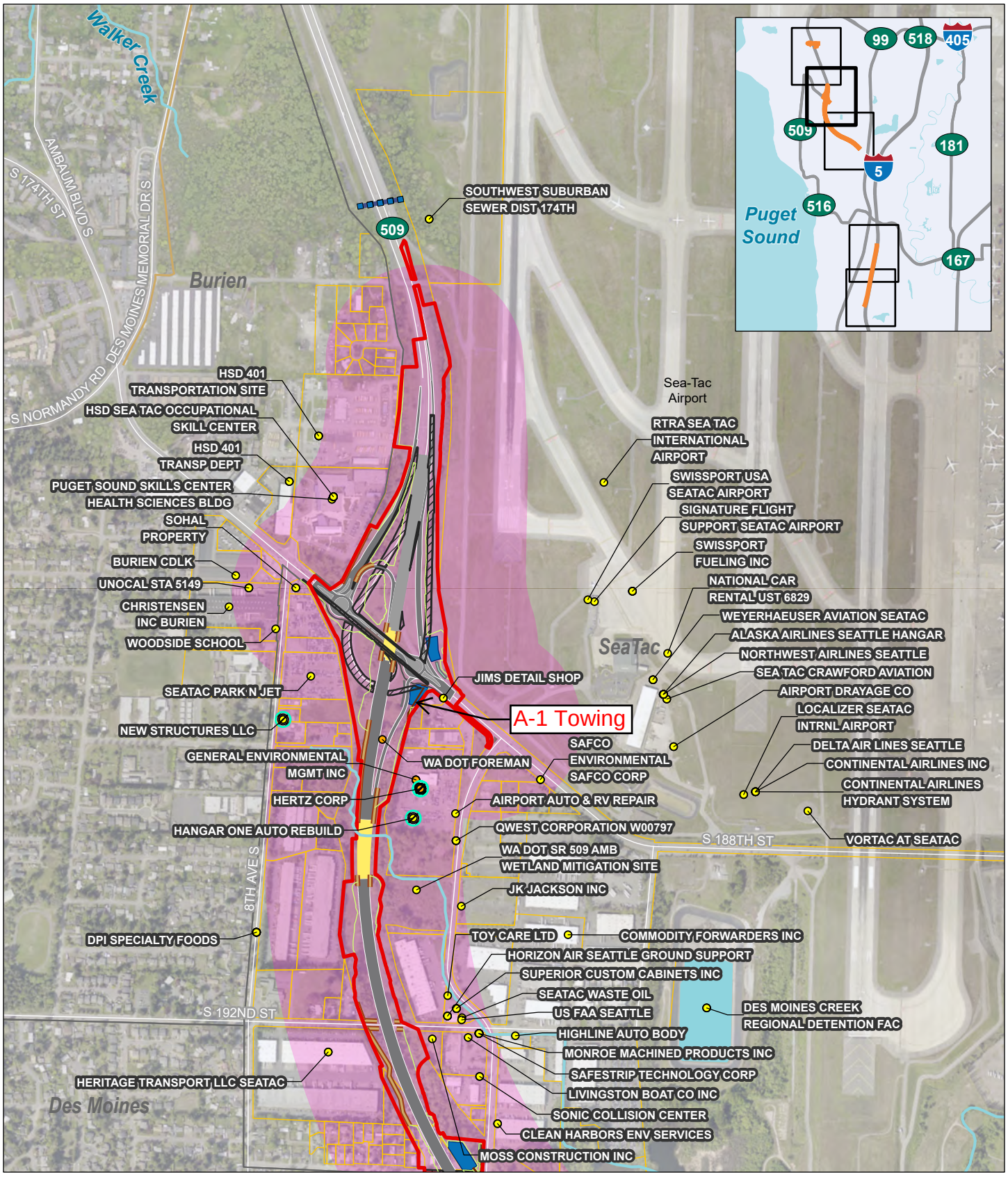


Moderate Impact
Low Impact
Trail
Noise Wall
Cut/Fill Line
Stream
Culvert
Parcel within 1/8 mile
Municipality
New Pavement
Sidewalk
Roundabout/Curb
Pavement Overlay
Pavement Removal
Impact Area

SR 509 - Stage 2
HazMat - Sites (Impacts)
DRAFT List
Page 1 of 5

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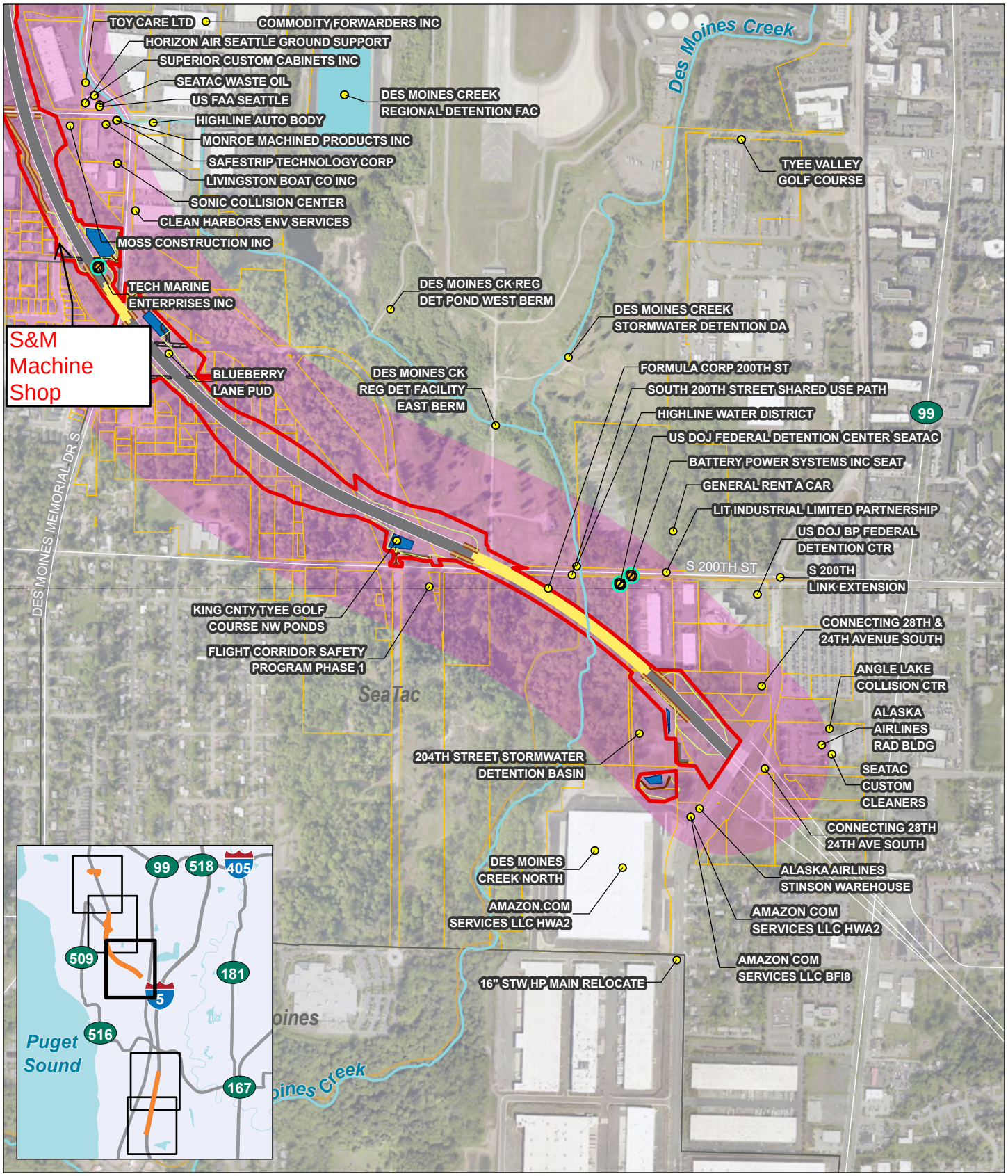
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- Low Impact
- 2018 Re-Eval
- Trail
- Retaining Wall
- Cut/Fill Line
- Stream
- Culvert
- Parcel within 1/8 mile
- Municipality
- Water
- New Pavement
- Sidewalk
- Roundabout/Curb
- Pavement Overlay
- Above-Grade Alignment
- Detention Pond
- Biofiltration Swale
- Maintenance Road
- Pavement Removal
- Impact Area

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HazMat - Sites (Impacts)
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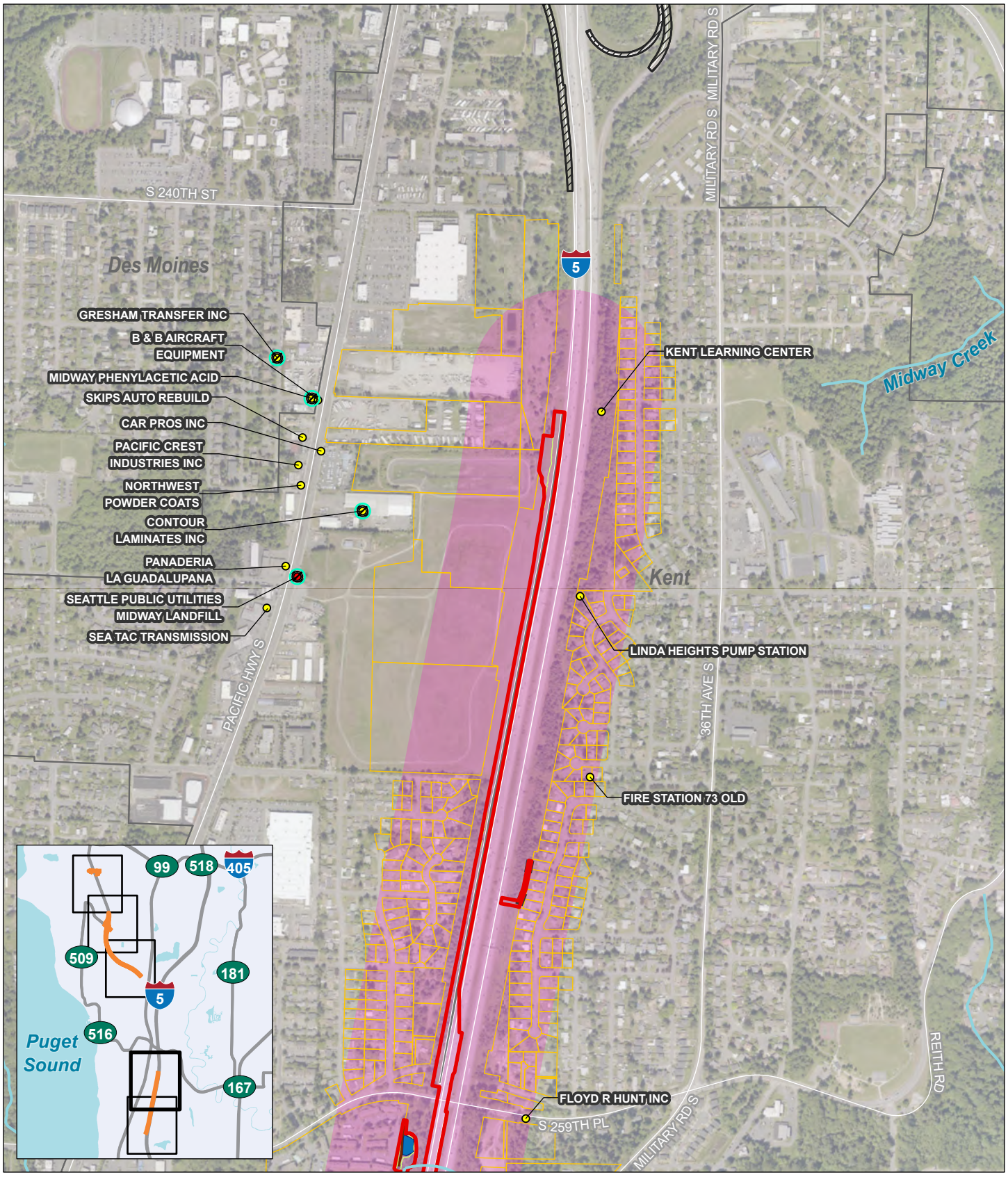
- Moderate Impact
- Low Impact
- 2018 Re-Eval
- Trail
- Retaining Wall
- Cut/Fill Line
- Stream
- Parcel within 1/8 mile
- Municipality
- Water
- New Pavement
- Above-Grade Alignment
- Detention Pond
- Biofiltration Swale
- Maintenance Road
- Pavement Removal
- Impact Area

SR 509 - Stage 2
HazMat - Sites (Impacts)
DRAFT List
Page 3 of 5

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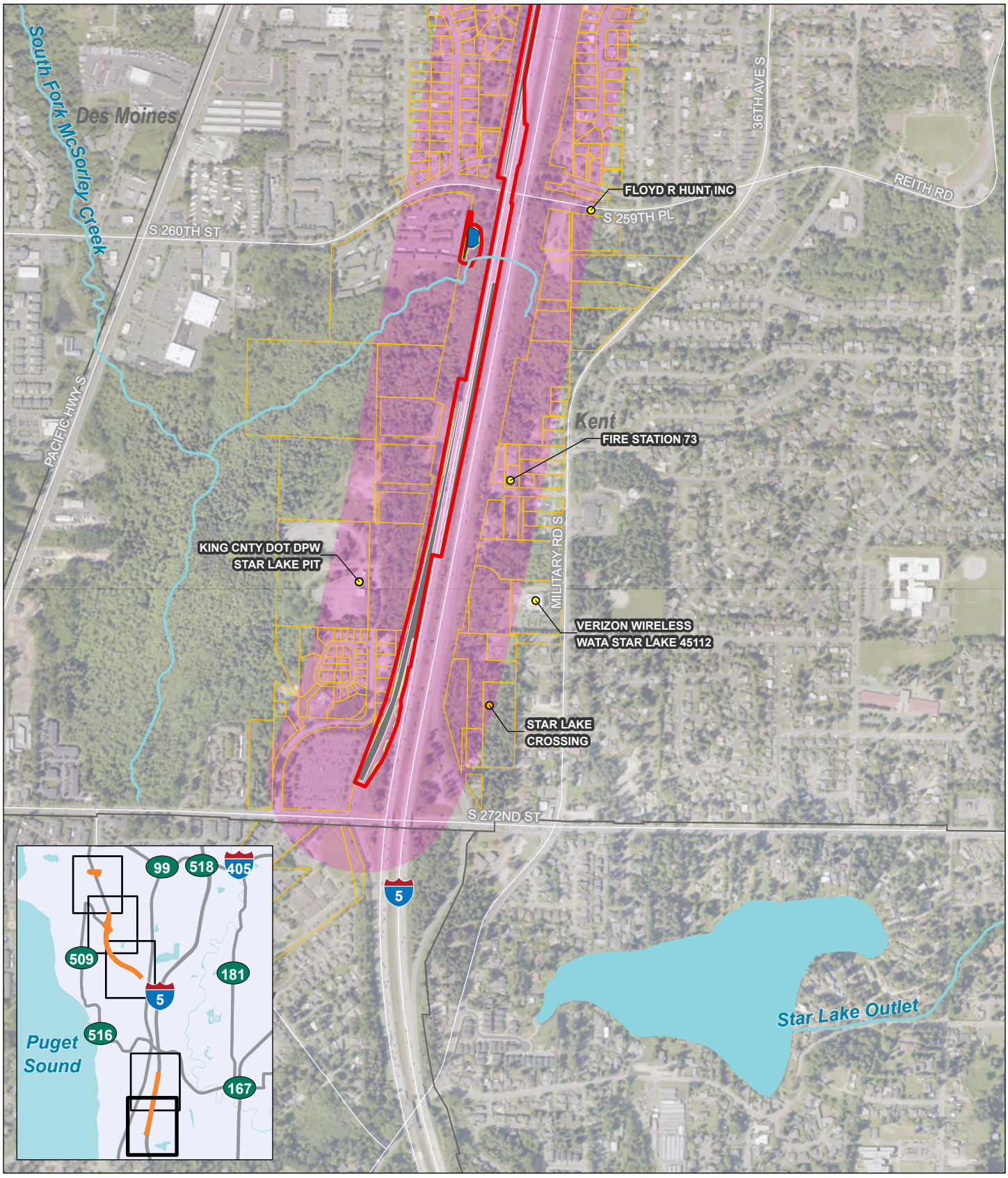


- High Impact
- Low Impact
- 2018 Re-Eval
- Noise Wall
- Cut/Fill Line
- Stream
- Parcel within 1/8 mile
- Municipality
- New Pavement
- Detention Pond
- Maintenance Road
- Pavement Removal
- Impact Area

SR 509 - Stage 2
HazMat - Sites (Impacts)
DRAFT List
Page 4 of 5

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- Moderate Impact
- Low Impact
- Noise Wall
- Cut/Fill Line
- Stream
- Parcel within 1/8 mile
- Municipality
- Water
- New Pavement
- Detention Pond
- Maintenance Road
- Impact Area

SR 509 - Stage 2
HazMat - Sites (Impacts)
DRAFT List
Page 5 of 5

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Note: Double yellow line shows future path of light rail along Interstate 5 at the landfill's edge. Red line shows landfill boundaries.
Source: Altose 2020

Figure 2. Map of Midway Landfill

ATTACHMENT I

WDOE Guidance for Reuse of PCS
Tables 12.1 – 12.2

Table 12.1 Guidelines for Reuse of Petroleum-Contaminated Soil

Parameter	Analytical Method	Soil Category (8)(9)(10)			
		1 No detectable Petroleum Components (mg/kg)	2 Commercial Fill Above Water Table (mg/kg)	3 Paving Base Material & Road Construction (mg/kg)	4 Landfill Daily Cover or Asphalt Manufacturing (mg/kg)
Total Petroleum Hydrocarbons (1)(2) See Table 7.1 for petroleum products that fall within these categories.					
Gasoline Range Organics	NWTPH-Gx	<5	5 - 30	>30 - 100	>100
Diesel Range Organics	NWTPH-Dx	<25	25 - 200	>200 - 500	>500
Heavy Fuels and Oils*	NWTPH-Dx	<100	100 - 200	>200 – 500	>500
Mineral Oil	NWTPH-Dx	<100	100 - 200	>200 – 500	>500
Volatile Petroleum Components					
Benzene	SW8260B	<0.005	0.005 - 0.03	0.03 or less	See Table 12.2
Ethyl benzene	SW8260B	<0.005	0.005 - 6	6 or less	>6
Toluene	SW8260B	<0.005	0.005 - 7	7 or less	>7
Xylenes (3)	SW8260B	<0.015	0.015 - 9	9 or less	>9
Fuel Additives & Blending Components					
(MTBE) Methyl Tert-Butyl Ether	SW8260B	<0.005	0.005 - 0.1	0.1 or less	>0.1
Lead	SW6010A	<17	17 - 50	>50 - 220	See Table 12.2
Other Petroleum Components					
Polychlorinated (4) Biphenyls (PCBs)	SW8082	<0.04	<0.04	<0.04	See Table 12.2
Naphthalenes (5)	SW8260B	<0.05	0.05 - 5	5 or less	>5
cPAHs (6)	SW8270C	<0.05	0.05 - 0.1	>0.1 - 2	>2
Other Petroleum Characteristics (Applies to soils contaminated with any petroleum product.)					
Odors	Smell	No detectable odor			
Staining	Visual	No unusual color or staining			
Sheen Test	See Footnote # 7	No visible sheen			

IMPORTANT: See Table 12.2 and the footnotes to this Table on the following pages!

Test soil for the parameters specified in Table 7.2.

****Does NOT include waste oil contaminated soils, which should be disposed of in a landfill.***

"<" means less than; ">" means greater than

Table 12.2 Description and Recommended Best Management Practices for Soil Categories in Table 12.1 (continues on next page)		
Category	**Acceptable Uses**	**Limitations**
Category 1 Soils: Soils with no detectable/ quantifiable levels of petroleum hydrocarbons or constituents using the analytical methods listed in Table 7.3 and are not suspected of being contaminated with any other hazardous substances.	• Can be used anywhere the use is allowed under other regulations. • Any use allowed for Category 2, 3 & 4 soils.	• These soils may have a slight petroleum odor, depending on the sensitivity of individuals, and this should be considered when reusing these soils.
Category 2 Soils: Soils with residual levels of petroleum hydrocarbons that could have adverse impacts on the environment in some circumstances.	• Any use allowed for Category 3 & 4 soils. • Backfill at cleanup sites above the water table. • Fill in commercial or industrial areas above the water table. • Road and bridge embankment construction in areas above the water table.	• Should be placed above the highest anticipated high water table. If seasonal groundwater elevation information is not available, place at least 10 feet above the current water table. • Should not be placed within 100 feet of any private drinking water well or within the 10 year wellhead protection area of a public water supply well. • Should not be placed in or directly adjacent to wetlands or surface water where contact with water is possible. • Should not be placed under a surface water infiltration facility or septic drain field. • Any other limitations in state or local regulations.
Category 3 Soils: Soils with moderate levels of residual petroleum contamination that could have adverse impacts on the environment unless re-used in carefully controlled situations.	• Any use allowed for Category 4 soils. • Use as pavement base material under public and private paved streets and roads. • Use as pavement base material under commercial and industrial parking lots.	• Should be placed above the highest anticipated high water table. If seasonal ground water elevation information is not available, place at least 10 feet above the water table. • Should be a maximum of 2 feet thick to minimize potential for leaching or vapor impacts. • Should not be placed within 100 feet of any private drinking water well or within the 10 year wellhead protection area of a public water supply well. • Should not be placed in or directly adjacent to wetlands or surface water. • Should 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. • Any other limitations in state or local regulations.

Table 12.2 Description and Recommended Best Management Practices for Soil Categories in Table 12.1 (continued)		
Category	**Acceptable Uses**	**Limitations**
Category 4 Soils: Soils with high levels of petroleum contamination that should not be re-used except in very limited circumstances.	• Use in the manufacture of asphalt. • Use as daily cover in a lined municipal solid waste or limited purpose landfill provided this is allowed under the landfill operating permit.	**Landfill Limitations:** The soil should be tested for and pass the following tests: ➢ Free liquids test. Soils that contain free liquids cannot be landfilled without treatment. ➢ TCLP for lead and benzene. Unless exempt under WAC 173-303-071(3)(t), soils that fail a TCLP for lead or benzene must be disposed of as hazardous waste. ➢ Flammability test. Soils that fail this test must be disposed of as hazardous waste. ➢ Bioassay test under WAC 173-303-100(5). Soils that fail this test must be disposed of as hazardous waste. ➢ PCBs. Soils with a total PCB content of 2 ppm or more must be disposed of as hazardous waste. Soil used for daily cover should be stockpiled within the landfill lined fill area. Soil containing more than 10,000 mg/kg TPH should be buried immediately with other wastes or daily covered to limit potential worker exposure. Any additional limitations specified in the landfill permit or in other state or local regulations. **Asphalt Manufacturing Limitations:** Soil storage areas should be contained in a bermed area to minimize contact with surface water runoff from adjacent areas. Runoff from storage areas should be considered contaminated until tested to prove otherwise. Soil storage areas should also be lined and covered with a roof or secured tarp to minimize contact with precipitation and potential groundwater contamination. Leachate from storage areas should be considered contaminated until tested to prove otherwise. The soil should be tested for and pass the following tests: ➢ TCLP for lead and benzene. Unless exempt under WAC 173-303-071(3)(t), soils that fail a TCLP for lead or benzene must be disposed of as hazardous waste. ➢ Flammability test. Soils that fail this test must be disposed of as hazardous waste. ➢ Bioassay test under WAC 173-303-100(5). Soils that fail this test must be disposed of as hazardous waste. ➢ No detectable levels of PCBs in soil (<0.04 mg/kg). Precautions should be taken to minimize worker exposure to soil storage piles and any dust or vapors from these piles prior to feeding into the asphalt batch plant.
IMPORTANT: See the following page for additional information!		

Notes to Table 12.1:

Contaminated soils can be treated to achieve these concentrations but dilution with clean soil to achieve these concentrations is a violation of Washington State solid and hazardous waste laws.

(1) See Table 7.1 for a description of what products fall within these general categories. If the product released is unknown, use the limitations for gasoline range organics. If the soil is contaminated from releases from more than one product, use the limitations for both products. For example, if the release is a mixture of gasoline and diesel, the soil should be tested for components of both gas and diesel and the limitations for both fuels and their components used.

(2) The concentrations for diesel, heavy oil and mineral oil are not additive. Use the TPH product category most closely representing the TPH mixture and apply the limitations for that product to the mixture. ***The reuse of waste oil contaminated soil is not allowed due to the wide variety of contaminants likely to be present.***

(3) Value is total of m, o, & p xylenes.

(4) Value is the total of all PCBs. Only heavy oil and mineral oil contaminated soils need to be tested for PCBs. Soil contaminated with a spill from a regulated PCB containing device must be disposed of in a TSCA permitted landfill, regardless of the PCB concentration. Other PCB contaminated soils may be disposed of in a municipal solid waste landfill permitted to receive such materials, provided the concentration does not exceed 2 ppm PCBs (WAC 173-303-9904).

(5) Value is total of naphthalene, 1-methyl naphthalene and 2-methyl naphthalene. Only diesel and heavy oil contaminated soils need to be tested for naphthalenes.

(6) The value is the benzo(a)pyrene equivalent concentration of the following seven cPAHs, using the procedures in WAC 173-340-708(8). The seven cPAHs are as follows: benz(a)anthracene; benzo(b)fluoranthene; benzo(k)fluoranthene; benzo(a)pyrene; chrysene; dibenz(a,h)anthracene; and, indeno(1,2,3-cd)pyrene. Only diesel and heavy oil contaminated soils need to be tested for cPAHs. Soils contaminated with more than 1% polycyclic aromatic hydrocarbons, as that term is defined in WAC 173-303-040 (which is more expansive than the above list), must be disposed of as hazardous waste.

(7) No visible sheen observed on water when approximately one tablespoon of soil placed in approximately ½ liter of water held in a shallow pan (like a gold pan or similar container).

(8) A soil in a lower category can be used for uses specified in any higher category. This means that:

- A category 1 soil can be used for any use specified in categories 1, 2, 3 and 4.
- A category 2 soil can be used for any use specified in categories 2, 3 and 4.
- A categories 3 soil can be used for any use specified in categories 3 and 4.

(9) ***If an environmental site assessment or soil or groundwater analyses indicate contaminants other than common petroleum constituents and naturally occurring levels of metals are likely to be present in the soil of interest at the site (for example, solvents or pesticides), do not reuse the soil.*** The soil should instead be treated using appropriate technology to address all contaminants or landfilled at a solid waste or hazardous waste facility permitted to receive these materials.

(10) Soils in categories 2, 3 and 4 should be stockpiled consistent with the soil storage recommendations in Section 11.3 of this guidance.

ATTACHMENT II

Subsurface Investigation and Phase II ESA Document Excerpts GeoEngineers

(Appendices removed for document usability, available on request)

Phase II Environmental Site Assessment

A-1 Towing
King County Tax Parcel 3223049048
Des Moines, Washington

for
Washington State Department of Transportation
c/o HNTB Corporation

December 22, 2021

GeoEngineers
Earth Science + Technology

Phase II Environmental Site Assessment

A-1 Towing
King County Tax Parcel 3223049048
Des Moines, Washington

for
Washington State Department of Transportation
c/o HNTB Corporation

December 22, 2021

GeoEngineers

4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego, Oregon 97035
503.624.9274

Phase II Environmental Site Assessment

A-1 Towing
King County Tax Parcel 3223049048
Des Moines, Washington

File No. 0180-393-00

December 22, 2021

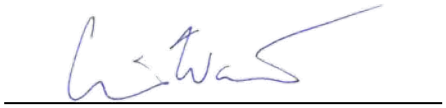
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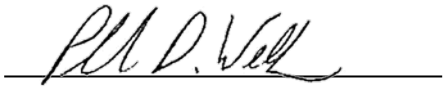
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Senior Environmental Scientist



Phil Welker, PE
Principal

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1.0 INTRODUCTION AND BACKGROUND

This report describes the Phase II Environmental Site Assessment (ESA) activities conducted at the property located at King County Tax Parcel 3223049048 (the provided address of 18451 12th Avenue South in Des Moines, Washington does not map accurately) as part of the expansion of SR-509 (herein referred to as "site"). The property is owned by Washington State Department of Transportation (WSDOT) but is leased by a private party and WSDOT is evaluating environmental conditions. The approximate site location is shown in the attached Vicinity Map, Figure 1.

GeoEngineers reviewed a Phase II ESA prepared for the property (known as A-1 Towing and the Foreman Property) located at 18451 12th Avenue South in Des Moines, Washington by WSDOT, dated January 24, 2019. The Phase II ESA indicated that WSDOT purchased the property in 2000. A tenant (Mr. Foreman) conducted welding activities between 2000 and 2016, and the Washington State Patrol (WSP) used a portion of the property to dismantle seized vehicles in the summer of 2016. At the time of the report (January 2019), A-1 Towing leased the property as a towing yard, which included storge of vehicles throughout the site and repairing of vehicles within an existing garage structure. The Phase II report included a summary of the following activities:

- The Phase II ESA performed by WSDOT in 2016 following the termination of the lease to Mr. Foreman included soil sampling of areas with significant staining. Areas identified as Area A, B, C and D were sampled as part of the Phase II ESA. Results indicated the presence of lube oil and arsenic exceeding the Model Toxic Control Act (MTCA) Cleanup Levels (CULs) in Area B and C, respectively.
- In April 2017, WSDOT contracted Marine Vacuum Incorporated to clean up areas of the Site with trash, debris and soils with notable detectable analytes below MTCA Method A CULs. It is unclear from this statement as to what soils were actually removed and no additional details were provided.
- In January 2018, A-1 Towing graded Site soils including some that were contaminated. The soils were displaced from previously sampled areas A and B. A new stockpile was present following these activities just north of Area D.
- On March 15, 2018, WSDOT collected four additional soil samples from areas defined as Area A, B, and a new location. WSDOT collected a sample to determine if there was an indication of grading with known or suspected soil contamination, or where displaced/graded soils appeared to be consolidated into a stockpile generated by the lessee. Areas C and D did not have these indicators and did not warrant additional sampling. Sample results did not indicate results exceeding the MTCA Method A CULs.
- On September 20 and 21, 2018, Marine Vacuum Performed excavation activities to address the previously detected lube oil concentrations exceeding the MTCA Method A CULs and an area to remediate suspected contaminated materials in Area C and D. During site excavation activities soils were field screened using sight, olfactory and photoionization detector (PID) levels above 10 parts per million. Non-suspect soils were placed off to the side on a lined area and covered. On September 21, 2018, WSDOT collected two confirmation soil samples in locations where the soils had been removed. Laboratory analytical results were either non-detect or detected at concentrations less than MTCA Method A CULs. Following sample results, the stockpiled non-suspect soils were used to fill and grade the excavation areas.
- The January 24, 2019, Phase II ESA summary indicated that the known and suspected soils with contamination (approximately 8.4 cubic yards) were removed from the site and based on the analytical

results no contamination remains on the property. WSDOT requested a no further action (NFA) determination from Washington State.

- Ecology responded to the request for a NFA determination indicating that additional information would be necessary including depth of samples, groundwater samples (if encountered) and more accurate sample location information (previous report had conflicting depictions).

The following sections describe our scope of services (prepared with approval by WSDOT), field activities, sampling results and opinions.

2.0 SCOPE OF SERVICES

Our general environmental scope of services was as follows:

- Prepared a Health and Safety Plan for use by GeoEngineers' personnel during the field activities.
- Coordinate the location of nine shallow proposed soil borings with one boring located at each historic background sample location SS-2, SS-3 and SS-4, which represent staining observed in Areas B, C and D, respectively (Area A does not appear to be of concern for additional assessment). Place two additional borings were placed in each area based on the sample location map depicting rectangular areas of staining and or remedial excavations. At least one boring in each area will be advanced to groundwater or 15 feet below ground surface (bgs) and a groundwater monitoring well installed, if water is encountered. The additional borings will be placed in a manner to bracket the depicted area of concern. A total of nine shallow borings and three monitoring wells were proposed.
- Contact the Utility Notification Center public locating service. A private locating service will also be subcontracted to locate potential utilities.
- Retain a drilling subcontractor to advance nine direct push borings to a depth of 5 to 15 feet (bgs), dependent on field screening results, presence of groundwater and depth to native soils. If groundwater is encountered (reportedly as shallow as 3 feet bgs) at the former sample locations SS-2 through SS4, a 2-inch-diameter polyvinyl chloride (PVC) casing monitoring well will be installed. Depths of the borings may be adjusted in an attempt to install a minimum of three wells to evaluate site specific groundwater flow direction. (Groundwater was not encountered during drilling activities and no wells were installed).
- Continuously sample push probes and visually classify and field screen (sheen, PID and odor) for potential laboratory analysis by a GeoEngineers representative. Visual classification of the soil samples is to be completed in general accordance with ASTM D 2488-90, the Standard Practice for Description and Identification of Soils.
- Collected two soil samples per boring for potential laboratory analysis based on field screening results and depth to groundwater.
- Submit the soil samples on a standard turnaround time (10 business days) for laboratory analysis of the following:
    - Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx (Gx)
    - Diesel- and lube-oil range petroleum hydrocarbons by Northwest Method NWTPH-Dx (Dx and Ox).

- Resource Conservation and Recovery Act (RCRA) eight metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) by United States Environmental Protection Agency (EPA) Method 6020.
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270.
- Volatile organic compounds (VOCs) by EPA Method 8260C.

- Coordinate disposal of investigation-derived waste (IDW) at an appropriate off-site facility. Collect one composite soil sample directly from the drum or during drilling for waste profiling purposes.
- Prepare a report including sample results tables, laboratory data, site figures and boring/sampling logs documenting results of the work performed at the site. The data will be tabulated and compared against MTCA CULs.
- Upload data to the Ecology Environmental Information Management (EIM) system as required.

3.0 SUBSURFACE CONDITIONS

Logs of borings are included in Appendix A. Soils were visually classified in general accordance with ASTM D 2488-94. Boring locations are shown in Exploration Locations, Figure 2.

3.1. Subsurface Soil Conditions

Surface conditions at the site consist primarily of fill gravel (from several inches up to 2 feet). Soils encountered during exploration activities consisted of sand, silt and varying gradations of sand and silt with occasional gravel to the maximum depth explored, 15 to 20 feet bgs.

3.2. Subsurface Groundwater Conditions

Soils observed during drilling were generally moist and groundwater was not encountered during drilling.

4.0 SOIL SAMPLING AND CHEMICAL ANALYTICAL RESULTS

A GeoEngineers' field representative collected soil samples continuously from each boring for field screening and potential laboratory analysis. Samples were field screened for evidence of petroleum and/or VOC-related impact using visual, water sheen and headspace vapor screening methods using a PID. Soil samples were collected based on field screening data. The soil samples were submitted for laboratory analysis of VOCs, Gx, Dx, Ox, PAHs and/or RCRA eight metals to Pace National. Soil chemical analytical data are presented in Tables 1 and 2. Laboratory analytical reports are attached in Appendix B.

4.1. Soil Sample Analytical Results

As previously noted, three areas of concern with previous sample results were identified for additional assessment identified as areas B, C and D (no concerns were expressed by Ecology for the need to further explore Area A). The following sections summarize the results of the additional borings and soil sampling performed in each area. Approximate locations of previous sampling performed by others and the sampling performed during this assessment are shown on Figure 2.

4.1.1. Area B

Area B is located off the southwest corner of the existing structure. Previous sample SS-2 indicated levels of arsenic (35 milligrams/kilogram [mg/kg]). Three borings (GEI-3, GEI-4 and MW-2) were performed within the identified Area B. Boring MW-2 was intended to be in the approximate location of previous sample SS-2 and planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (15 feet bgs). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-3 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample GEI-4 at 2-3 feet bgs was non-detect for Gx, Dx and VOCs. Ox and PAHs and detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-2 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

4.1.2. Area C

Area C is located off the east side of the of the existing structure. Previous sample SS-3 indicated levels of lube oil at 31,000 mg/kg. Three borings (GEI-1, GEI-2 and MW-1) were performed within the identified Area C. Boring MW-1 was intended to be in the approximate location of previous sample SS-3 and planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (20 feet bgs at boring GEI-1). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-1 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample GEI-2 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-1 at 2-3 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

4.1.3. Area D

Area D is located off the north side of the existing structure. Previous observations indicated the presence of staining and groundwater in the exploration, which was not sampled. Three borings (GEI-4, GEI-6 and MW-3) were performed within the identified Area C. Boring MW-3 was intended to be in the approximate location of previous sample SS-4 and staining. MW-3 was planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (15 feet bgs). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-5 at 7-8 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

- Sample GEI-6 at 7-8 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-3 at 2-3 feet bgs was non-detect for Gx, VOCs and PAHs. Detected Dx, Ox and RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

5.0 CONCLUSIONS

GeoEngineers performed additional sampling at three areas (Area B, C and D) located around the existing structure on the A-1 towing site to further evaluate the potential presence of contaminants related to past uses at the site. Results of the assessment did not identify concentrations of Gx, Dx, Ox, VOCs, PAHs and or RCRA eight metals at concentrations exceeding the MTCA Method A Cleanup Levels. Out of the nine soil samples analyzed, only two identified low concentrations of Dx, Ox and/or PAHs. Groundwater was not encountered at the maximum depth explored at the site of 15 to 20 feet bgs.

Based on the results of the assessment a No Further Action determination should be requested from Ecology.

6.0 LIMITATIONS

We have prepared this report for the exclusive use of WSDOT. 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, experience and discrete sample collection. Contaminants may be present in areas of the site not sampled or tested. No warranty or other conditions, express or implied, should be understood.

Please refer to Appendix C, Report Limitations and Guidelines for Use, for additional information regarding the use of this report.

TABLES

GeoEngineers

Table 1

Soil Chemical Analytical Results - Petroleum Hydrocarbons and VOCs
A-1 Towing
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Field Screening Observation		NWTPH-Gx (mg/kg)	NWTPH-Dx (mg/kg)		VOCs EPA Method 8260 (mg/kg)								
				Sheen	PID (ppm)	Gasoline	Diesel	Heavy Oil	Various	Anthracene	Acenapthene	Acenaphthylene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo(g,h,i)perylene	Benzo (k) fluoranthene	Chrysene
GEI-1	GE-1 (9-10')	10/25/2021	9-10	NS	<1	<3.01	< 4.4	< 10.9	ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	NS	<1	<2.99	< 4.34	< 10.80	ND	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	NS	<1	<3.23	< 4.50	< 11.2	ND	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	NS	<1	<2.97	< 21.8	**166**	ND	< 0.00655	< 0.00655	< 0.00655	**0.0298**	**0.0363**	**0.0500**	**0.0306**	**0.0150**	**0.0354**
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	NS	<1	<3.02	< 4.36	< 10.9	ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	NS	<1	<2.95	< 4.33	< 10.8	ND	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649
MW-1	MW-1 (2-3')	10/25/2021	2-3	NS	<1	<3.43	< 4.69	< 11.7	ND	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703
MW- 2	MW-2 (9-10')	10/25/2021	9-10	NS	<1	<3.08	< 4.43	< 11.1	ND	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665
MW- 3	MW-3 (2-3')	10/25/2021	2-3	NS	<1	<3.35	**5.55**	**24.3**	ND	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691
MTCA Method A Cleanup Levels for Unrestricted Land Use						800/1,000	2,000		Various	--	--	--	--	--	--	--	--	--

Boring/Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Field Screening Observation		NWTPH-Gx (mg/kg)	NWTPH-Dx (mg/kg)				EPA Method 8260 (mg/kg)										Total cPAHs[1] (mg/kg)
				Sheen	PID (ppm)	Gasoline	Diesel		Heavy Oil		Various	Dibenz(a,h)anthracene		Fluoranthene		Fluorene		Indeno (1,2,3-cd) pyrene		Naphthalene		Phenanthrene		Pyrene		1-Methyl-naphthalene		2-Methyl-naphthalene		TEQ
GEI-1	GE-1 (9-10')	10/25/2021	9-10	NS	<1	<3.01	<	4.4	<	10.9	ND	<	0.00654	<	0.00654	<	0.00654	<	0.00654	<	0.0218	<	0.00654	<	0.00654	<	0.0218	<	0.0128	ND
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	NS	<1	<2.99	<	4.34	<	10.80	ND	<	0.00650	<	0.00650	<	0.00650	<	0.00650	<	0.0217	<	0.00650	<	0.00650	<	0.0217	<	0.0217	ND
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	NS	<1	<3.23	<	4.50	<	11.2	ND	<	0.00675	<	0.00675	<	0.00675	<	0.00675	<	0.0225	<	0.00675	<	0.00675	<	0.0225	<	0.0225	ND
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	NS	<1	<2.97	<	22		**166**	ND		**0.00660**		**0.0622**	<	0.0066		**0.0325**	<	0.0218		**0.0244**		**0.0474**	<	0.0218	<	0.0218	**0.0223**
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	NS	<1	<3.02	<	4.4	<	10.9	ND	<	0.00654	<	0.00654	<	0.00654	<	0.00654	<	0.02180	<	0.00654	<	0.00654	<	0.0218	<	0.0218	ND
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	NS	<1	<2.95	<	4.3	<	10.8	ND	<	0.00649	<	0.00649	<	0.00649	<	0.00649	<	0.0216	<	0.00649	<	0.00649	<	0.0216	<	0.0216	ND
MW-1	MW-1 (2-3')	10/25/2021	2-3	NS	<1	<3.43	<	4.7	<	11.7	ND	<	0.00703	<	0.00703	<	0.00703	<	0.00703	<	0.02340	<	0.00703	<	0.00703	<	0.0234	<	0.0234	ND
MW- 2	MW-2 (9-10')	10/25/2021	9-10	NS	<1	<3.08	<	4.43	<	11.1	ND	<	0.00665	<	0.00665	<	0.00665	<	0.00665	<	0.0222	<	0.00665	<	0.00665	<	0.0222	<	0.0222	ND
MW- 3	MW-3 (2-3')	10/25/2021	2-3	NS	<1	<3.35		**5.6**		**24.3**	ND	<	0.00691	<	0.00691	<	0.00691	<	0.00691	<	0.023	<	0.00691	<	0.00691	<	0.023	<	0.023	ND
MTCA Method A Cleanup Levels for Unrestricted Land Use						800/1,000	2,000				Various			--		--		--		5		--		--		--		--		0.1

Notes:

[1]Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) analyzed by EPA Method 8270D/SIM. Total cPAHs calculated using the toxicity equivalency (TEQ) methodology specified in Washington Administrative Code (WAC) 173-340-780(8); cPAHs that were not detected were assigned half the value of the detection limit for these calculations. Not detected (ND) is indicated for samples which no cPAHs were detected.

<3.01 = analyte not detected at or less than the presented concentration

Bold = analyte was detected at a concentration above the laboratory reported detection limit

-- = not analyzed/no cleanup level

mg/kg = milligrams per kilogram; VOCs = volatile organic compounds

NS = no sheen; ppm = parts per million

PID = Photoionization Detector

ND = Not Detected

TEQ = toxic equivalency

EPA = Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbons

MTCA = Model Toxics Control Act

Table 2

Soil Chemical Analytical Results - Metals
A-1 Towing
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Metals EPA Method 6010D/7471B (mg/kg)							
				Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
GEI-1	GE-1 (9-10')	10/25/2021	9-10	**2.26**	**41.9**	< 1.09	**23.4**	< 2.2	< 0.0436	< 2.72	< 0.545
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	**2.36**	**45.2**	< 1.08	**21.5**	< 2.17	< 0.0434	< 2.71	< 0.542
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	**2.93**	**25.3**	< 1.12	**11.8**	< 2.25	< 0.0450	< 2.81	< 0.562
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	**6.28**	**72.2**	< 1.09	**33.9**	**27.6**	**0.0731**	< 2.73	< 0.546
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	**2.58**	**39.6**	< 1.09	**21.1**	< 2.18	< 0.0436	< 2.73	< 0.545
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	**2.31**	**35.1**	< 1.08	**16.3**	< 2.16	< 0.0433	< 2.71	< 0.541
MW-1	MW-1 (2-3')	10/25/2021	2-3	**3.70**	**61.0**	< 1.17	**26.7**	< 2.34	< 0.0469	< 2.93	< 0.0586
MW- 2	MW-2 (9-10')	10/25/2021	9-10	**3.17**	**44.9**	< 1.11	**24.4**	< 2.22	< 0.0443	< 2.77	< 0.554
MW- 3	MW-3 (2-3')	10/25/2021	2-3	**7.77**	**58.8**	< 1.15	**41.6**	**3.16**	< 0.0460	< 2.88	< 0.575
MTCA Method A Cleanup Levels for Unrestricted Land Use				21	--	2	2,000	250	2	400	400
MTCA Cleanup Level for the Protection of Groundwater				--	1,600	--	--	--	--	5	14

Notes:

<1.09 = analyte not detected

Bold = analyte was detected at a concentration above the laboratory method detection limit

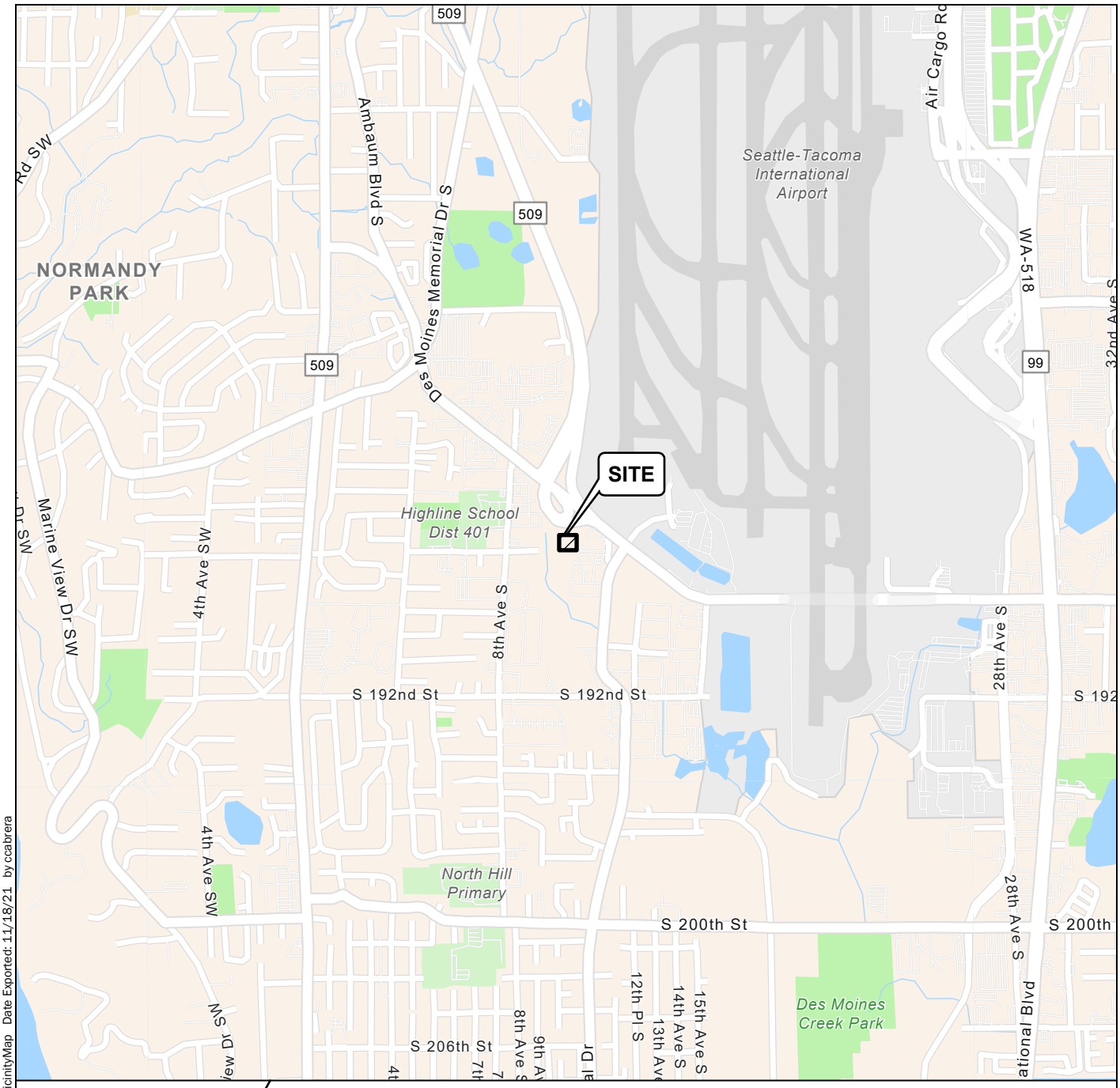
mg/kg = milligrams per kilogram

EPA = Environmental Protection Agency

MTCA = Model Toxics Control Act

FIGURES

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Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

WSDOT - A-1 Towing
SeaTac, Washington

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Figure 1

P:\0\0180393\GIS\0180393Project\0180393Project.aprx\0180393300_F01_VicinityMap Date Exported: 11/18/21 by ccabrera



Boring Number and Approximate Location

Monitoring Well Number and Approximate Location

Previous WSDOT Explorations (2016)

Drum Storage

Assessment Area

Data Source: ESRI Clarity

N

W E

S

30 0 30

Feet

Exploration Locations

WSDOT - A-1 Towing
SeaTac, Washington

GeoEngineers

Figure 2

P:\0\0180393\GIS\0180393Project\0180393Project.aprx\0180393_F02_ExplorationLocations Date Exported: 12/01/21 by ccabrera

Notes:

Legend

Phase II Environmental Site Assessment

S&M Machine Shop
1122 South 194th Street
SeaTac, Washington 98148

for
Washington State Department of Transportation
c/o HNTB Corporation

December 28, 2021

GeoEngineers
Earth Science + Technology

Phase II Environmental Site Assessment

S&M Machine Shop
1122 South 194th Street
SeaTac, Washington 98148

for
Washington State Department of Transportation
c/o HNTB Corporation

December 28, 2021

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Phase II Environmental Site Assessment

S&M Machine Shop Property
1122 South 194th Street
SeaTac, Washington 98148

File No. 0180-393-00

December 28, 2021

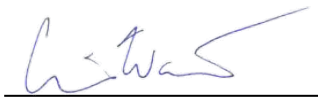
Prepared for:

Washington State Department of Transportation
c/o HNTB Corporation
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Bellevue, Washington 98004

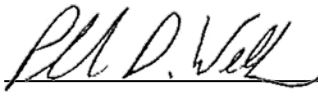
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1.0 INTRODUCTION AND BACKGROUND

This report describes the Phase II Environmental Site Assessment (ESA) activities conducted for the property located at 1122 South 194th Street in SeaTac, Washington as part of the expansion of State Route (SR)-509 (herein referred to as "site"). A portion of the property is owned by Washington State Department of Transportation (WSDOT) but is leased by a private party and WSDOT is evaluating environmental conditions associated with current and historic uses. The approximate site location is shown in the attached Vicinity Map, Figure 1.

GeoEngineers, Inc. (GeoEngineers) reviewed the Washington State Department of Ecology (Ecology) database for the property (known as S&M Machine Shop Property) located at 1122 South 194th Street in SeaTac, Washington. No information was available regarding this property. WSDOT provided a project property spreadsheet with some initial property information indicating that large machinery was and/or is parked on the property and that the potential for surface leaks are possible. The project property spreadsheet also noted that the former occupant (Tech Marine) had a National Pollutant Discharge Elimination System (NPDES) permit with several violations. WSDOT performed test pits and field screening that did not indicate the presence of field detectable contamination. However, due to access restrictions at the time, the test pits were limited to the northeastern corner of the parking lot area and were not near the identified drain or off the edge of the paved area. Additionally, a stormwater permit was previously issued for the property for a company named Tech Marine, which expired in 2014. Several letters were noted indicating violations and warnings related to the permit.

The following sections describe our scope of services (prepared with approval by WSDOT), field activities, sampling results and opinions.

2.0 SCOPE OF SERVICES

Our general environmental scope of services was as follows:

- Prepared a Health and Safety Plan for use by GeoEngineers personnel during the field activities.
- Coordinated the location (as part of a site recon) of one boring in the parking lot close to a former drain, but on the WSDOT owned property and up to six shallow proposed soil borings generally along the northern and eastern perimeter just beyond the parking lot boundary where vegetation and soils exist that could have been affected by contaminated sheet flow from the property. Approximate boring locations are shown on the attached figure.
- Contacted the Utility Notification Center public locating service. A private locating service was also be subcontracted to locate potential utilities.
- Retained a drilling subcontractor to advance six direct push borings to a depth of 15 feet below ground surface (bgs).
- The push probes were continuously sampled and visually classified and field screened (sheen, photoionization detector [PID] and odor) for potential laboratory analysis by a GeoEngineers representative. Visual classification of the soil samples were completed in general accordance with ASTM International (ASTM) D 2488-90, the Standard Practice for Description and Identification of Soils.

- Collected a minimum of one sample per boring for potential laboratory analysis based on field screening results and depth to groundwater. If field screening did not indicate contamination, one sample was collected from the groundwater interface.
- If groundwater was encountered, purged groundwater using low flow methods and collected a grab groundwater sample for laboratory analysis when groundwater became relatively clear.
- Submitted the soil and groundwater samples on a standard turnaround time (10 business days) for laboratory analysis of the following:
    - Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx.
    - Diesel- and lube-oil range petroleum hydrocarbons by Northwest Method NWTPH-Dx (with and without a silica gel cleanup).
    - Resource Conservation and Recovery Act (RCRA) 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) by United State Environmental Protection Agency (EPA) Method 6020.
    - Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270.
    - Volatile organic compounds (VOCs) by EPA Method 8260C.
- Coordinate disposal of investigation-derived waste (IDW) at an appropriate off-site facility (in progress).
- Prepared a report including sample results tables, laboratory data, site figures, and boring/sampling logs documenting results of the work performed at the site. The data will be tabulated and compared against Model Toxics Control Act (MTCA) cleanup levels (CULs).
- Upload data to the Ecology Environmental Information Management (EIM) system as required (in progress).

3.0 SUBSURFACE CONDITIONS

Logs of borings are included in Appendix A. Soils were visually classified in general accordance with ASTM D 2488-94. Boring locations are shown in Figure 2, Exploration Locations.

3.1. Subsurface Soil Conditions

Surface conditions at the site consist of concrete or surface soils. Soils encountered during exploration activities consisted of interbedded sands with gravel and varying gradations of sand and silt to the maximum depth of exploration of 15 feet bgs.

3.2. Subsurface Groundwater Conditions

Groundwater was encountered at two borings at 9 feet bgs (boring B-5) and 12 feet bgs (boring B-1).

4.0 SOIL AND GROUNDWATER SAMPLING AND CHEMICAL ANALYTICAL RESULTS

The two identified areas of concern for contaminants were related to the former oil water separator (location information provided by WSDOT, which was an asphalt area patched near the building and boring B-1), and surface discharge around the property area due to the nature of machine shop operations (petroleum and

solvent uses). Therefore, one boring (B-1) was performed near the former oil water separator and five borings (B-2 through B-6) were performed around the perimeter area in areas with soil surfaces.

A GeoEngineers' field representative collected soil samples continuously from each boring for field screening and potential laboratory analysis. Samples were field screened for evidence of petroleum and/or VOC-related impact using visual, water sheen and headspace vapor screening methods using a PID. Soil samples were collected based on field screening data. Where groundwater was encountered, a temporary well was set, and groundwater purged using low flow methods prior to sample collection. The soil and groundwater samples were submitted for laboratory analysis of VOCs, gasoline- (Gx), diesel- (Dx), oil (Ox)-range hydrocarbons, PAHs, and/or RCRA 8 metals to Pace National. Soil chemical analytical data are presented in Tables 1 and 2. Groundwater samples are presented in Tables 3 and 4. Laboratory analytical reports are attached in Appendix B. Approximate boring locations of shown on Figure 2. The following sections summarize the results of the soil and groundwater (where encountered) sampling from each boring.

4.1. Soil Sample Analytical Results

Field screening did not indicate the presence of petroleum or VOC compounds during drilling and sampling. Therefore, one soil sample from each boring was collected at the groundwater interface (if encountered) or similar depth range of 13 to 14 feet bgs. Samples analyzed were non-detect for Gx, Dx, Ox, VOCs and PAHs. The detected concentrations of metals were all less than the MTCA Method A Cleanup Levels for unrestricted land use.

4.2. Groundwater Analytical Results

Two borings (B-1 and B-5) encountered groundwater and samples were collected using low flow sampling methods.

Sample analytical results for the sample collected from boring B-5 was non-detect for Gx, Dx, Ox, VOCs and PAHs and detected metals were less than the MTCA Method A cleanup levels.

Sample analytical results for the sample collected from boring B-1 (located near the former oil/water separator) were non-detect for Gx and PAHs, but Dx, Ox and acetone were detected at concentrations less than the MTCA Method A cleanup levels. Vinyl chloride was detected in the groundwater sample from boring B-1 at 0.357 micrograms per liter (µg/L), which slightly exceeded the MTCA Method A cleanup level (0.2 µg/L). Based on the lack of other solvents that are known precursors to vinyl chloride in soil and/or groundwater the source of the vinyl chloride is unknown and therefore, the sample was reanalyzed by the laboratory for VOCs for confirmation purposes. Results indicated the presence of acetone, cis-1,2-dichloroethene (DCE) and vinyl chloride. The concentration of vinyl chloride (0.410 µg/L) was slightly higher than the initial result (0.357 µg/L) and still exceeded the MTCA Method A cleanup level (0.2 µg/L). cis-1,2-DCE is a precursor to vinyl chloride and a breakdown product of trichloroethene (TCE) during anaerobic biodegradation, which can occur naturally.

5.0 CONCLUSIONS

GeoEngineers performed soil and groundwater sampling at the site at five locations around the perimeter and one location near the former oil water separator. Six borings were performed to evaluate potential petroleum and/or related contaminants based on historic site uses as a machine shop and vehicle storage.

Results of the assessment did not identify concentrations of Gx, Dx, Ox, VOCs, PAHs and or RCRA 8 metals at concentrations exceeding the MTCA Method A Cleanup Levels in soil.

Groundwater was encountered in two explorations (B-1 and B-5). Contaminants of concern were not detected in the groundwater sample from boring B-5 or were detected (limited to metals) at concentrations less than the MTCA Method A cleanup levels. The groundwater sample from boring B-1 near the former oil water separator had Dx and Ox detected at concentrations less than the MTCA Method A cleanup level and vinyl chloride at a concentration exceeding the MTCA Method A cleanup level. The VOC analysis was repeated at the laboratory with similar results, but cis-1,2-DCE was also detected. No sources of cis-1,2-DCE and vinyl chloride, such as solvent precursors (TCE), were identified in soil and/or groundwater. TCE is a common solvent used in machine shop operations and is a precursor to cis-1,2-DCE and subsequently vinyl chloride during anaerobic biodegradation. Petroleum was also detected in the groundwater sample from boring B-1, indicating that a failure of the oil/water separator and use of solvents is a possible source. Further assessment is necessary to evaluate the magnitude and extent of solvent related breakdown products in soil and/or groundwater. In addition, groundwater samples from temporary borings can be skewed high due to the disturbance of drilling activities. Further assessment should include installation of constructed monitoring wells to accurately assess solvent related contaminants in groundwater.

6.0 LIMITATIONS

We have prepared this report for the exclusive use of WSDOT. 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, experience and discrete sample collection. Contaminants may be present in areas of the site not sampled or tested. No warranty or other conditions, express or implied, should be understood.

Please refer to Appendix C, Report Limitations and Guidelines for Use, for additional information regarding the use of this report.

TABLES

GeoEngineers

Table 1

Soil Chemical Analytical Results - Petroleum Hydrocarbons and VOCs
S&M Machine Shop
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Field Screening Observation		NWTPH-Gx (mg/kg)	NWTPH-Dx (mg/kg)		VOCs EPA Method 8260D (mg/kg)	Semi-VOCs EPA Method 8270-SIM (mg/kg)																	Total cPAHs[1] (mg/kg)
				Sheen	PID (ppm)	Gasoline	Diesel	Heavy Oil	Various	Anthracene	Acenapthene	Acenaphthylene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo(g,h,i)perylene	Benzo (k) fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methyl-naphthalene	2-Methyl-naphthalene	TEQ
B-1	B-1 (13-14')	10/27/2021	13-14	NS	<1	< 3.44	< 4.60	< 11.5	ND	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.023	< 0.0069	< 0.0069	< 0.023	< 0.023	ND
B-2	B-2 (13-14')	10/27/2021	13-14	NS	<1	< 3.17	< 4.42	< 11.1	ND	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.0221	< 0.00663	< 0.00663	< 0.0221	< 0.0221	ND
B-3	B-3 (14-15')	10/27/2021	14-15	NS	<1	< 3.72	< 4.87	< 12.2	ND	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0243	< 0.0073	< 0.0073	< 0.0243	< 0.0243	ND
B-4	B-4 (13-14')	10/27/2021	13-14	NS	<1	< 3.46	< 4.60	< 11.5	ND	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0230	< 0.0069	< 0.0069	< 0.0230	< 0.0230	ND
B-5	B-5 (13-14')	10/27/2021	13-14	NS	<1	< 3.29	< 4.49	< 11.2	ND	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.0225	< 0.00674	< 0.00674	< 0.0225	< 0.0225	ND
B-6	B-6 (14-15')	10/27/2021	14-15	NS	<1	< 3.87	< 4.69	< 12.4	ND	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.0248	< 0.00743	< 0.00743	< 0.0248	< 0.0248	ND
MTCA Method A Cleanup Levels for Unrestricted Land Use						100	2,000		Various	--	--	--	--	0.1	--	--	--	--	--	--	--	--	5	--	--	--	--	0.1

Notes:

[1]Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) analyzed by EPA Method 8270D/SIM. Total cPAHs calculated using the toxicity equivalency (TEQ) methodology specified in Washington Administrative Code (WAC) 173-340-780(8); cPAHs that were not detected were assigned half the value of the detection limit for these calculations. Not detected (ND) is indicated for samples which no cPAHs were detected.

<3.01 = analyte not detected at or less than the presented concentration

Bold = analyte was detected at a concentration above the laboratory reported detection limit

-- = not analyzed/no cleanup level

mg/kg = milligram per kilogram; VOCs = volatile organic compounds

NS = no sheen; ppm = parts per million

PID = Photoionization Detector

ND = Not Detected

TEQ = toxic equivalency

EPA = Environmental Protection Agency

NWTPH = Northwest total petroleum hydrocarbon

MTCA = Model Toxics Control Act

Table 2

Soil Chemical Analytical Results - Metals
S&M Machine Shop
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Metals EPA Method 6010D/7471B (mg/kg)							
				Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
B-1	B-1 (13-14')	10/27/2021	13-14	**2.80**	**48.9**	< 1.15	**27.3**	< 2.30	< 0.0460	< 2.88	< 0.575
B-2	B-2 (13-14')	10/27/2021	13-14	**2.73**	**57.6**	< 1.11	**30.8**	< 2.21	< 0.0442	< 2.76	< 0.553
B-3	B-3 (14-15')	10/27/2021	14-15	**2.11**	**112**	< 1.22	**52.3**	**3.75**	< 0.0487	< 3.04	< 0.608
B-4	B-4 (13-14')	10/27/2021	13-14	**2.38**	**47.9**	< 1.15	**25.4**	< 2.30	< 0.0460	< 2.87	< 0.575
B-5	B-5 (13-14')	10/27/2021	13-14	**2.04**	**42.0**	< 1.12	**20.8**	< 2.25	< 0.0449	< 2.81	< 0.561
B-6	B-6 (14-15')	10/27/2021	14-15	**17.1**	**131**	< 1.24	**76.5**	**6.71**	< 0.0495	< 3.10	< 0.619
MTCA Method A Cleanup Levels for Unrestricted Land Use				21	--	2	2,000	250	2	400	400
MTCA Cleanup Level for the Protection of Groundwater				--	1,600	--	--	--	--	5	14

Notes:

<1.09 = analyte not detected

Bold = analyte was detected at a concentration above the laboratory method detection limit

mg/kg = milligram per kilogram

EPA = Environmental Protection Agency

MTCA = Model Toxics Control Act

Table 3

Groundwater Chemical Analytical Results - Petroleum Hydrocarbons and VOCs
S&M Machine Shop
SeaTac, Washington

						VOCs EPA Method 8260D (µg/L)				Semi-VOCs EPA Method 8270-SIM (µg/L)																	Total cPAHs[4] (ug/L)
Well ID	**Sample ID**	**Date Collected**	**NWTHP-Gx (µg/L)**	**NWTPH-Dx (µg/L)**																							
			Gasoline	**Diesel**	**Heavy Oil**	**Acetone**	**cis-1,2-DCE**	**Vinyl Chloride**	**Various**	**Anthracene**	**Acenapthene**	**Acenaphthylene**	**Benzo (a) anthracene**	**Benzo (a) pyrene**	**Benzo (b) fluoranthene**	**Benzo(g,h,i) perylene**	**Benzo (k) fluoranthene**	**Chrysene**	**Dibenz(a,h) anthracene**	**Fluoranthene**	**Fluorene**	**Indeno (1,2,3-cd) pyrene**	**Naphthalene**	**Phenanthrene**	**Pyrene**	**1-Methyl-naphthalene**	**2-Methyl-naphthalene**	**TEQ**
B-1	B-1 (211027)	10/27/2021	< 100	**421**	**334**	**2.70**	< 0.100	**0.357**	ND	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.200	< 0.100	< 0.100	< 0.500	< 0.100	< 0.100	< 0.500	< 0.500	ND
	B-1 (211027)[1]		--	--	--	**4.61**	**0.149**	**0.410**	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-5	B-5 (211027)	10/27/2021	< 100	< 200	< 250	< 1.00	< 0.100	< 0.100	ND	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.100	< 0.050	< 0.050	< 0.250	< 0.500	< 0.500	< 0.250	< 0.250	ND
MTCA Method A or B Cleanup Levels			1,000	500	500	7,200	16	0.2	various	--	--	--	--	0.1	--	--	--	--	--	--	--	--	160	--	--	--	--	0.1

Notes:

[1] = Sample B-1 (211027) was reanalyzed for VOCs by the lab due to concerns over potential laboratory cross contamination (presence of acetone is a common laboratory contaminant).

-- = Not analyzed

<100 = not detected at or above the presented concentration

Bold = analyte was detected at a concentration above the laboratory method detection limit

Gray shading indicates the detected concentration exceeds the presented MTCA cleanup levels.

TEQ = toxic equivalency

EPA = Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbons

MTCA = Model Toxics Control Act

ug/L = micrograms per liter

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

DCE = dichloroethene

Table 4

Groundwater Chemical Analytical Results - Metals
S&M Machine Shop
SeaTac, Washington

Well ID	Sample ID	Date Collected	Total Metals EPA 200.8/7470A (µg/L)							
			Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
B-1	B-1 (211027)	10/27/2021	**3.10**	**46.1**	< 1.00	**6.55**	< 2.00	< 0.200	< 2.00	< 2.00
B-5	B-5 (211027)	10/27/2021	< 2.00	**31.4**	< 1.00	**4.63**	< 2.00	< 0.200	< 2.00	< 2.00
MTCA Method A or B Cleanup Levels			5	3,200	5	50	15	2	80	80

Notes:

<2.00 analyte not detected at or above concentration presented

Bold = analyte was detected at a concentration above the laboratory method detection limit

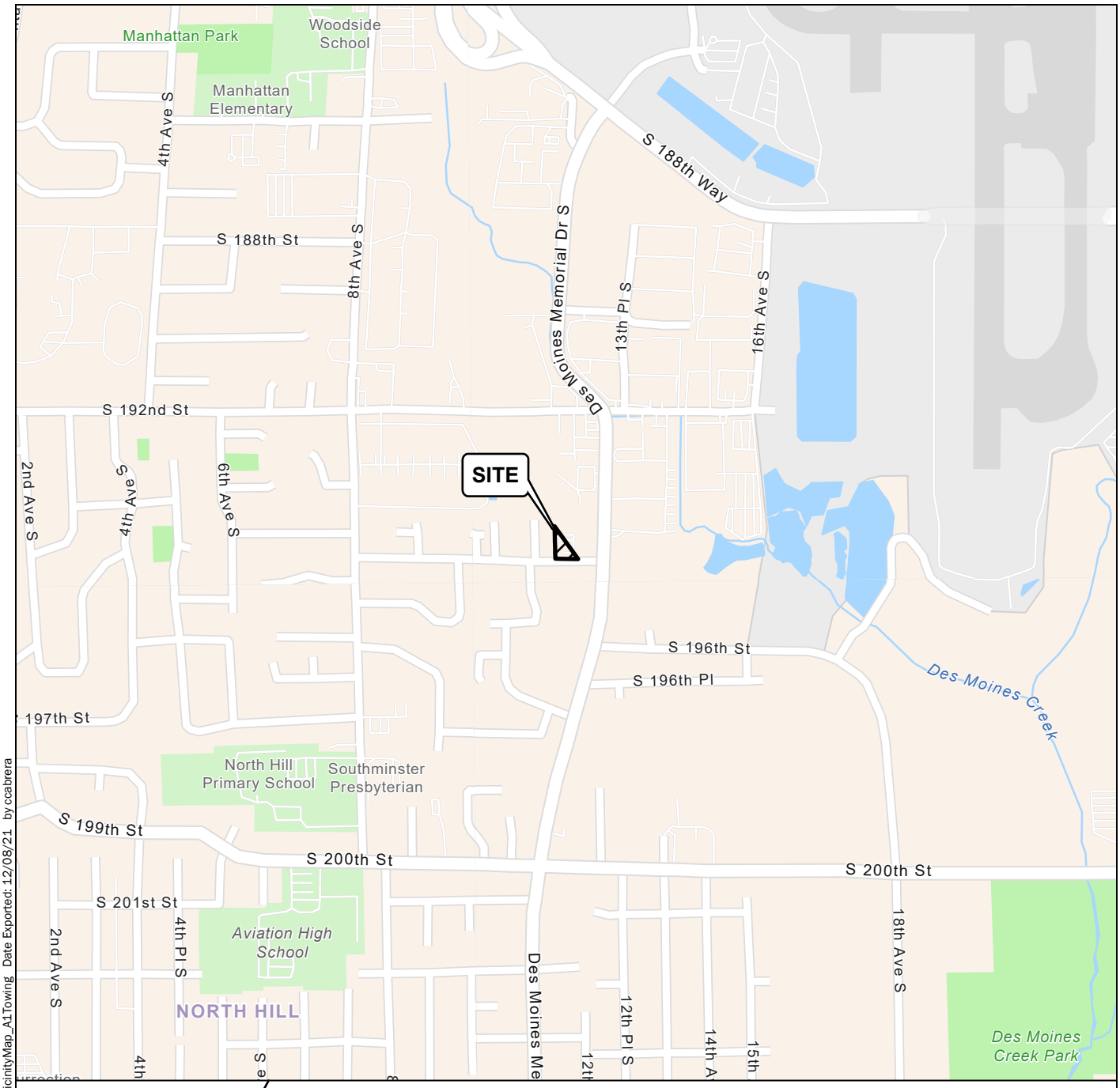
EPA = Environmental Protection Agency

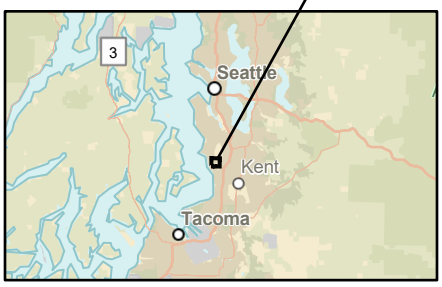
MTCA = Model Toxics Control Act

ug/L = micrograms per liter

FIGURES

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N
W E
S

1,000 0 1,000

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

WSDOT – S&M Machine Shop
SeaTac, Washington

GeoEngineers

Figure 1

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P:\0\0180393\GIS\0180393Project\0180393Project.aprx\0180393Project Date Exported: 12/08/21 by ccabrera



Legend

Boring Number and Approximate Location

N
W
E
S

40 0 40

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source:2019 King County Imagery.

Projection: GCS WGS 1984

Exploration Location

WSDOT – S&M Machine Shop
SeaTac, Washington

GeoEngineers

Figure 2

Well Installation and Groundwater Monitoring Report

S&M Machine Shop
1122 South 194th Street
SeaTac, Washington 98148

for
Washington State Department of Transportation
c/o HNTB Corporation

September 8, 2022

GeoEngineers
Earth Science + Technology

Well Installation and Groundwater Monitoring Report

S&M Machine Shop
1122 South 194th Street
SeaTac, Washington 98148

for
Washington State Department of Transportation
c/o HNTB Corporation

September 8, 2022

GeoEngineers

4000 Kruse Way Place
Bldg. 3, Suite 200
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503.624.9274

Well Installation and Groundwater Monitoring Report

S&M Machine Shop
1122 South 194th Street
SeaTac, Washington 98148

File No. 0180-393-02

September 8, 2022

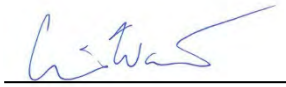
Prepared for:

Washington State Department of Transportation
c/o HNTB Corporation
600 108th Avenue NE, Suite 900
Bellevue, Washington 98004

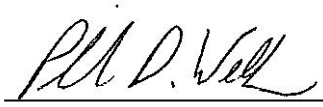
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1.0 INTRODUCTION AND BACKGROUND

This report describes the monitoring well and groundwater monitoring activities conducted for the property located at 1122 South 194th Street in SeaTac, Washington as part of the expansion of State Route (SR)-509 (herein referred to as "site"). A portion of the property is owned by Washington State Department of Transportation (WSDOT) but is leased by a private party and WSDOT is evaluating environmental conditions associated with current and historic uses. The approximate site location is shown on the attached Vicinity Map, Figure 1.

GeoEngineers, Inc. (GeoEngineers) previously reviewed the Washington State Department of Ecology (Ecology) database for the property (known as S&M Machine Shop Property) located at 1122 South 194th Street in SeaTac, Washington. No information was available regarding this property. WSDOT provided a project property spreadsheet with some initial property information indicating that large machinery was and/or is parked on the property and that the potential for surface leaks is possible. The project property spreadsheet also noted that the former occupant (Tech Marine) had a National Pollutant Discharge Elimination System (NPDES) permit with several violations. WSDOT performed test pits and field screening that did not indicate the presence of field detectable contamination. However, due to access restrictions at the time, the test pits were limited to the northeastern corner of the parking lot area and were not near the identified oil water separator (OWS) or off the edge of the paved area. Additionally, a stormwater permit was previously issued for the property for a company named Tech Marine, which expired in 2014. Several letters were reviewed indicating violations and warnings related to the permit.

Based on the information available, a Phase II Environmental Site Assessment (ESA) was performed by GeoEngineers in consultation with WSDOT to evaluate the subsurface conditions at the site from the past uses. A total of six borings were drilled, generally around the perimeter of the northern and eastern edge with one boring adjacent to the suspected former location of an OWS. Results of the soil and groundwater sampling (where encountered) were generally non-detect for chemicals of concern, except for petroleum and solvents in the groundwater sample (collected from boring B-1) adjacent to the former oil water separator. Based on the detection of solvents exceeding the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) cleanup levels, wells were proposed to further evaluate the presence of a groundwater plume.

The following sections describe our scope of services (prepared with approval by WSDOT), field activities, sampling results and opinions.

2.0 SCOPE OF SERVICES

Our general environmental scope of services was as follows:

- Updated the Health and Safety Plan for use by GeoEngineers personnel during the field activities.
- Coordinated the location (as part of a site recon) of one well (MW-1) in the parking lot close to a former OWS (on the WSDOT owned property), one well (MW-2) northeast of MW-1 approximately 20 feet and one well (MW-3) southeast of MW-1 approximately 20 feet. Approximate well locations are shown on the attached Figure 2.
- Contacted the Utility Notification Center public locating service.

- Perform a geophysical survey of the suspected former oil water separator area to evaluate the presence of infrastructure and to perform private locates for potential utilities.
- Retained a drilling subcontractor to advance three borings using hollow stem auger to a maximum boring depth of 26.5 feet below ground surface (bgs) and installing a monitoring well at each location.
- The borings were sampled at 5-foot intervals to visually classify and field screen (sheen, photoionization detector [PID] and odor) for potential laboratory analysis by a GeoEngineers representative. Visual classification of the soil samples was completed in general accordance with ASTM International (ASTM) D 2488-90, the Standard Practice for Description and Identification of Soils.
- Collected a minimum of one sample per boring for potential laboratory analysis based on field screening results and depth to groundwater. If field screening did not indicate contamination, one sample was collected from the groundwater interface.
- Submitted the soil samples on a standard turnaround time (10 business days) for laboratory analysis of the following:
    - Gasoline-range petroleum hydrocarbons (Gx) by Northwest Method NWTPH-Gx.
    - Diesel- and lube-oil range petroleum hydrocarbons (Dx and Ox, respectively) by Northwest Method NWTPH-Dx.
    - Resource Conservation and Recovery Act (RCRA) 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) by United State Environmental Protection Agency (EPA) Method 6020.
    - Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270-SIM.
    - Volatile organic compounds (VOCs) by EPA Method 5035/8260D.
- Installed three, 2-inch-diameter polyvinyl chloride (PVC) monitoring wells (MW-1 through MW-3). Well completion depths were 25 feet bgs based on initial groundwater levels. Wells MW-1 through MW-3 were constructed with 10 feet of 10-slot screen that extends over an interval that corresponds to anticipated seasonal water table fluctuations. All wells were completed using flush-mount steel monuments.
- Developed each monitoring well by pumping, surging, bailing, or a combination of these methods. Recorded the initial and final depth to water, initial and final well depth, and volume of removed water.
- Surveyed the relative elevation of each well using an engineer's level accurate to 0.01 foot relative to a common datum.
- Performed a groundwater monitoring event, sampling each monitoring well using low flow sampling methods.
- Coordinate disposal of investigation-derived waste (IDW) at an appropriate off-site facility (in progress).
- Prepared a report including sample results tables, laboratory data, site figures, and boring/sampling logs documenting results of the work performed at the site. The data will be tabulated and compared against MTCA cleanup levels (CULs).
- Upload data to the Ecology Environmental Information Management (EIM) system as required (in progress).

3.0 FIELD ACTIVITIES

The monitoring well installation and groundwater monitoring activities were conducted in general accordance with the revised proposal, dated March 22, 2022. Field activities were performed on May 19, 20 and 23, 2022, using the methods described in Appendix A. Site features as well as boring and well locations, are shown on Figure 2.

3.1. Geophysical Survey

On May 19, 2022, a GeoEngineers representative observed a geophysical survey (survey) conducted in the vicinity of the suspected former oil water separator, as well as the proposed monitoring well locations, to evaluate the potential presence of remaining infrastructure associated with the oil water separator and any utilities prior to drilling. Results of the survey did not indicate the presence of infrastructure associated with the oil water separator and soils appeared to be disturbed in nature. Based on the results, it appears that the infrastructure was removed during decommissioning activities. Therefore, boring GEI-1/MW-1 was placed at the edge of the concrete and immediately adjacent to the disturbed soils.

3.2. Soil Explorations

On May 20, 2022, a GeoEngineers representative oversaw advancement of three explorations (GEI/MW-1 through GEI-3/MW-3) using a hollow stem auger drill rig operated by Holocene Drilling (Holocene). Soil borings were advanced to 26.5 feet bgs and were selected based on the presumed location of the former oil water separator, geophysical survey results and presumed groundwater gradient at the site. Soil samples for analysis were collected based on field screening evidence of sheen or were collected just above the soil-water interface. Additionally, groundwater monitoring wells were constructed in each boring and groundwater samples were collected from the monitoring wells.

3.2.1. Soil Sampling

Surface conditions at the site consist of asphalt and concrete. Soils encountered during exploration activities consisted of predominantly sands with varying gradations of silt and in some cases interbedded gravel layers to the maximum depth explored, 26.5 feet bgs.

Soil was field screened using visual observations and headspace vapor measurements using a PID to detect the presence of VOCs. The soil samples were also field screened for sheen using a sheen pan and distilled water. PID readings for the samples were less than 1 part per million (ppm) and slight to moderate sheens were observed in several field screened samples. Soil samples were selected for analysis to represent the worst-case scenario based on the field screening. Additional details regarding field screening procedures are detailed in Appendix A.

Soil samples were transferred to the laboratory-prepared containers and stored in coolers with ice for transport to Pace Analytical in Mt. Juliet, Tennessee. A total of six soil samples (two per boring) were analyzed for gasoline- (Gx), diesel- (Dx), oil (Ox)-range hydrocarbons, PAHs, and RCRA 8 metals (total and dissolved for groundwater samples).

Soil generated during boring and monitoring well installation was drummed, labeled, and temporarily stored on site.

3.2.2. Monitoring Well Construction, Well Development and Groundwater Sampling

A GeoEngineers' field representative observed and documented the installation of MW-1 through MW-3, and maintained a log of the well construction materials, depths of materials, and depths of each well. Well construction details are included in Appendix A.

Each monitoring well was constructed using 2-inch-diameter, schedule 40 PVC well casing and well screens. The wells were constructed with a 10-foot screened interval. Colorado silica sand or equivalent was placed in the annular space surrounding the pre-packed well screens and extended at least 0.5 feet above the screen. Monitoring wells were screened between approximately 15 to 25 feet bgs and completed with a bentonite seal and a flush-mounted monument. A concrete surface-seal was placed around the monument at the ground surface and a lockable cap was installed at the top of the PVC well casing.

MW-1 through MW-3 were developed after installation to remove water introduced into the well during drilling (if any), stabilize the filter pack and formation materials surrounding the well screen, and restore the hydraulic connection between the well screen and the surrounding soil. Wells were developed using a two-stage submersible or peristaltic pump with disposable tubing until the water was relatively free of sediment. Water generated during development was drummed, labeled, and temporarily stored on site.

Following installation of the monitoring wells, the locations were established in the field using a handheld global positioning system (GPS) device.

Wells MW-1 through MW-3 were allowed to stabilize over the weekend between May 20 and May 22, 2022. All wells were purged and sampled on May 23, 2022. Prior to purging the wells depth to water was recorded from each well. A peristaltic pump with disposable tubing was used to purge each monitoring well using low-flow sampling methodology (EPA 2017). Groundwater quality parameters (temperature, pH, specific conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity) were measured at 3- to 5-minute intervals during well purging. Groundwater samples were collected after each water quality parameter had stabilized in general conformance with the criteria presented in Appendix A.

Groundwater samples were transferred to laboratory-prepared containers and stored in coolers with ice for transport to Pace Analytical in Mt. Juliet, Tennessee. Three groundwater samples were analyzed for the Contaminants of Concern (COCs): gasoline- (Gx), diesel- (Dx), oil (Ox)-range hydrocarbons, PAHs, and RCRA 8.

Purge water generated during well development and sampling was drummed, labeled, and temporarily stored on site.

4.0 RESULTS

4.1. Soil Chemical Analytical Results

The laboratory chemical analytical reports are presented in Appendix B. The soil sample results are summarized in Tables 1 and 2.

Field screening indicated the presence of petroleum or VOC compounds during drilling and sampling based on the presence of sheen observed. Therefore, two soil samples from each boring were collected at the locations indicating the worst-case scenario. However, samples analyzed were non-detect for Gx, Dx, Ox,

VOCs and PAHs. The detected concentrations of metals were all less than the MTCA Method A Cleanup Levels for unrestricted land use with the exception of arsenic from one sample collected from boring GEI-2/MW-2 at 25 to 26.5 feet bgs. Arsenic in sample GE-2-25-26.5 was detected at 23.7 milligrams per kilogram (mg/kg), which exceeded the MTCA Method A Cleanup Level of 21 mg/kg. However, based on sample results from other locations, coupled with the lack of a source for a release of arsenic, this result appears to be naturally occurring and limited in nature and extent.

4.2. Groundwater Elevations and Gradients

Groundwater elevations in the Site monitoring wells in May 2022 ranged from 96.25 (MW-2) to 97.26 (MW-2) as measured on May 23, 2022 and the September 2022 elevations ranged from 93.16 (MW-2) to 95.04 (MW-1). The groundwater gradient was to the northeast during both monitoring events. The May 2022 groundwater elevations and contours are shown on Figure 2 and the September 2022 elevation and contours are shown on Figure 3. Groundwater elevations are presented in Table 3.

4.3. Groundwater Chemical Analytical Results

Groundwater samples were collected from MW-1 through MW-3. The laboratory chemical analytical reports are presented in Appendix B. The groundwater sample results are summarized in Tables 3 and 4.

Petroleum hydrocarbons and VOCs were not detected in the three groundwater samples submitted for analysis with the exception of a single detection for acetone relatively near the detection limit. The presence of acetone is considered a common laboratory contaminant and does not appear to be indicative of a release at the site. Metals detected in the groundwater samples submitted for analysis were at concentrations less than the MTCA Method A Cleanup Levels, except for arsenic (total and dissolved) in the sample from well MW-2. However, the detected concentration of arsenic at 5.75 micrograms per Liter (µg/L) and 5.71 µg/L (total and dissolved, respectively) were less than the natural background arsenic levels for Puget Sound Lowlands (8 µg/L).

5.0 CONCLUSIONS

GeoEngineers performed soil and groundwater sampling at the site at the one location (GEI-1/MW-1) near the former oil water separator and two locations in the presumed downgradient direction (GEI-2/MW-2 and GEI-3/MW-3). Results of the assessment did not identify concentrations of Gx, Dx, Ox, VOCs, PAHs and or RCRA 8 metals at concentrations exceeding the MTCA Method A Cleanup Levels and/or natural background conditions in soil or groundwater with one minor exception; arsenic in one soil sample GEI-2-25-26.5 collected from boring GEI-2/MW-2 at 25 to 26.5 feet bgs was detected at a concentration (23.7 mg/kg) exceeding the MTCA Method A Cleanup Level (21 mg/kg). However, based on the depth, other sample results and the lack of evidence for a release of arsenic this result appears to be an anomaly.

During the October 2021 drilling, analytical results from groundwater grab samples from boring B-1 indicated the presence of low levels of diesel and oil-range petroleum hydrocarbons at concentrations less than the MTCA Method A cleanup levels. In addition, solvent related chemical (cis-1,2-dichloroethene and vinyl chloride) were detected with only vinyl chloride exceeding the MTCA Method A cleanup levels. However, soil samples from boring B-1 and other borings at the site were non-detect for petroleum and solvent related compounds. Soil samples collected from borings during the May 2022 well installation were also non-detect for petroleum and solvent related compounds. Furthermore, groundwater sample results from properly

constructed monitoring wells were non-detect for petroleum and solvent related compounds. Based on these results the previous detections appear to be *de minimis* in nature and extent and/or no longer present.

Based on the results of the soil and groundwater sampling performed at the site to date, no additional sampling is warranted at this time.

6.0 LIMITATIONS

We have prepared this report for the exclusive use of WSDOT. 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, experience, and discrete sample collection. Contaminants may be present in areas of the site not sampled or tested. No warranty or other conditions, express or implied, should be understood.

Please refer to Appendix C, Report Limitations and Guidelines for Use, for additional information regarding the use of this report.

7.0 REFERENCES

Ecology, 1994. Natural Background Soil Metals Concentrations in Washington State, Toxics Cleanup Program, Publication No. 94-115. October 1994.

Ecology, 2013. Model Toxics Control Act (MTCA) Regulation and Statute. MTCA Cleanup Regulation Chapter 173-340 WAC. Compiled by Washington State Department of Ecology Toxics Cleanup Program, Publication No. 94-06. Revised 2013. http://www.ecy.wa.gov/biblio/9406.html.

Ecology, 2018. Natural Background Groundwater Arsenic Concentrations in Washington State, Toxics Cleanup Program, Publication No. 14-09-044. Review Draft, May 2018.

Ecology, 2021. Cleanup Levels and Risk Calculations (CLARC). Washington State Department of Ecology Online Database

GeoEngineers, Inc., 2021. Phase II Environmental Site Assessment, S&M Machine Shop, 1122 South 194th Street, SeaTac, Washington. December 28.

TABLES

GeoEngineers

Table 1

Soil Chemical Analytical Results - Petroleum Hydrocarbons and VOCs
S&M Machine Shop
SeaTac, Washington

Boring/Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Field Screening Observation		NWTPH-Gx (mg/kg)	NWTPH-Dx (mg/kg)		VOCs EPA Method 8260D (mg/kg)	Semi-VOCs EPA Method 8270-SIM (mg/kg)																		Total cPAHs[1] (mg/kg)
				Sheen	PID (ppm)	Gasoline	Diesel	Heavy Oil	Various	Anthracene	Acenapthene	Acenaphthylene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo(g,h,i)p erylene	Benzo (k) fluoranthene	Chrysene	Dibenz(a,h)an thracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methyl-naphthalene	2-Methyl-naphthalene	TEQ
October 2021 Phase II Environmental Site Assessment																												
B-1	B-1 (13-14')	10/27/2021	13-14	NS	<1	< 3.44	< 4.60	< 11.5	ND	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.023	< 0.0069	< 0.0069	< 0.023	< 0.023	ND
B-2	B-2 (13-14')	10/27/2021	13-14	NS	<1	< 3.17	< 4.42	< 11.1	ND	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.00663	< 0.0221	< 0.00663	< 0.00663	< 0.0221	< 0.0221	ND
B-3	B-3 (14-15')	10/27/2021	14-15	NS	<1	< 3.72	< 4.87	< 12.2	ND	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0073	< 0.0243	< 0.0073	< 0.0073	< 0.0243	< 0.0243	ND
B-4	B-4 (13-14')	10/27/2021	13-14	NS	<1	< 3.46	< 4.60	< 11.5	ND	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0069	< 0.0230	< 0.0069	< 0.0069	< 0.0230	< 0.0230	ND
B-5	B-5 (13-14')	10/27/2021	13-14	NS	<1	< 3.29	< 4.49	< 11.2	ND	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.00674	< 0.0225	< 0.00674	< 0.00674	< 0.0225	< 0.0225	ND
B-6	B-6 (14-15')	10/27/2021	14-15	NS	<1	< 3.87	< 4.69	< 12.4	ND	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.00743	< 0.0248	< 0.00743	< 0.00743	< 0.0248	< 0.0248	ND
May 2022 Groundwater Monitoring Well Installation and Sampling Event																												
GEI-1/MW-1	GEI-1-10-11.5	5/20/2022	10-11.5	MS	<1	< 1.31	< 1.63	< 4.09	ND	< 0.00282	< 0.00257	< 0.00265	< 0.00212	< 0.00220	< 0.00188	< 0.00217	< 0.00264	< 0.00285	< 0.00211	< 0.00279	< 0.00252	< 0.00222	< 0.0050	< 0.0028	< 0.00246	< 0.00551	< 0.0052	ND
GEI-1/MW-1	GEI-1-20-21.5	5/20/2022	20-21.5	MS	<1	< 1.35	< 1.66	16.1	ND	< 0.00288	< 0.00261	< 0.00270	< 0.00216	< 0.00224	< 0.00191	< 0.00221	< 0.00269	< 0.00290	< 0.00215	< 0.00284	< 0.00256	< 0.00226	< 0.0051	< 0.0029	< 0.00250	< 0.00561	< 0.0053	ND
GEI-2/MW-2	GEI-2-10-11.5	5/20/2022	10-11.5	SS	<1	< 1.03	< 1.47	< 3.69	ND	< 0.00255	< 0.00231	< 0.00239	< 0.00192	< 0.00198	< 0.00169	< 0.00196	< 0.00238	< 0.00257	< 0.00190	< 0.00251	< 0.00227	< 0.00200	< 0.0045	< 0.0026	< 0.00221	< 0.00497	< 0.0047	ND
GEI-2/MW-2	GEI-2-25-26.5	5/20/2022	25-26.5	NS	<1	< 1.45	< 1.72	< 4.31	ND	< 0.00298	< 0.00271	< 0.00280	< 0.00224	< 0.00232	< 0.00198	< 0.00229	< 0.00279	< 0.00301	< 0.00223	< 0.00294	< 0.00266	< 0.00235	< 0.0053	< 0.0030	< 0.00259	< 0.00582	< 0.0055	ND
GEI-3/MW-3	GEI-3-10-11.5	5/20/2022	10-11.5	SS	<1	< 1.12	< 1.49	< 3.73	ND	< 0.00258	< 0.00234	< 0.00242	< 0.00194	< 0.00201	< 0.00172	< 0.00198	< 0.00241	< 0.00260	< 0.00193	< 0.00254	< 0.00230	< 0.00203	< 0.0046	< 0.0026	< 0.00224	< 0.00503	< 0.0048	ND
GEI-3/MW-3	GEI-3-20-21.5	5/20/2022	20-21.5	MS	<1	< 1.32	< 1.67	< 4.19	ND	< 0.00290	< 0.00263	< 0.00272	< 0.00218	< 0.00225	< 0.00193	< 0.00223	< 0.00271	< 0.00292	< 0.00217	< 0.00286	< 0.00258	< 0.00228	< 0.0051	< 0.0029	< 0.00252	< 0.00565	< 0.0054	ND
MTCA Method A Cleanup Levels for Unrestricted Land Use						100	2,000		Various	--	--	--	--	0.1	--	--	--	--	--	--	--	--	5	--	--	--	--	0.1

Notes:

[1]Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) analyzed by EPA Method 8270D/SIM. Total cPAHs calculated using the toxicity equivalency (TEQ) methodology specified in Washington Administrative Code (WAC) 173-340-780(8); cPAHs that were not detected were assigned half the value of the detection limit for these calculations. Not detected (ND) is indicated for samples which no cPAHs were detected.

<3.01 = analyte not detected at or less than the presented concentration

Bold = analyte was detected at a concentration above the laboratory reported detection limit

-- = not analyzed/no cleanup level

mg/kg = milligram per kilogram; VOCs = volatile organic compounds

NS = no sheen; SS = slight sheen; MS = moderate sheen; ppm = parts per million

PID = Photoionization Detector

ND = Not Detected

TEQ = toxic equivalency

EPA = Environmental Protection Agency

NWTPH = Northwest total petroleum hydrocarbon

MTCA = Model Toxics Control Act

Table 2

Soil Chemical Analytical Results - Metals
S&M Machine Shop
SeaTac, Washington

Boring/Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Metals EPA Method 6020B/7471B (mg/kg)							
				Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
October 2021 Phase II Environmental Site Assessment											
B-1	B-1 (13-14')	10/27/2021	13-14	**2.80**	**48.9**	< 1.15	**27.3**	< 2.30	< 0.0460	< 2.88	< 0.575
B-2	B-2 (13-14')	10/27/2021	13-14	**2.73**	**57.6**	< 1.11	**30.8**	< 2.21	< 0.0442	< 2.76	< 0.553
B-3	B-3 (14-15')	10/27/2021	14-15	**2.11**	**112**	< 1.22	**52.3**	**3.75**	< 0.0487	< 3.04	< 0.608
B-4	B-4 (13-14')	10/27/2021	13-14	**2.38**	**47.9**	< 1.15	**25.4**	< 2.30	< 0.0460	< 2.87	< 0.575
B-5	B-5 (13-14')	10/27/2021	13-14	**2.04**	**42.0**	< 1.12	**20.8**	< 2.25	< 0.0449	< 2.81	< 0.561
B-6	B-6 (14-15')	10/27/2021	14-15	**17.1**	**131**	< 1.24	**76.5**	**6.71**	< 0.0495	< 3.10	< 0.619
May 2022 Groundwater Monitoring Well Installation and Groundwater Monitoring Event											
GEI-1/MW-1	GEI-1-10-11.5	5/20/2022	10-11.5	**2.64**	**96.1**	< 0.11	**45.9**	**5.76**	< 0.0221	< 0.221	< 0.106
GEI-1/MW-1	GEI-1-20-21.5	5/20/2022	20-21.5	**6.05**	**106**	< 0.11	**53.6**	**4.88**	< 0.0225	< 0.225	< 0.108
GEI-2/MW-2	GEI-2-10-11.5	5/20/2022	10-11.5	**3.15**	**63.5**	< 0.09	**27.6**	**3.05**	< 0.0199	< 0.199	< 0.096
GEI-2/MW-2	GEI-2-25-26.5	5/20/2022	25-26.5	**23.7**	**143**	< 0.11	**75.1**	**6.82**	< 0.0233	< 0.233	< 0.112
GEI-3/MW-3	GEI-3-10-11.5	5/20/2022	10-11.5	**1.12**	**32.2**	< 0.10	**26.1**	< 0.111	< 0.0202	< 0.202	< 0.097
GEI-3/MW-3	GEI-3-20-21.5	5/20/2022	20-21.5	**4.63**	**92.2**	< 0.11	**51.8**	**4.39**	< 0.0227	< 0.227	< 0.109
MTCA Method A Cleanup Levels for Unrestricted Land Use				21	--	2	2,000	250	2	400	400
MTCA Cleanup Level for the Protection of Groundwater				--	1,600	--	--	--	--	5	14
Natural Background Soil Metals Concentrations - Puget Sound				7	--	1	48	24	0.07	--	--

Notes:

<1.09 = analyte not detected

Bold = analyte was detected at a concentration above the laboratory method detection limit

mg/kg = milligram per kilogram

EPA = Environmental Protection Agency

MTCA = Model Toxics Control Act

Grey shading = detected concentration exceeds the MTCA Method A Cleanup Level and the natural background concentration for the Puget Sound

Table 3

Groundwater Chemical Analytical Results - Petroleum Hydrocarbons and VOCs
S&M Machine Shop
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Top of Casing Elevation[2]	Depth to Water	Groundwater Elevation	NWTPH-Gx (µg/L)	NWTPH-Dx (µg/L)		VOCs EPA Method 8260D (µg/L)				Semi-VOCs EPA Method 8270-SIM (µg/L)																Total cPAHs[4] (ug/L)
						Gasoline	Diesel	Heavy Oil	Acetone	cis-1,2-DCE	Vinyl Chloride	Various	Anthracene	Acenapthene	Acenaphthylene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo(g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methyl-naphthalene	2-Methyl-naphthalene	TEQ
October 2021 Phase II Environmental Site Assessment (Grab Groundwater Sample Results)																													
B-1	B-1 (211027)	10/27/2021	--	--	--	< 100	**421**	**334**	**2.70**	< 0.100	**0.357**	ND	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.200	< 0.100	< 0.100	< 0.500	< 0.100	< 0.100	< 0.500	< 0.500	ND
	B-1 (211027)[1]					--	--	--	**4.61**	**0.149**	**0.410**	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B-5	B-5 (211027)	10/27/2021	--	--	--	< 100	< 200	< 250	< 1.00	< 0.100	< 0.100	ND	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.100	< 0.050	< 0.050	< 0.250	< 0.500	< 0.500	< 0.250	< 0.250	ND
May 2022 Monitoring Well Installation and Groundwater Monitoring Event																														
MW-1	MW-1-052322	5/23/2022	100.45	3.19	97.26	< 32	< 66.7	< 83.3	**2.01**	< 0.028	< 0.027	ND	< 2.30	< 2.09	< 2.16	< 1.73	< 1.79	< 1.53	< 1.77	< 2.15	< 2.32	< 1.72	< 2.27	< 2.05	< 1.81	< 0.0917	< 2.31	< 2.00	< 4.49	< 4.27	ND
	--	9/6/2022		5.41	95.04	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	MW-2-052322	5/23/2022	100.20	3.95	96.25	< 32	< 66.7	< 83.3	< 0.55	< 0.028	< 0.027	ND	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.03	< 0.02	< 0.02	< 0.0917	< 0.02	< 0.02	< 0.07	< 0.07	ND
	--	9/6/2022		7.04	93.16	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	MW-3-052322	5/23/2022	99.92	2.70	97.22	< 32	< 66.7	< 83.3	< 0.55	< 0.028	< 0.027	ND	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.03	< 0.02	< 0.02	< 0.0917	< 0.02	< 0.02	< 0.07	< 0.07	ND
	--	9/6/2022		5.49	94.43	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MTCA Method A or B Cleanup Levels						1,000	500	500	7,200	16	0.2	various	--	--	--	--	0.1	--	--	--	--	--	--	--	--	160	--	--	--	--	0.1

Notes:

[1] = Sample B-1 (211027) was reanalyzed for VOCs by the lab due to concerns over potential laboratory cross contamination (presence of acetone is a common laboratory contaminant). The footnoted row of VOC results represents the secondary analysis of remaining sample volume from boring B-1.

[2] = Elevations in feet as measured to an arbitrary point on site of 100.00 feet.

-- = Not analyzed

<100 = not detected at or above the presented concentration

Bold = analyte was detected at a concentration above the laboratory method detection limit

Gray shading indicates the detected concentration exceeds the presented MTCA cleanup levels.

TEQ = toxic equivalency

EPA = Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbons

MTCA = Model Toxics Control Act

ug/L = micrograms per liter

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

DCE = dichloroethene

Table 4

Groundwater Chemical Analytical Results - Metals
S&M Machine Shop
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Total Metals EPA 200.8/7470A (µg/L)								Dissolved Metals EPA 200.8/7470A (µg/L)							
			Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
October 2021 Phase II Environmental Site Assessment (Grab Groundwater Sample Results)																		
B-1	B-1 (211027)	10/27/2021	**3.10**	**46.1**	< 1.00	**6.55**	< 2.00	< 0.200	< 2.00	< 2.00	--	--	--	--	--	--	--	--
B-5	B-5 (211027)	10/27/2021	< 2.00	**31.4**	< 1.00	**4.63**	< 2.00	< 0.200	< 2.00	< 2.00	--	--	--	--	--	--	--	--
May 2022 Well Installation and Groundwater Monitoring Event																		
MW-1	MW-1-052322	5/23/2022	**4.19**	**24.5**	< 1.00	< 2.00	< 2.00	< 0.200	< 2.00	< 2.00	**3.86**	**25.3**	< 1.00	< 2.00	< 2.00	< 0.200	< 2.00	< 2.00
MW-2	MW-2-052322	5/23/2022	**5.75**	**35.4**	< 1.00	< 2.00	< 2.00	< 0.200	< 2.00	< 2.00	**5.71**	**30.3**	< 1.00	< 2.00	< 2.00	< 0.200	< 2.00	< 2.00
MW-3	MW-3-052322	5/23/2022	**3.63**	**42.8**	< 1.00	**5.99**	< 2.00	< 0.200	< 2.00	< 2.00	**2.94**	**22.7**	< 1.00	< 2.00	< 2.00	< 0.200	< 2.00	< 2.00
MTCA Method A or B Cleanup Levels			5	3,200	5	50	15	2	80	80	5	3,200	5	50	15	2	80	80
Natural Background Groundwater Arsenic Levels - Puget Sound Lowlands			8	--	--	--	--	--	--	--	8	--	--	--	--	--	--	--

Notes:

<2.00 analyte not detected at or above concentration presented

Bold = analyte was detected at a concentration above the laboratory method detection limit

EPA = Environmental Protection Agency

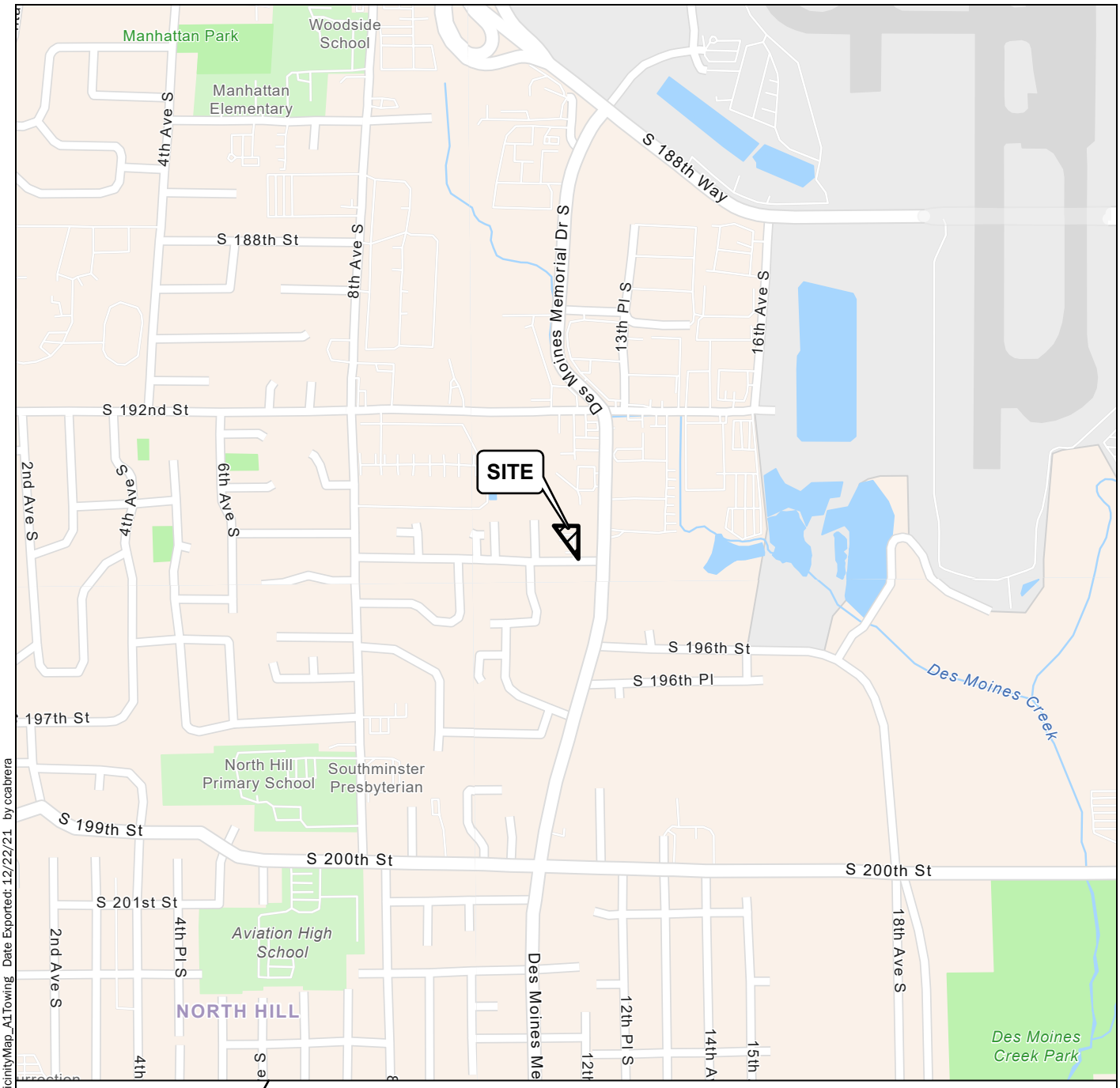
MTCA = Model Toxics Control Act

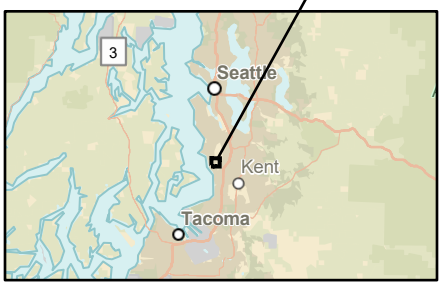
ug/L = micrograms per liter

Grey Shading = Exceeds the MTCA Method A Cleanup Level, but not the natural background level.

FIGURES

GeoEngineers





N
W E
S

1,000 0 1,000

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

WSDOT – S&M Machine Shop
SeaTac, Washington

GeoEngineers

Figure 1

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Legend

- Boring Number and Approximate Location
- Approximate Monitoring Well Location
- Interpreted Groundwater Contour (0.1 ft)
- Area of Geophysical Survey for Utility Clearance and Former Oil Water Separator

N
W E
S

40 0 40

Feet

Exploration Location and May 2022 Groundwater Elevation Contours

WSDOT – S&M Machine Shop
SeaTac, Washington

GeoEngineers

Figure 2

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source:2019 King County Imagery.

Projection: GCS WGS 1984

P:\0\0180393\GIS\0180393Project\0180393Project.aprx\0180393Project Date Exported: 09/06/22 by ccabrera



Legend

- Boring Number and Approximate Location
- Approximate Monitoring Well Location
- Interpreted Groundwater Contour (0.1 ft)
- Area of Geophysical Survey for Utility Clearance and Former Oil Water Separator

N
W E
S

40 0 40

Feet

Exploration Location and September 2022 Groundwater Elevation Contours

WSDOT – S&M Machine Shop
SeaTac, Washington

GeoEngineers

Figure 3

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source:2019 King County Imagery.

Projection: GCS WGS 1984

Phase II Environmental Site Assessment, Soil Sampling Report
State Route (SR) 509
Foreman Property 18451 12th Avenue South

Prepared for

Washington State Department of Transportation
SR 509 Project Office

Prepared by

Headquarters Hazardous Materials and Solid Waste Program
Environmental Services Office

Washington State Department of Transportation

January 24, 2019

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Appendix 5 - Photos

Acronyms and Abbreviations

ASTM E 1903-11	American Society for Testing and Materials Standard Practice for Environmental Site Assessments: Phase II Environmental Assessment Process, Designation: E 1903-11
bgs	Below ground surface
CUL	Cleanup Level
Ecology	Washington State Department of Ecology
ESA	Environmental Site Assessment
ESO	Environmental Services Office
HazMat Program	Hazardous Materials and Solid Waste Program
HQ	Headquarters
MTCA	Model Toxics Control Act
NFA	No Further Action
NWR	Northwest Region
RCRA	Resource Conservation and Recovery Act
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

1.0 INTRODUCTION

The Washington State Department of Transportation (WSDOT) Headquarters (HQ) Hazardous Materials and Solid Waste (HazMat) Program prepared this Phase II Environmental Site Assessment (ESA) Report to provide a summary of information associated with soil investigation and excavation activities within existing unconstructed WSDOT right-of-way (ROW) at 18451 12th Avenue South in Des Moines, WA (Site) (See Appendix 1).. The Site is associated with the WSDOT 509 Project Office in support of the future construction of the State Route (SR) 509 Roadway Project.

The Phase II ESA soil sampling activities assesses soil conditions within the property and confirms the presence or absence of contaminated soil after cleanup activities. A contractor, Marine Vacuum Incorporated (Marine Vac.) remediated two areas of confirmed and suspected contaminated materials.

HazMat conducted this Phase II ESA in general accordance with the American Society for Testing and Materials Standard Practice for Environmental Site Assessments (ASTM): Phase II Environmental Site Assessment Process, Designation: E 1903-11 (ASTM 1903-1) and the WSDOT Environmental Manual (EM) 31-11, Chapter 447.

1.1 SITE INFORMATION

The following sections provide information pertaining to the background, physical, geological and hydrogeological setting of the site.

1.1.1 Physical Setting and Historical Background

WSDOT purchased this Site as part of the future SR 509 Project, and leased the property to tenants since 2000. The Site is located near the intersection of Des Moines Memorial Drive and South 188 Street and the intersection of SR 509 and South 188 Street. The previous tenant, Mr. Foreman, conducted welding activities on this property from 2000 through 2016. In the summer of 2016, WSDOT allowed the Washington State Patrol (WSP) to use a portion of the property to dismantle seized vehicles. Currently, A-1 Towing leases the property as a towing yard, which includes parking vehicles throughout the site and repairing the vehicles within the garage structure.

1.2.1 Geologic and Hydrogeologic Setting

Based upon review available information near the Site vicinity, soils from surface to six feet (ft.) below ground surface (bgs) are defined as poorly graded sand, medium dense, olive gray, moist and homogenous. Soils from six to 10 ft. are defined as poorly graded sand, medium dense, olive gray, moist, and homogeneous. Soils from 10 to 15 ft. are defined as silty sand, dense, grayish brown, moist, and homogenous.

Groundwater depth varied across the Site; although, it was encountered as shallow as three ft. bgs in select locations.

2.0 BACKGROUND INFORMATION

The following provides a chronological order of the relevant events that led up to the cleanup of contaminated soils on the Site. The background describes two separate sample events prior to the contaminated soil remedial activities and confirmation sampling.

In October 2016, WSDOT Northwest Region (NWR) Real Estate Services (RES) requested the WSDOT NWR Hazardous Materials Specialist to perform a limited Phase II Environmental Site Assessment (ESA) after MR. Foreman's lease terminated. WSDOT NWR sampled four locations (A, B, C, & D) (See Appendix 1) of suspected contaminated soil identified on the property. NWR HazMat identified two relatively large heavily stained areas, numerous small stains located on the north end of the site, and abandoned solid waste debris and trash scattered throughout. WSDOT collected a total of four representative samples (SS1 in Area A, SS2 in Area B, SS3 in Area C, and SS4 in Area D). WSDOT collected samples in areas where large stains were evident (A and C), numerous small stains (D), unusual odors (A-D), and solid wastes like trash and debris were abandoned (B and D). The soil samples were analyzed using the following methods:

- Northwest Total Petroleum Hydrocarbons - Method NWTPH – Benzene, Toluene, Ethylbenzene, and Xylene (BTEX))
- Diesel and Heavy Oil - Method NWTPH (Dx)
- SVOCs - EPA Method 8270
- RCRA 8 Metals - EPA Method 6010

Analytical results of one the four soil samples indicated that that lube range petroleum hydrocarbons were detected at a concentration greater than current Model Toxics Control Act (MTCA) Method A cleanup level (CUL) of 2,000 milligrams per kilograms (SS-3 31,000 mg/kg). WSDOT considered this asphalt. The analytical results of another sample indicated that arsenic were detected at a concentration greater the current MTCA Method A CUL of 20 milligrams per kilograms (SS-2 35 mg/kg). The remaining analytes sampled were either non-detect or below MTCA Method A cleanup levels. Based upon the sample results, field remediation of contaminated soils was needed in area B (SS-2) and C (SS-3).

In April 2017, WSDOT contracted Marine Vacuum Incorporated (Marine Vac.) to cleanup areas on the Site with trash, debris, and soils with notable detectable analytes below MTCA Method A CULs.

In January 2018 A-1 Towing, the lessee, graded and displaced Site soils. Some soils were contaminated. The soils were displaced from previously sampled areas A and B. There also was a new stockpile located just north of area D.

On March 15, 2018, WSDOT Headquarters (HQ) HazMat Program collected four soil samples (SS1a, SS2a, SS3a, and SS4a) on the Site in areas previously defined as A, B, and in a new location. The HazMat Program collected a sample if there was an indication of grading with known or suspected soil contamination, or where displaced/graded soils appeared to be consolidated into a stock pile generated by the lessee. Areas C and D did not have these indicators and did not warrant additional sampling. The stock pile location is just north of area D and was estimated to contain approximately 25 cubic yards of material.

The analytical results from the March 2018 investigative sampling, individual chemical constituents detected in each soil sample were analyzed using:

- NWTPH-Gx,
- NWTPH-Dx,
- Volatiles EPA Method 8260C,
- Semi-Volatiles Method 8270D,
- Total metals EPA Method 6010D.

No sample results were above MTCA Method A cleanup standards.

3.0 FIELD INVESTIGATION

On September 21, 2018, HQ HazMat collected two soil confirmation samples (Fcl1 and Fcl2) using a pre-cleaned stainless steel spoon. HQ HazMat decontaminated the stainless steel spoon with a phosphate free cleaner (Alconox) and rinsed it with distilled water between the confirmation sample locations. HQ HazMat collected the two confirmation samples in areas remediated where:

- Soils were previously identified in concentrations that exceeded MTCA Method A cleanup levels (CULs) for lube oil; and
- Numerous stains were located throughout the area.

The Fcl1 confirmation sample was collected at the bottom from the center of where the crushed asphalt was removed.

The depth of the excavation trench for the 2nd confirmation sample could not safely be accessed. Therefore, the Fcl2 confirmation sample was collected from soil excavated with a backhoe bucket taken from the center of the bottom of the excavation.

4.0 ANALYTICAL SAMPLING RESULTS

The analytical data was reviewed and deemed acceptable. The individual chemical constituents in each soil sample was evaluated against the MTCA Method A cleanup levels for unrestricted land use. The sample results were below MTCA Method A cleanup levels. All chemical results from each of the soil sample events are presented in its entirety in Appendix 3. All of the soil samples were delivered to OnSite Environmental Incorporated located in Redmond, WA.

The analytical results from the September 2018 confirmation samples, individual constituents detected in each soil sample was evaluated against:

- NWTPH-Dx
- Semi-Volatiles EPA Method 8260C
- MTCA Metals

The laboratory analytical results from the two confirmation samples were either non-detect or at concentrations below MTCA Method A CULs.

5.0 FIELD ACTIVITIES

On September 20 and 21, 2018, Marine Vac. conducted excavation activities to address lube oil concentrations exceeding MTCA Method A CULs. Additionally, Marine Vac. excavated an area to remediate suspected contaminated materials (See Appendix 1 areas C and D). During site cleanup activities, excavated soils were segregated based on field screening results. Soils included in the direct haul to Marine Vac. for disposal as contaminated included soils based up sight, olfactory indicators, and/or had Photoionization Indication Detector (PID) levels above 10 ppm. The non-suspect soils were placed off to the side in a designated area lined and covered with 6 mil polyethylene sheeting. On September 24, 2018, Marine Vac. filled and graded the excavation areas with the existing non-suspect soils.

A total of about 8.4 cubic yards of suspected and/or confirmed contaminated material was excavated and transported for disposal by Marine Vac. Waste disposal receipts are located in Appendix 4.

No groundwater was encountered during cleanup activities.

6.0 SUMMARY AND CONCLUSIONS

WSDOT completed soil investigation and excavation activities within the Site. WSDOT investigated the soils on the Site at the end of an existing long term lease and also after the new lessee displaced and graded soils. Confirmed and suspect contamination existed on the site. Approximately 8.4 cubic yards of confirmed and suspected contaminated soil was disposed. Based on the laboratory analytical results from the confirmation sample locations, it was determined that no contamination remains on the property.

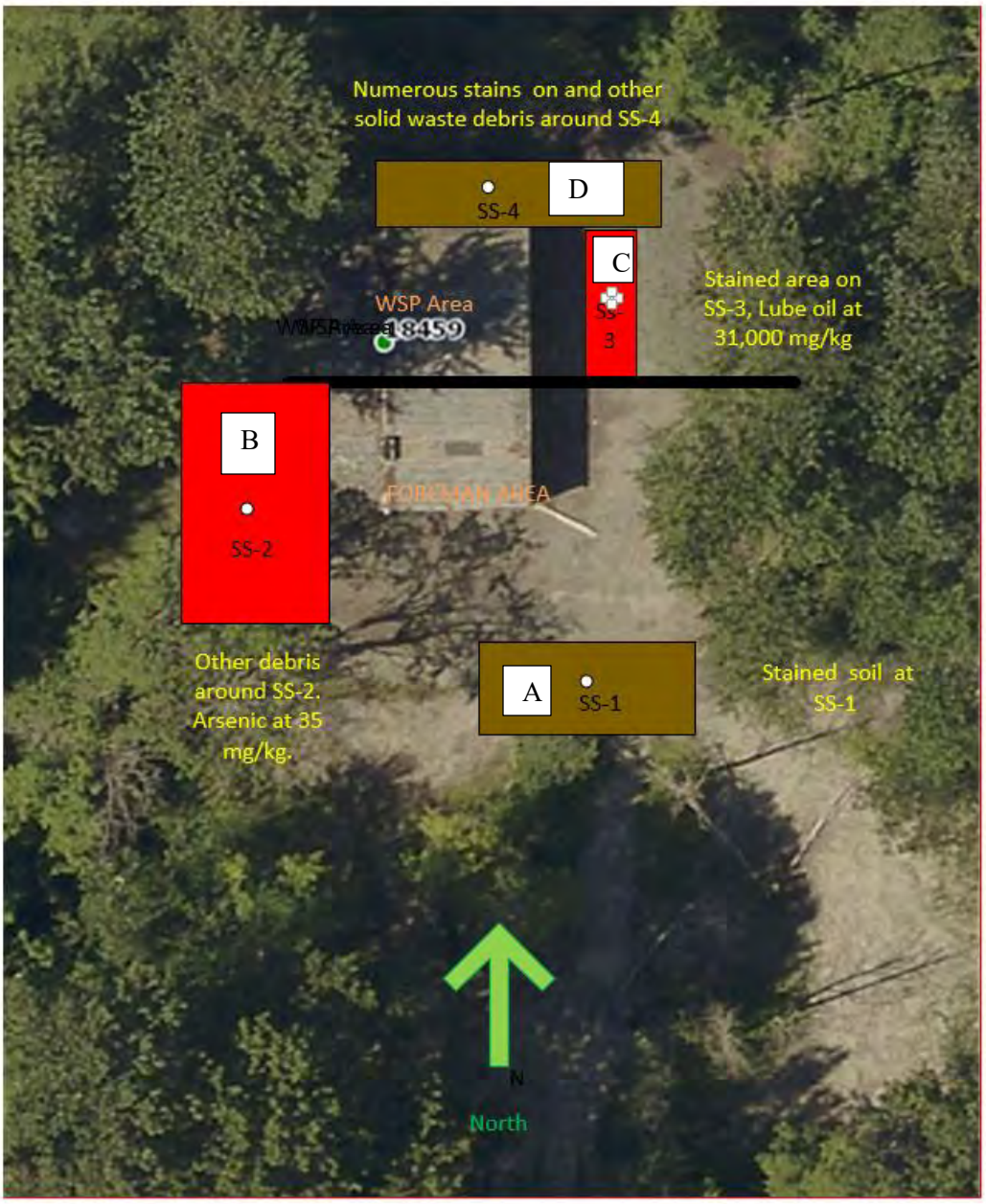
Based on the cleanup activities and the laboratory analytical results, it appears that the subsequent environmental investigation removed the confirmed or suspected contamination; therefore, with no immediate threat to human health or the environment no additional environmental investigation appears warranted at this time. WSDOT recommends Washington State Department of Ecology to accept this Site as a No Further Action.

APPENDIX 1 – VICINITY MAP and SAMPLE POINTS & BACKGROUND

VICINITY MAP WITH SAMPLE POINTS



BACKGROUND AREA



◯ Sample locations

APPENDIX 2 SUMMARY TABLES

BACKGROUND CONDITION

Sample Collected (10/2016)	Gasoline mg/kg	Diesel mg/kg	Lube Oil mg/kg	Benzene mg/kg	Chromium mg/kg	Arsenic mg/kg
SS 1	ND	ND	1900	ND	48	ND
SS 2	ND	ND	220	0.022 (0.03)	46	**35**
SS 3	ND	ND	**31,000**	ND	22	ND
SS 4 *MTCA Method A Cleanup levels mg/kg*	ND *30 mg/kg with Benzene 100 mg/kg without Benzene*	ND *2000 mg/kg*	60 *2000 mg/kg*	ND *0.03*	42 *100 mg/kg(replaced by values for III (2000) and VI (19))*	ND *20 mg/kg*

MARCH 2018 INVESTIGATION

Sample Collected (10/2016)	Gasoline mg/kg	Diesel mg/kg	Lube Oil mg/kg	Benzene mg/kg	Chromium mg/kg	Arsenic mg/kg
SS 1	ND	ND	82	ND	41	ND
SS 2	ND	58	370	ND	52	ND
SS 3 (STOCKPILE)	ND	ND	470	ND	47	ND
SS 4 (STOCKPILE)	ND	ND	260	ND	60	ND
MTCA Method A Cleanup levels mg/kg	*30 mg/kg with Benzene 100 mg/kg without Benzene*	*2000 mg/kg*	*2000 mg/kg*	*0.03 mg/kg*	*100 mg/kg(replaced by values for III (2000) and VI (19))*	*5 mg/kg*

CONFIRMATION SAMPLE

Sample Collected 8/21/2018	Lube Oil
FC1-1 (Baseline ss3)	590
FC1-2 (Baseline ss4)	ND
MTCA Method A cleanup level mg/kg	*2000 mg/kg*

APPENDIX 3 LABORATORY REPORTS

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

November 8, 2016

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project SR 509 - 12th Street
Laboratory Reference No. 1610-295

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on October 26, 2016.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

Case Narrative

Samples were collected on October 25, 2016 and received by the laboratory on October 26, 2016. 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.

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.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Semivolatiles EPA 8270D/SIM Analysis

Sample SS 4 had one surrogate recovery out of control limits. This was due to a large co-eluting non-target analyte peak, tentatively identified as 2-butoxy ethanol by spectral library search.

The Spike Blank/Spike Blank Duplicate had one recovery slightly above control limits, due to a small upward bias in the instruments' calibration and the sample was non-detect for this analyte. No further action was taken.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	10-31-16	
Toluene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
Ethyl Benzene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
m,p-Xylene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
o-Xylene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
Gasoline	**ND**	5.1	NWTPH-Gx	10-28-16	10-31-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*63-124*				
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
Benzene	**0.022**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	9.4	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*63-124*				
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	4.8	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*63-124*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	5.5	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*63-124*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1028S1					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	10-28-16	
Toluene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
Ethyl Benzene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
m,p-Xylene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
o-Xylene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
Gasoline	**ND**	5.0	NWTPH-Gx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*63-124*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-293-16										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*100*	*95*	*63-124*			
SPIKE BLANKS											
Laboratory ID:	SB1028S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.929**	**0.914**	1.00	1.00		**93**	**91**	70-124	2	12	
Toluene	**0.935**	**0.927**	1.00	1.00		**94**	**93**	73-119	1	12	
Ethyl Benzene	**0.953**	**0.942**	1.00	1.00		**95**	**94**	74-117	1	12	
m,p-Xylene	**0.905**	**0.907**	1.00	1.00		**91**	**91**	75-117	0	13	
o-Xylene	**0.943**	**0.932**	1.00	1.00		**94**	**93**	75-116	1	12	
Surrogate:											
Fluorobenzene						*95*	*91*	*63-124*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
Diesel Range Organics	**ND**	550	NWTPH-Dx	10-28-16	10-28-16	U1
Lube Oil	**1900**	56	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
Diesel Range Organics	**ND**	46	NWTPH-Dx	10-28-16	10-28-16	U1
Lube Oil Range Organics	**220**	70	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
Diesel Range Organics	**ND**	6000	NWTPH-Dx	10-28-16	10-31-16	U1
Lube Oil	**31000**	1100	NWTPH-Dx	10-28-16	10-31-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*---*	*50-150*				S
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
Diesel Range Organics	**ND**	30	NWTPH-Dx	10-28-16	10-28-16	
Lube Oil Range Organics	**60**	59	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

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NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1028S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	10-28-16	10-28-16	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-295-01									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	U1
Lube Oil	**1670**	**1670**	NA	NA		NA	NA	0	NA	
Surrogate:										
o-Terphenyl						*84* *100*	*50-150*			

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
n-Nitrosodimethylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.37	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**0.0099**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Fluorene	**0.0088**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**0.014**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**0.011**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.37	EPA 8270D	11-2-16	11-3-16	
Pyrene	**0.018**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**0.053**	0.037	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Chrysene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
bis(2-Ethylhexyl)phthalate	**0.26**	0.037	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*51*	*18 - 109*				
Phenol-d6	*63*	*25 - 111*				
Nitrobenzene-d5	*64*	*22 - 113*				
2-Fluorobiphenyl	*82*	*30 - 114*				
2,4,6-Tribromophenol	*88*	*22 - 116*				
Terphenyl-d14	*78*	*33 - 114*				

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Project: SR 509 - 12th Street

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.46	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**0.30**	0.23	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**0.044**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**0.026**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**0.014**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Fluorene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**0.012**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**0.0098**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.46	EPA 8270D	11-2-16	11-3-16	
Pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Chrysene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
bis(2-Ethylhexyl)phthalate	**0.059**	0.046	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*28*	*18 - 109*				
Phenol-d6	*29*	*25 - 111*				
Nitrobenzene-d5	*49*	*22 - 113*				
2-Fluorobiphenyl	*57*	*30 - 114*				
2,4,6-Tribromophenol	*51*	*22 - 116*				
Terphenyl-d14	*57*	*33 - 114*				

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
n-Nitrosodimethylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Pyridine	**ND**	1.8	EPA 8270D	11-2-16	11-4-16	
Phenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Aniline	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroethyl)ether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Chlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,3-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,4-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Benzyl alcohol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
1,2-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Methylphenol (o-Cresol)	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroisopropyl)ether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
n-Nitroso-di-n-propylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Hexachloroethane	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Nitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Isophorone	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Nitrophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dimethylphenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroethoxy)methane	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2,4-Trichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Naphthalene	**0.011**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Hexachlorobutadiene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Chloro-3-methylphenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Methylnaphthalene	**0.042**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**0.030**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4,6-Trichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3-Dichloroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4,5-Trichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Chloronaphthalene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,4-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Dimethylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,3-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,6-Dinitrotoluene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Acenaphthylene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
3-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
2,4-Dinitrophenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Acenaphthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
4-Nitrophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dinitrotoluene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Dibenzofuran	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Diethylphthalate	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
4-Chlorophenyl-phenylether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Fluorene	**0.15**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
4,6-Dinitro-2-methylphenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
n-Nitrosodiphenylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2-Diphenylhydrazine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Bromophenyl-phenylether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Hexachlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Pentachlorophenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Phenanthrene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Anthracene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Carbazole	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Di-n-butylphthalate	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Fluoranthene	**0.18**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzidine	**ND**	1.8	EPA 8270D	11-2-16	11-4-16	
Pyrene	**0.30**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
3,3'-Dichlorobenzidine	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Benzo[a]anthracene	**0.21**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Chrysene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Benzo[b]fluoranthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo(j,k)fluoranthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[a]pyrene	**0.12**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Indeno[1,2,3-cd]pyrene	**0.078**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Dibenz[a,h]anthracene	**ND**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[g,h,i]perylene	**0.15**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*53*	*18 - 109*				
Phenol-d6	*62*	*25 - 111*				
Nitrobenzene-d5	*67*	*22 - 113*				
2-Fluorobiphenyl	*68*	*30 - 114*				
2,4,6-Tribromophenol	*76*	*22 - 116*				
Terphenyl-d14	*38*	*33 - 114*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Pyridine	**ND**	0.40	EPA 8270D	11-2-16	11-7-16	
Phenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Aniline	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Chlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Benzyl alcohol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Hexachloroethane	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Nitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Isophorone	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Nitrophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Naphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4-Chloroaniline	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Dimethylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Acenaphthylene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
3-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Acenaphthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4-Nitrophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Dibenzofuran	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Diethylphthalate	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Fluorene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Pentachlorophenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Phenanthrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Carbazole	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzidine	**ND**	0.40	EPA 8270D	11-2-16	11-7-16	
Pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Butylbenzylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis-2-Ethylhexyladipate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Benzo[a]anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Chrysene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Di-n-octylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo(j,k)fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo[g,h,i]perylene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*1.6*	*18 - 109*				Q
Phenol-d6	*75*	*25 - 111*				
Nitrobenzene-d5	*78*	*22 - 113*				
2-Fluorobiphenyl	*83*	*30 - 114*				
2,4,6-Tribromophenol	*92*	*22 - 116*				
Terphenyl-d14	*85*	*33 - 114*				

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Date of Report: November 8, 2016
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Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.33	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.33	EPA 8270D	11-2-16	11-3-16	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*69*	*18 - 109*				
Phenol-d6	*70*	*25 - 111*				
Nitrobenzene-d5	*72*	*22 - 113*				
2-Fluorobiphenyl	*74*	*30 - 114*				
2,4,6-Tribromophenol	*76*	*22 - 116*				
Terphenyl-d14	*81*	*33 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1102S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.07**	**1.02**	1.33	1.33	80	77	37 - 107	5	39	
2-Chlorophenol	**1.08**	**1.01**	1.33	1.33	81	76	36 - 107	7	40	
1,4-Dichlorobenzene	**0.503**	**0.485**	0.667	0.667	75	73	28 - 108	4	41	
n-Nitroso-di-n-propylamine	**0.488**	**0.465**	0.667	0.667	73	70	28 - 113	5	33	
1,2,4-Trichlorobenzene	**0.505**	**0.489**	0.667	0.667	76	73	33 - 106	3	38	
4-Chloro-3-methylphenol	**1.15**	**1.11**	1.33	1.33	86	83	52 - 106	4	30	
Acenaphthene	**0.525**	**0.510**	0.667	0.667	79	76	52 - 90	3	30	
4-Nitrophenol	**1.44**	**1.48**	1.33	1.33	108	111	30 - 109	3	32	I
2,4-Dinitrotoluene	**0.576**	**0.569**	0.667	0.667	86	85	50 - 101	1	32	
Pentachlorophenol	**0.981**	**0.855**	1.33	1.33	74	64	21 - 114	14	40	
Pyrene	**0.590**	**0.592**	0.667	0.667	88	89	52 - 104	0	30	
Surrogate:										
2-Fluorophenol					*79*	*75*	*18 - 109*			
Phenol-d6					*84*	*78*	*25 - 111*			
Nitrobenzene-d5					*81*	*76*	*22 - 113*			
2-Fluorobiphenyl					*87*	*80*	*30 - 114*			
2,4,6-Tribromophenol					*90*	*94*	*22 - 116*			
Terphenyl-d14					*95*	*92*	*33 - 114*			

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-295-01					
Client ID:	**Soil Sample 1**					
Arsenic	**ND**	11	6010C	10-27-16	10-27-16	
Barium	**79**	2.8	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.56	6010C	10-27-16	10-27-16	
Chromium	**48**	0.56	6010C	10-27-16	10-27-16	
Lead	**6.2**	5.6	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.28	7471B	10-27-16	10-27-16	
Selenium	**ND**	11	6010C	10-27-16	10-27-16	
Silver	**ND**	1.1	6010C	10-27-16	10-27-16	
Lab ID:	10-295-02					
Client ID:	**Soil Sample 2**					
Arsenic	**35**	14	6010C	10-27-16	10-27-16	
Barium	**170**	3.5	6010C	10-27-16	10-27-16	
Cadmium	**0.77**	0.70	6010C	10-27-16	10-27-16	
Chromium	**45**	0.70	6010C	10-27-16	10-27-16	
Lead	**37**	7.0	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.35	7471B	10-27-16	10-27-16	
Selenium	**ND**	14	6010C	10-27-16	10-27-16	
Silver	**ND**	1.4	6010C	10-27-16	10-27-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-295-03					
Client ID:	**Soil Sample 3**					
Arsenic	**ND**	11	6010C	10-27-16	10-27-16	
Barium	**55**	2.8	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.55	6010C	10-27-16	10-27-16	
Chromium	**22**	0.55	6010C	10-27-16	10-27-16	
Lead	**45**	5.5	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.28	7471B	10-27-16	10-27-16	
Selenium	**ND**	11	6010C	10-27-16	10-27-16	
Silver	**ND**	1.1	6010C	10-27-16	10-27-16	
Lab ID:	10-295-04					
Client ID:	**SS 4**					
Arsenic	**ND**	12	6010C	10-27-16	10-27-16	
Barium	**73**	3.0	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.59	6010C	10-27-16	10-27-16	
Chromium	**42**	0.59	6010C	10-27-16	10-27-16	
Lead	**ND**	5.9	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.30	7471B	10-27-16	10-27-16	
Selenium	**ND**	12	6010C	10-27-16	10-27-16	
Silver	**ND**	1.2	6010C	10-27-16	10-27-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-27-16
Date Analyzed:	10-27-16
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1027SM1,MB1027SM2&MB1027S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-289-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**47.1**	**46.5**	1	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**50.1**	**48.5**	3	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-289-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**92.3**	92	**91.8**	92	0	
Barium	100	**148**	101	**142**	95	4	
Cadmium	50.0	**48.7**	97	**48.3**	97	1	
Chromium	100	**135**	85	**137**	86	1	
Lead	250	**265**	106	**250**	100	6	
Mercury	0.500	**0.535**	107	**0.542**	108	1	
Selenium	100	**92.3**	92	**91.9**	92	0	
Silver	25.0	**20.8**	83	**21.0**	84	1	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

% MOISTURE

Date Analyzed: 10-27-16

Client ID	Lab ID	% Moisture
Soil Sample 1	10-295-01	11
Soil Sample 2	10-295-02	28
Soil Sample 3	10-295-03	10
SS 4	10-295-04	16

This report pertains to the samples analyzed in accordance with the chain of custody,
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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-napthalene) 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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

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Chain of Custody

Page (of)

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

Company: WSDOT
Project Number:
Project Name: SR509 - 12th St
Project Manager: PAT SVOBODA
Sampled by: WSDOT

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: 10-295

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Volatiles 8270D/SIM (with low-level PAHs) SVOCs	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A						% Moisture
1	Soil Sample 1	10/25/16	3:10	SOIL	3		X		X			X						X				NO					X
2	Soil Sample 2	10/25/16	3:20																			DO					X
3	Soil Sample 3	10/25/16	3:30																			83					X
4	SS 4	10/25/16	3:45																								X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	Patti Sloan	WSDOT	10/26/2016	8:15A	
Received	Diane Wyatt	SPEEDY	10-26-16	8:15A	
Relinquished	Diane Wyatt	SPEEDY	10-26-16	11:10A	
Received		0082	10/26/16	1110	
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

March 27, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project SR509 Foreman Property
Laboratory Reference No. 1803-152

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on March 16, 2018.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

Case Narrative

Samples were collected on March 15, 2018 and received by the laboratory on March 16, 2018. 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.

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.

Semivolatiles EPA 8270D/SIM Analysis

The spike blank duplicate had one recovery slightly above control limits. The samples were non-detect for this analyte, further action was taken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Gasoline	**ND**	7.3	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*66-130*				
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Gasoline	**ND**	12	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*66-130*				
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Gasoline	**ND**	5.4	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*66-130*				
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Gasoline	**ND**	10	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*66-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Gx
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Gasoline	**ND**	5.0	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*66-130*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-145-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*95*	*97*	*66-130*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Diesel Range Organics	**ND**	35	NWTPH-Dx	3-19-18	3-19-18	
Lube Oil Range Organics	**82**	71	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Diesel Range Organics	**58**	34	NWTPH-Dx	3-19-18	3-19-18	N
Lube Oil Range Organics	**370**	68	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Diesel Range Organics	**ND**	60	NWTPH-Dx	3-19-18	3-20-18	
Lube Oil	**470**	120	NWTPH-Dx	3-19-18	3-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Diesel Range Organics	**ND**	33	NWTPH-Dx	3-19-18	3-19-18	U1
Lube Oil	**260**	61	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*79*	*50-150*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	3-19-18	3-19-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-145-01										
	ORIG	DUP									
Diesel Range Organics	**64.2**	**42.0**	NA	NA		NA		NA	42	NA	
Lube Oil Range Organics	**188**	**137**	NA	NA		NA		NA	31	NA	
Surrogate:											
o-Terphenyl						*88*	*81*	*50-150*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Acetone	0.023	0.0054	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0022	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*120*	*75-131*				
Toluene-d8	*119*	*83-130*				
4-Bromofluorobenzene	*115*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Acetone	0.0075	0.0063	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	

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Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0025	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*75-131*				
Toluene-d8	*104*	*83-130*				
4-Bromofluorobenzene	*100*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
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Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0022	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*123*	*75-131*				
Toluene-d8	*119*	*83-130*				
4-Bromofluorobenzene	*115*	*78-130*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0032	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*119*	*75-131*				
Toluene-d8	*121*	*83-130*				
4-Bromofluorobenzene	*118*	*78-130*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0319S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0319S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0020	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*75-131*				
Toluene-d8	*102*	*83-130*				
4-Bromofluorobenzene	*103*	*78-130*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0319S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0518**	**0.0521**	0.0500	0.0500	104	104	58-126	1	20	
Benzene	**0.0538**	**0.0549**	0.0500	0.0500	108	110	72-122	2	19	
Trichloroethene	**0.0503**	**0.0497**	0.0500	0.0500	101	99	75-120	1	20	
Toluene	**0.0506**	**0.0503**	0.0500	0.0500	101	101	78-123	1	19	
Chlorobenzene	**0.0453**	**0.0456**	0.0500	0.0500	91	91	75-120	1	18	
Surrogate:										
Dibromofluoromethane					*109*	*103*	*75-131*			
Toluene-d8					*109*	*99*	*83-130*			
4-Bromofluorobenzene					*105*	*99*	*78-130*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
n-Nitrosodimethylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.47	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
2,4-Dinitrophenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.47	EPA 8270D	3-21-18	3-22-18	
Pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*68*	*18 - 113*				
Phenol-d6	*71*	*19 - 119*				
Nitrobenzene-d5	*71*	*19 - 119*				
2-Fluorobiphenyl	*78*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*74*	*30 - 116*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.46	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**2.9**	1.1	EPA 8270D	3-21-18	3-23-18	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**0.016**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**0.014**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.028**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.46	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.023**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.022**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.028**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**0.012**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**0.012**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**0.020**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*61*	*18 - 113*				
Phenol-d6	*67*	*19 - 119*				
Nitrobenzene-d5	*67*	*19 - 119*				
2-Fluorobiphenyl	*77*	*33 - 109*				
2,4,6-Tribromophenol	*79*	*19 - 121*				
Terphenyl-d14	*76*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**0.12**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.013**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.012**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**0.51**	0.20	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.0092**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**0.25**	0.20	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.011**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**0.014**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*55*	*18 - 113*				
Phenol-d6	*68*	*19 - 119*				
Nitrobenzene-d5	*61*	*19 - 119*				
2-Fluorobiphenyl	*76*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*77*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**0.0097**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.012**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.013**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.0084**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.011**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*63*	*18 - 113*				
Phenol-d6	*67*	*19 - 119*				
Nitrobenzene-d5	*68*	*19 - 119*				
2-Fluorobiphenyl	*75*	*33 - 109*				
2,4,6-Tribromophenol	*74*	*19 - 121*				
Terphenyl-d14	*71*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0321S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Pyridine	**ND**	0.33	EPA 8270D	3-21-18	3-21-18	
Phenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Aniline	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Chlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Benzyl alcohol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Hexachloroethane	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Nitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Isophorone	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Nitrophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4-Chloroaniline	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Dimethylphthalate	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
3-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0321S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4-Nitrophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Dibenzofuran	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Diethylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Pentachlorophenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Carbazole	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzidine	**ND**	0.33	EPA 8270D	3-21-18	3-21-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*85*	*18 - 113*				
Phenol-d6	*86*	*19 - 119*				
Nitrobenzene-d5	*85*	*19 - 119*				
2-Fluorobiphenyl	*89*	*33 - 109*				
2,4,6-Tribromophenol	*85*	*19 - 121*				
Terphenyl-d14	*81*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0321S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.11**	**1.15**	1.33	1.33	83	86	39 - 109	4	36	
2-Chlorophenol	**1.18**	**1.28**	1.33	1.33	89	96	42 - 105	8	35	
1,4-Dichlorobenzene	**0.561**	**0.613**	0.667	0.667	84	92	31 - 103	9	37	
n-Nitroso-di-n-propylamine	**0.598**	**0.615**	0.667	0.667	90	92	36 - 104	3	34	
1,2,4-Trichlorobenzene	**0.601**	**0.618**	0.667	0.667	90	93	32 - 104	3	38	
4-Chloro-3-methylphenol	**1.17**	**1.21**	1.33	1.33	88	91	48 - 107	3	31	
Acenaphthene	**0.554**	**0.597**	0.667	0.667	83	90	38 - 102	7	33	
4-Nitrophenol	**1.21**	**1.23**	1.33	1.33	91	92	27 - 121	2	35	
2,4-Dinitrotoluene	**0.551**	**0.582**	0.667	0.667	83	87	36 - 103	5	34	
Pentachlorophenol	**1.43**	**1.53**	1.33	1.33	108	115	21 - 114	7	37	I
Pyrene	**0.585**	**0.619**	0.667	0.667	88	93	46 - 108	6	31	
Surrogate:										
2-Fluorophenol					*86*	*90*	*18 - 113*			
Phenol-d6					*87*	*90*	*19 - 119*			
Nitrobenzene-d5					*84*	*87*	*19 - 119*			
2-Fluorobiphenyl					*85*	*86*	*33 - 109*			
2,4,6-Tribromophenol					*90*	*92*	*19 - 121*			
Terphenyl-d14					*83*	*86*	*30 - 116*			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-152-01					
Client ID:	**SS1 N A'**					
Arsenic	**ND**	14	6010D	3-21-18	3-21-18	
Barium	**84**	3.5	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.71	6010D	3-21-18	3-21-18	
Chromium	**41**	0.71	6010D	3-21-18	3-21-18	
Lead	**ND**	7.1	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.35	7471B	3-19-18	3-19-18	
Selenium	**ND**	14	6010D	3-21-18	3-21-18	
Silver	**ND**	1.4	6010D	3-21-18	3-21-18	
Lab ID:	03-152-02					
Client ID:	**SS2**					
Arsenic	**ND**	14	6010D	3-21-18	3-21-18	
Barium	**110**	3.4	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.68	6010D	3-21-18	3-21-18	
Chromium	**52**	0.68	6010D	3-21-18	3-21-18	
Lead	**53**	6.8	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.34	7471B	3-19-18	3-19-18	
Selenium	**ND**	14	6010D	3-21-18	3-21-18	
Silver	**ND**	1.4	6010D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-152-03					
Client ID:	**SS3**					
Arsenic	**ND**	12	6010D	3-21-18	3-21-18	
Barium	**61**	3.0	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.60	6010D	3-21-18	3-21-18	
Chromium	**47**	0.60	6010D	3-21-18	3-21-18	
Lead	**27**	6.0	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.30	7471B	3-19-18	3-19-18	
Selenium	**ND**	12	6010D	3-21-18	3-21-18	
Silver	**ND**	1.2	6010D	3-21-18	3-21-18	
Lab ID:	03-152-04					
Client ID:	**SS4**					
Arsenic	**ND**	12	6010D	3-21-18	3-21-18	
Barium	**160**	3.0	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.61	6010D	3-21-18	3-21-18	
Chromium	**60**	0.61	6010D	3-21-18	3-21-18	
Lead	**23**	6.1	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.30	7471B	3-19-18	3-19-18	
Selenium	**ND**	12	6010D	3-21-18	3-21-18	
Silver	**ND**	1.2	6010D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0321SM1

Analyte	Method	Result	PQL
Arsenic	6010D	**ND**	10
Barium	6010D	**ND**	2.5
Cadmium	6010D	**ND**	0.50
Chromium	6010D	**ND**	0.50
Lead	6010D	**ND**	5.0
Selenium	6010D	**ND**	10
Silver	6010D	**ND**	1.0

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-19-18
Date Analyzed:	3-19-18
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0319S1

Analyte	Method	Result	PQL
Mercury	7471B	**ND**	0.25

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
DUPLICATE QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**83.0**	**68.1**	20	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**30.1**	**36.9**	20	0.50	
Lead	**57.3**	**49.0**	16	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 3-19-18
Date Analyzed: 3-19-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.25	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
MS/MSD QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**95.4**	95	**90.7**	91	5	
Barium	100	**175**	92	**181**	98	4	
Cadmium	50.0	**46.4**	93	**45.9**	92	1	
Chromium	100	**123**	93	**122**	92	1	
Lead	250	**291**	93	**290**	93	0	
Selenium	100	**97.3**	97	**94.8**	95	3	
Silver	25.0	**19.3**	77	**18.8**	75	3	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 3-19-18
Date Analyzed: 3-19-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.510**	102	**0.490**	98	4	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

% MOISTURE

Date Analyzed: 3-19-18

Client ID	Lab ID	% Moisture
SS1 N A'	03-152-01	29
SS2	03-152-02	27
SS3	03-152-03	16
SS4	03-152-04	18

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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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

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Chain of Custody

Page 1 of 1

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

Company: WSDOT
Project Number:
Project Name: SR509 Foreman Property
Project Manager: PATRICK SVOBODA
Sampled by:

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: 03-152

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	SS1 NA	3/15/18	12:30	S	5
2	SS2	3/15/18	1:00		
3	SS3	3/15/18	2:00		
4	SS4	3/15/18	2:15		

Lab ID	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	✓	✓	✓	✓	✓		✓	✓					✓	✓				✓
2	✓	✓	✓		✓		✓	✓					✓	✓				✓
3	✓	✓	✓		✓		✓	✓					✓	✓				✓
4	✓	✓	✓		✓		✓	✓					✓	✓				✓

	Signature	Company	Date	Time
Relinquished	Patrick Svoboda	WSDOT	3/16/18	8:30
Received	Eileen Clark	Alpha	3/16/18	8:30
Relinquished	Eileen Clark	Alpha	3/16/18	11:23
Received			3/16/18	11:23
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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

September 24, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project Foreman
Laboratory Reference No. 1809-229

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on September 21, 2018.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

Case Narrative

Samples were collected on September 20 and 21, 2018 and received by the laboratory on September 21, 2018. 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.

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.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

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

September 24, 2018

Patrick Svoboda
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15700 Dayton Avenue North
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Project Manager

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Laboratory Reference: 1809-229
Project: Foreman

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

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:	**FC1-1**					
Laboratory ID:	09-229-01					
Diesel Range Organics	**ND**	41	NWTPH-Dx	9-21-18	9-21-18	U1
Lube Oil	**590**	57	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
Diesel Range Organics	**ND**	27	NWTPH-Dx	9-21-18	9-21-18	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*81*	*50-150*				

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

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:	MB0921S3					
Diesel Range Organics	**ND**	25	NWTPH-Dx	9-21-18	9-21-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-217-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range Organics	**178**	**164**	NA	NA		NA		NA	8	NA	
Surrogate:											
o-Terphenyl						*82*	*80*	*50-150*			

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
n-Nitrosodimethylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	3.8	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
2,4-Dinitrophenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	3.8	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*38*	*19 - 103*				
Phenol-d6	*48*	*30 - 103*				
Nitrobenzene-d5	*44*	*27 - 105*				
2-Fluorobiphenyl	*56*	*36 - 102*				
2,4,6-Tribromophenol	*55*	*33 - 110*				
Terphenyl-d14	*64*	*38 - 108*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	0.36	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	0.36	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*41*	*19 - 103*				
Phenol-d6	*47*	*30 - 103*				
Nitrobenzene-d5	*43*	*27 - 105*				
2-Fluorobiphenyl	*52*	*36 - 102*				
2,4,6-Tribromophenol	*78*	*33 - 110*				
Terphenyl-d14	*79*	*38 - 108*				

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0921S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	0.33	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0921S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	0.33	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*42*	*19 - 103*				
Phenol-d6	*47*	*30 - 103*				
Nitrobenzene-d5	*43*	*27 - 105*				
2-Fluorobiphenyl	*50*	*36 - 102*				
2,4,6-Tribromophenol	*70*	*33 - 110*				
Terphenyl-d14	*69*	*38 - 108*				

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0921S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**0.782**	**0.896**	1.33	1.33	59	67	45 - 94	14	29	
2-Chlorophenol	**0.770**	**0.879**	1.33	1.33	58	66	46 - 94	13	33	
1,4-Dichlorobenzene	**0.360**	**0.429**	0.667	0.667	54	64	42 - 91	17	37	
n-Nitroso-di-n-propylamine	**0.382**	**0.479**	0.667	0.667	57	72	45 - 100	23	26	
1,2,4-Trichlorobenzene	**0.396**	**0.454**	0.667	0.667	59	68	45 - 100	14	32	
4-Chloro-3-methylphenol	**0.950**	**1.01**	1.33	1.33	71	76	55 - 97	6	21	
Acenaphthene	**0.444**	**0.497**	0.667	0.667	67	75	48 - 91	11	21	
4-Nitrophenol	**1.04**	**1.11**	1.33	1.33	78	83	53 - 102	7	20	
2,4-Dinitrotoluene	**0.496**	**0.524**	0.667	0.667	74	79	47 - 96	5	19	
Pentachlorophenol	**1.32**	**1.35**	1.33	1.33	99	102	35 - 125	2	26	
Pyrene	**0.540**	**0.545**	0.667	0.667	81	82	55 - 110	1	17	
Surrogate:										
2-Fluorophenol					*48*	*55*	*19 - 103*			
Phenol-d6					*55*	*61*	*30 - 103*			
Nitrobenzene-d5					*51*	*57*	*27 - 105*			
2-Fluorobiphenyl					*56*	*64*	*36 - 102*			
2,4,6-Tribromophenol					*76*	*74*	*33 - 110*			
Terphenyl-d14					*71*	*71*	*38 - 108*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
Arsenic	**ND**	11	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.57	EPA 6010D	9-21-18	9-21-18	
Chromium	**64**	0.57	EPA 6010D	9-21-18	9-21-18	
Lead	**27**	5.7	EPA 6010D	9-21-18	9-21-18	
Mercury	**ND**	0.28	EPA 7471B	9-21-18	9-21-18	
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
Arsenic	**ND**	11	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.54	EPA 6010D	9-21-18	9-21-18	
Chromium	**11**	0.54	EPA 6010D	9-21-18	9-21-18	
Lead	**ND**	5.4	EPA 6010D	9-21-18	9-21-18	
Mercury	**ND**	0.27	EPA 7471B	9-21-18	9-21-18	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

TOTAL METALS
EPA 6010D/7471B
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0921SM2					
Arsenic	**ND**	10	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.50	EPA 6010D	9-21-18	9-21-18	
Chromium	**ND**	0.50	EPA 6010D	9-21-18	9-21-18	
Lead	**ND**	5.0	EPA 6010D	9-21-18	9-21-18	
Laboratory ID:	MB0921S1					
Mercury	**ND**	0.25	EPA 7471B	9-21-18	9-21-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-138-01										
	ORIG	DUP									
Arsenic	**14.6**	**14.8**	NA	NA		NA		NA	2	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**43.8**	**50.1**	NA	NA		NA		NA	13	20	
Lead	**52.9**	**55.3**	NA	NA		NA		NA	5	20	
Laboratory ID:	09-213-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	09-138-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**106**	**105**	100	100	14.6	**92**	**91**	75-125	1	20	
Cadmium	**48.0**	**47.1**	50.0	50.0	ND	**96**	**94**	75-125	2	20	
Chromium	**145**	**147**	100	100	43.8	**101**	**103**	75-125	1	20	
Lead	**296**	**287**	250	250	52.9	**97**	**94**	75-125	3	20	
Laboratory ID:	09-213-01										
Mercury	**0.566**	**0.586**	0.500	0.500	0.0548	**102**	**106**	80-120	3	20	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

% MOISTURE

Date Analyzed: 9-21-18

Client ID	Lab ID	% Moisture
FC1-1	09-229-01	12
FC1-2	09-229-02	8

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

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

Company: WSDOT
Project Number:
Project Name: Foreman
Project Manager: PAT SVOBODA
Sampled by: WSDOT

Turnaround Request (in working days)

(Check One) 24 hour

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

Laboratory Number: 09-229

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	FC1-1	9/20	14:15	S	6				✓			✓						✓			X
2	FC1-2	9/21	11:00	S	6				✓			✓						✓			X

	Signature	Company	Date	Time
Relinquished	[signature]	WSDOT	9/21/18	11:10
Received	[signature]	ALPHA	9-21-18	11:10
Relinquished	[signature]	ALPHA	9-21-18	12:39
Received	[signature]	ONE	9/21/18	1239
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Call when you receive these.

Chromatograms with final report ☐

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

APPENDIX 4 DISPOSAL TICKETS

PetroCard™
MORE THAN JUST FUEL.

1st + CW 1st Load 401187

Phone (206) 621.9777 **Certified Weight Ticket**

Company _____ **Charge** ____ **Cash** X

Truck # _____ **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** _____

16:53:47 20 Sep 2018

Weigh fee: 10.00
3215 4TH AVE S

Axle 1:	3240 lb
Axle 2:	5620 lb
Axle 3:	5660 lb
Total:	14520 lb

PetroCard™
MORE THAN JUST FUEL.

2nd. Load

401252

Phone (206) 621.9777 **Certified Weight Ticket**

Company X MARINE VACUME SERVICE **Charge** X **Cash** ____

Truck # X _____ **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** X R.B. ALLEN

08:44:47 22 Sep 2018

Weigh fee: 10.00
3215 4TH AVE S

Axle 1: 10680 lb
Axle 2: 7540 lb
Total: 18220 lb

V152

PetroCard™
MORE THAN JUST FUEL.

Light Weight 52

401254

Phone (206) 621.9777 **Certified Weight Ticket**

Company MARINE VACUUM SERVICE **Charge** ____ **Cash** ✓

Truck # X **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** X R B ALLEN

10:13:36 22 Sep 2018

Weigh fee: 10.00 $10.00

3215 4TH AVE S

Axle 1: 3620 lb
Axle 2: 7640 lb
Total: 11260 lb

W

PetroCard™
MORE THAN JUST FUEL.

Light Weight

401254

Phone (206) 621.9777 **Certified Weight Ticket**

Company MARINE VACUUM SERVICE **Charge** ____ **Cash** X

Truck # X **Account #** ____

Trailer # ____ **Card #** ____

Weighmaster ____ **Signature** X R B ALLEN

10:13:36 22 Sep 2018

Weigh fee: 10.00 $10.00

3215 4TH AVE S

Axle 1:	3620 lb
Axle 2:	7640 lb
Total:	11260 lb

WELCOME TO
KITIMAT SEATTLE GULL
TP53888936-001 KITIMAT SEATTLE GULL
3215 4TH AVE S
SEATTLE WA 98134

Descr.	qty	amount
SCALES	1	1.00
Sub Total		1.00
Tax		0.00
TOTAL		1.00
CASH $		1.00

THANKS, COME AGAIN
PLEASE COME AGAIN
206-621-9777
REG# 003 CSH# 009 DR# 01 TRAN# 38855
09/22/18 10:04:24 ST# 20

SEATTLE RECYCLE AND
DISPOSAL STATION

R E C E I P T

Bill Acct:CASH**
CASH CUSTOMERS

SITE:STS South Transfer Static
DATE:09/22/18 TICKET#:41071208
TIME IN:14:19 ID IN:MCA
TIME OUT:14:34 ID OUT:RJO
TURNAROUND TIME: 15
TRUCK:
ROUTE:Z-Not Specified

	LBS	TONS
GROSS:	16160	8.13
TARE:	15240	7.67
NET:	920	0.46

MATERIAL:	QTY	AMT
Package	920	$66.70

TIP FEE:	66.70
SPEC FEE:	0.00
TOTAL FEE:	**$66.70**
TENDERED:	66.70
CHANGE:	0.00

Payment Info:
5 - Credit Car $66.70

SIGNATURE: _____
NOTE:

WELCOME TO
KITIMAT SEATTLE GULL
TP53888936-001 KITIMAT SEATTLE GULL
3215 4TH AVE S
SEATTLE WA 98134

Descr.	qty	amount
< DUPLICATE RECEIPT >		
<CUSTOMER COPY>		
SCALES	1	10.00
Sub Total		10.00
Tax		0.00
TOTAL		10.00
CREDIT $		10.00

CARD TYPE: VISA
ACCT NUMBER: XXXX XXXX XXXX 1811
TRANS TYPE: SALE
APPROVAL: 012223 INVOICE: 036301
AMOUNT: $ 10.00

APPROVED 012223
****

THANKS, COME AGAIN
PLEASE COME AGAIN
206-621-9777
REG# 0003 CSH# 009 DR# 01 TRAN# 38807
09/22/18 08:30:26 ST# 20

APPENDIX 5 PHOTOS



SS-1 during investigation



SS-2 during investigation



SS-3 during investigation



SS-4 during investigation





SS-4 During investigation



General trash and debris scattered around the property



Grading and soil displacement on property



Soil displacement near SS-1



Soil displacement near SS-2



SS-2 Sample near soil displacement



SS3 of stockpile



SS4 of stockpile



Cleanup of SS-3 Area and confirmation sample area



Part of Cleanup of SS-4 area and confirmation sample taken from this area



Backfill of front area



Backfill of side area

Washington State Department of Transportation

May 30, 2023

Department of Ecology
Toxic Cleanup Program – Northwest Regional Office
15700 Dayton Avenue North
Shoreline, Washington 98133

RE: A-1 Towing VCP Application – FS 90042

To whom it may concern,

With this letter, the Washington Department of Transportation (WSDOT) Environmental Services Office is submitting the requested additional information regarding the A-1 Towing VCP application. In addition to the attached information, WSDOT would like to state that after the demolition of the current structures at the site and before the start of construction for SR 509, the top 1.5 feet of soil where contamination was previously identified at the property will be removed, tested, and disposed of appropriately. After the removal of the soil, clean fill dirt will be imported to the site. The contamination remaining at the site, shown in the table attached, is for the most part below regulatory standards and WSDOT feels that removing the top part of the soil across the site will remediate any residual contamination remaining.

If you have any comments, questions, or concerns regarding the additional information provided or with the VCP application submitted in 2022, please don't hesitate to contact me.

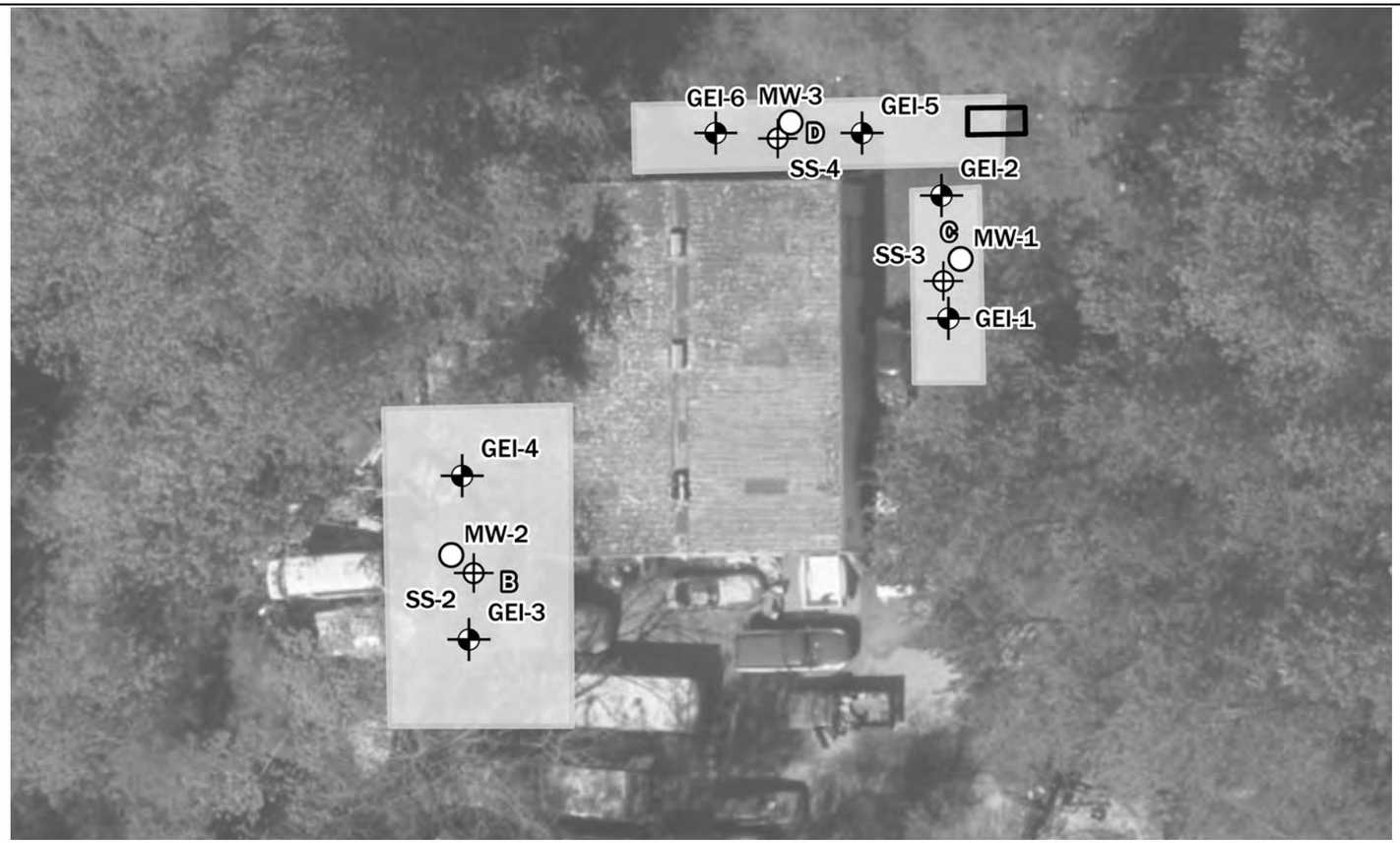
Sincerely,

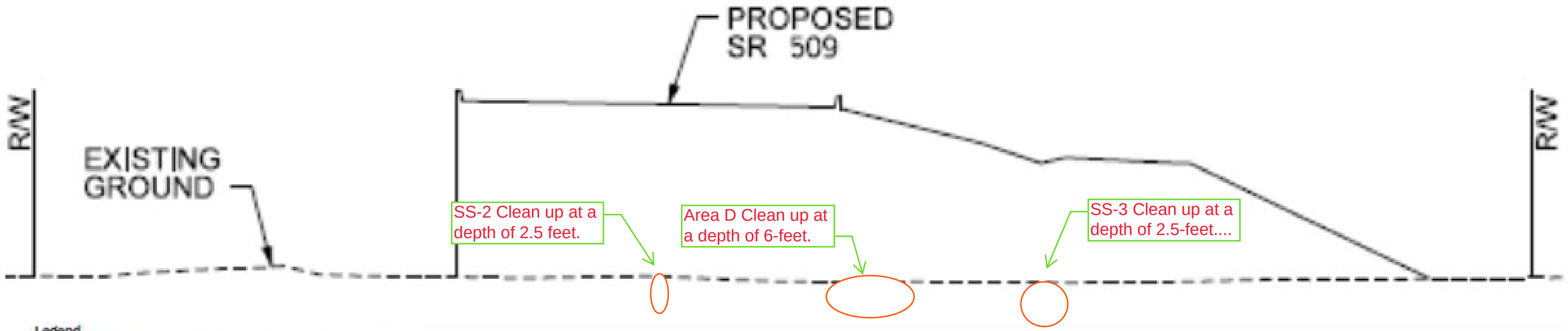
Patrick Svoboda

Patrick Svoboda
Hazardous Materials and Solid Waste Program Manager
Environmental Services Office
Washington Department of Transportation
360-870-9491 Office

N

A1 TOWING - CLEANUP





Legend

- Boring Number and Approximate Location
- Monitoring Well Number and Approximate Location
- Previous WSDOT Explorations (2016)
- Drum Storage
- Assessment Area

Puget Sound GATEWAY Program

WSDOT

509 5 167

SR 509/24TH AVE. S. TO S. 188TH ST.
NEW EXPRESSWAY PROJECT

DATE: 4/5/2023 PRINTED BY: roegreg
FILE NAME: c:\users\roegreg\pw_wsdot\d0373158\A1 Towing Cleanup.dgn
MODEL NAME: Default

Sample ID	Date Collected	Depth Below Ground Surface (ft)	NWTPH-Gx Gasoline	NWTPH-Dx Diesel	Heavy Oil (Lube Oil)	Benzene
SS1	**10/25/2016**		ND	ND	**1900**	ND
SS2	**10/25/2016**		ND	ND	**220**	**0.022**
SS3	**10/25/2016**		ND	ND	**31,000**	ND
SS4	**10/25/2016**		ND	ND	**60**	ND
SS1a	**3/15/2018**		ND	ND	**82**	ND
SS2a	**3/15/2018**		ND	**58**	**370**	ND
SS3a (stockpile)	**3/15/2018**		ND	ND	**470**	ND
SS4a (stockpile)	**3/15/2018**		ND	ND	**260**	ND
FC1-1	**9/20/2018**				**590**	
FC1-2	**9/21/2018**				ND	
GEI-1	**12/25/2021**	9 to 10	<3.01	<4.4	<10.9	
GEI-2	**12/25/2021**	9 to 10	<2.99	<4.34	<10.80	
GEI-3	**12/25/2021**	9 to 10	<3.23	<4.50	<11.2	
GEI-4	**12/25/2021**	2 to 3	<2.97	<21.8	**166**	
GEI-5	**12/25/2021**	7 to 8	<3.02	<4.36	<10.9	
GEI-6	**12/25/2021**	7 to 8	<2.95	<4.33	<10.8	
MW-1	**12/25/2021**	2 to 3	<3.43	<4.69	<11.7	
MW-2	**12/25/2021**	9 to 10	<3.08	<4.43	<11.1	
MW-3	**12/25/2021**	2 to 3	<3.35	**5.55**	**24.3**	
MTCA Method A Cleanup Levels for Unrestricted Use			**30/100**[1]	**2,000**	**2,000**	**0.03**

Notes:

[1] TPH, gasoline range organics, benzene present / benzene not present

[2] MTCA Soil Protective of Groundwater Vadose @ 13 degrees C

Bold - analyte was detected at a concentration above the laboratory reported detection limit

- = no cleanup level noted

mg/kg = milligrams per kilogram

ND = Not Detected

TEQ = Toxic Equivalency

NWTPH = Northwest Total Petroleum Hydrocarbons

MTCA = Model Toxics Control Act

Anthracene	Acenapthene	Acenaphthylene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) Fluoranthene	Benzo (g,h,i) Perylene	Benzo (k) Fluoranthene
<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654
<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.00650
<0.00675	<0.00675	<0.00675	<0.00675	<0.00675	<0.00675	<0.00675	<0.00675
<0.00655	<0.00655	<0.00655	**0.0298**	**0.0363**	**0.05**	**0.0306**	**0.015**
<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.00654
<0.00649	<0.00649	0.00649	0.00649	0.00649	0.00649	0.00649	0.00649
<0.00703	<0.00703	<0.00703	<0.00703	<0.00703	<0.00703	<0.00703	<0.00703
<0.00665	<0.00665	0.00665	0.00665	0.00665	0.00665	0.00665	0.00665
<0.00691	<0.00691	0.00691	0.00691	0.00691	0.00691	0.00691	0.00691
$1{,}100^2$	**49^2**	**-**	**-**	**0.1**	**-**	**-**	**-**

Contaminants Detected (mg/kg)

Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.0218	<0.00654	<0.00654
<0.00650	<0.00650	<0.00650	<0.00650	<0.00650	<0.0217	<0.00650	<0.00650
<0.00675	<0.00675	<0.00675	<0.00675	<0.00675	<0.0225	<0.00675	<0.00675
0.0354	**0.0066**	**0.0622**	<0.0066	**0.0325**	<0.0218	**0.0244**	**0.0474**
<0.00654	<0.00654	<0.00654	<0.00654	<0.00654	<0.02180	<0.00654	<0.00654
0.00649	0.00649	0.00649	0.00649	0.00649	<0.0216	<0.00649	<0.00649
<0.00703	<0.00703	<0.00703	<0.00703	<0.00703	<0.02340	<0.00703	<0.00703
0.00665	0.00665	0.00665	0.00665	0.00665	<0.0222	<0.00665	<0.00665
0.00691	0.00691	0.00691	0.00691	0.00691	<0.023	<0.00691	<0.00691
-	-	**630[2]**	**51[2]**	-	**5**	-	**330[2]**

1-Methyl-naphthalene	2-Methyl-napthalene	Total cPAHs TEQ	Arsemic	Barium	Cadmium	Chromium	Lead
			ND			**48**	
			35			**46**	
			ND			**22**	
			ND			**42**	
			ND			**41**	
			ND			**52**	
			ND			**47**	
			ND			**60**	
<0.0218	<0.0128	ND	**2.26**	**41.9**	<1.09	**23.4**	<2.2
<0.0217	<0.0217	ND	**2.36**	**45.2**	<1.08	**21.5**	<2.17
<0.0225	<0.0225	ND	**2.93**	**25.3**	<1.12	**11.8**	<2.25
<0.0218	<0.0218	**0.0223**	**6.28**	**72.2**	<1.09	**33.9**	**27.6**
<0.0218	<0.0218	ND	**2.58**	**39.6**	<1.09	**21.1**	<2.18
<0.0216	<0.0216	ND	**2.31**	**35.1**	<1.08	**16.3**	<2.16
<0.0234	<0.0234	ND	**3.70**	**61**	<1.17	**26.7**	<2.34
<0.0222	<0.0222	ND	**3.17**	**44.9**	<1.11	**24.4**	<2.22
<0.023	<0.023	ND	**7.77**	**58.8**	<1.15	**41.6**	**3.16**
0.08[2]	**1.7**[2]	-	**20**	**1,600**[2]	**2**	**2000**	**250**

Mercury	Selenium	Silver
<0.0436	<2.72	<0.545
<0.0434	<2.71	<0.542
<0.0450	<2.81	<0.562
0.0731	<2.73	<0.546
<0.0436	<2.73	<0.545
<0.0433	<2.71	<0.541
<0.0469	<2.93	<0.0586
<0.0443	<2.77	<0.554
<0.0460	<2.88	<0.575
2	**5.2^2**	**14^2**

Phase II Environmental Site Assessment

A-1 Towing
King County Tax Parcel 3223049048
Des Moines, Washington

for
Washington State Department of Transportation
c/o HNTB Corporation

November 25, 2022

GeoEngineers
Earth Science + Technology

Phase II Environmental Site Assessment

A-1 Towing
King County Tax Parcel 3223049048
Des Moines, Washington

for
Washington State Department of Transportation
c/o HNTB Corporation

November 25, 2022

GeoEngineers

4000 Kruse Way Place
Building 3, Suite 200
Lake Oswego, Oregon 97035
503.624.9274

Phase II Environmental Site Assessment

A-1 Towing
King County Tax Parcel 3223049048
Des Moines, Washington

File No. 0180-393-00

November 25, 2022

Prepared for:

Washington State Department of Transportation
c/o HNTB Corporation
600 108th Avenue NE, Suite 405
Bellevue, Washington 98004

Attention: Dan Holmquist

Prepared by:

GeoEngineers, Inc.
4000 Kruse Way Place
Building 3, Suite 200
Lake Oswego, Oregon 97035
503.624.9274

Cris Watkins
Senior Environmental Scientist

Phil Welker, PE
Principal

PHILIP D. WELKER
STATE OF WASHINGTON
53014
REGISTERED
PROFESSIONAL ENGINEER
11/25/2022

CJW:PW:cdb

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

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Appendix C. Report Limitations and Guidelines for Use

1.0 INTRODUCTION AND BACKGROUND

This report describes the Phase II Environmental Site Assessment (ESA) activities conducted at the property located at King County Tax Parcel 3223049048 (the provided address of 18451 12th Avenue South in Des Moines, Washington does not map accurately) as part of the expansion of SR-509 (herein referred to as "site"). The property is owned by Washington State Department of Transportation (WSDOT) but is leased by a private party and WSDOT is evaluating environmental conditions. The approximate site location is shown in the attached Vicinity Map, Figure 1.

GeoEngineers, Inc. (GeoEngineers) reviewed a Phase II ESA prepared for the property (known as A-1 Towing and the Foreman Property) located at 18451 12th Avenue South in Des Moines, Washington by WSDOT, dated January 24, 2019. The Phase II ESA indicated that WSDOT purchased the property in 2000. A tenant (Mr. Foreman) conducted welding activities between 2000 and 2016, and the Washington State Patrol (WSP) used a portion of the property to dismantle seized vehicles in the summer of 2016. At the time of the report (January 2019), A-1 Towing leased the property as a towing yard, which included storge of vehicles throughout the site and repairing of vehicles within an existing garage structure. The Phase II report included a summary of the following activities:

- The Phase II ESA performed by WSDOT in 2016 following the termination of the lease to Mr. Foreman included soil sampling of areas with significant staining. Areas identified as Area A, B, C and D were sampled as part of the Phase II ESA. Results indicated the presence of lube oil and arsenic exceeding the Model Toxic Control Act (MTCA) Cleanup Levels (CULs) in Area B and C, respectively.
- In April 2017, WSDOT contracted Marine Vacuum Incorporated to clean up areas of the Site with trash, debris and soils with notable detectable analytes below MTCA Method A CULs. It is unclear from this statement as to what soils were actually removed and no additional details were provided.
- In January 2018, A-1 Towing graded Site soils including some that were contaminated. The soils were displaced from previously sampled areas A and B. A new stockpile was present following these activities just north of Area D.
- On March 15, 2018, WSDOT collected four additional soil samples from areas defined as Area A, B, and a new location. WSDOT collected a sample to determine if there was an indication of grading with known or suspected soil contamination, or where displaced/graded soils appeared to be consolidated into a stockpile generated by the lessee. Areas C and D did not have these indicators and did not warrant additional sampling. Sample results did not indicate results exceeding the MTCA Method A CULs.
- On September 20 and 21, 2018, Marine Vacuum Performed excavation activities to address the previously detected lube oil concentrations exceeding the MTCA Method A CULs and an area to remediate suspected contaminated materials in Area C and D. During site excavation activities soils were field screened using sight, olfactory and photoionization detector (PID) levels above 10 parts per million. Non-suspect soils were placed off to the side on a lined area and covered. On September 21, 2018, WSDOT collected two confirmation soil samples in locations where the soils had been removed. Laboratory analytical results were either non-detect or detected at concentrations less than MTCA Method A CULs. Following sample results, the stockpiled non-suspect soils were used to fill and grade the excavation areas.

- The January 24, 2019, Phase II ESA summary indicated that the known and suspected soils with contamination (approximately 8.4 cubic yards) were removed from the site and based on the analytical results no contamination remains on the property. WSDOT requested a no further action (NFA) determination from Washington State.
- Ecology responded to the request for a NFA determination indicating that additional information would be necessary including depth of samples, groundwater samples (if encountered) and more accurate sample location information (previous report had conflicting depictions).

The following sections describe our scope of services (prepared with approval by WSDOT), field activities, sampling results and opinions.

2.0 SCOPE OF SERVICES

Our general environmental scope of services was as follows:

- Prepared a Health and Safety Plan for use by GeoEngineers' personnel during the field activities.
- Coordinate the location of nine shallow proposed soil borings with one boring located at each historic background sample location SS-2, SS-3 and SS-4, which represent staining observed in Areas B, C and D, respectively (Area A does not appear to be of concern for additional assessment). Two additional borings were placed in each area based on the sample location map depicting rectangular areas of staining and or remedial excavations. At least one boring in each area will be advanced to groundwater or 15 feet below ground surface (bgs) and a groundwater monitoring well installed, if water is encountered. The additional borings will be placed in a manner to bracket the depicted area of concern. A total of nine shallow borings and three monitoring wells were proposed.
- Contact the Utility Notification Center public locating service. A private locating service will also be subcontracted to locate potential utilities.
- Retain a drilling subcontractor to advance nine direct push borings to a depth of 5 to 15 feet (bgs), dependent on field screening results, presence of groundwater and depth to native soils. If groundwater is encountered (reportedly as shallow as 3 feet bgs) at the former sample locations SS-2 through SS-4, a 2-inch-diameter polyvinyl chloride (PVC) casing monitoring well will be installed. Depths of the borings may be adjusted in an attempt to install a minimum of three wells to evaluate site specific groundwater flow direction. (Groundwater was not encountered during drilling activities and no wells were installed).
- Continuously sample push probes and visually classify and field screen (sheen, PID and odor) for potential laboratory analysis by a GeoEngineers representative. Visual classification of the soil samples is to be completed in general accordance with ASTM D 2488-90, the Standard Practice for Description and Identification of Soils.
- Collected two soil samples per boring for potential laboratory analysis based on field screening results and depth to groundwater.
- Submit the soil samples on a standard turnaround time (10 business days) for laboratory analysis of the following:
    - Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx (Gx).

- Diesel- and lube-oil range petroleum hydrocarbons by Northwest Method NWTPH-Dx (Dx and Ox).
- Resource Conservation and Recovery Act (RCRA) eight metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) by United States Environmental Protection Agency (EPA) Method 6020.
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270.
- Volatile organic compounds (VOCs) by EPA Method 8260C.

- Coordinate disposal of investigation-derived waste (IDW) at an appropriate off-site facility. Collect one composite soil sample directly from the drum or during drilling for waste profiling purposes.
- Prepare a report including sample results tables, laboratory data, site figures and boring/sampling logs documenting results of the work performed at the site. The data will be tabulated and compared against MTCA CULs.
- Upload data to the Ecology Environmental Information Management (EIM) system as required.

3.0 SUBSURFACE CONDITIONS

Logs of borings are included in Appendix A. Soils were visually classified in general accordance with ASTM D 2488-94. Boring locations are shown in Exploration Locations, Figure 2.

3.1. Subsurface Soil Conditions

Surface conditions at the site consist primarily of fill gravel (from several inches up to 2 feet). Soils encountered during exploration activities consisted of sand, silt and varying gradations of sand and silt with occasional gravel to the maximum depth explored, 15 to 20 feet bgs.

3.2. Subsurface Groundwater Conditions

Soils observed during drilling were generally moist and groundwater was not encountered during drilling.

4.0 SOIL SAMPLING AND CHEMICAL ANALYTICAL RESULTS

A GeoEngineers' field representative collected soil samples continuously from each boring for field screening and potential laboratory analysis. Samples were field screened for evidence of petroleum and/or VOC-related impact using visual, water sheen and headspace vapor screening methods using a PID. Soil samples were collected based on field screening data. The soil samples were submitted for laboratory analysis of VOCs, Gx, Dx, Ox, PAHs and/or RCRA eight metals to Pace National. Soil chemical analytical data are presented in Tables 1 and 2. Laboratory analytical reports are attached in Appendix B.

4.1. Soil Sample Analytical Results

As previously noted, three areas of concern with previous sample results were identified for additional assessment identified as areas B, C and D (no concerns were expressed by Ecology for the need to further explore Area A). The following sections summarize the results of the additional borings and soil sampling performed in each area. Approximate locations of previous sampling performed by others and the sampling performed during this assessment are shown on Figure 2.

4.1.1. Area B

Area B is located off the southwest corner of the existing structure. Previous sample SS-2 indicated levels of arsenic (35 milligrams/kilogram [mg/kg]). Three borings (GEI-3, GEI-4 and MW-2) were performed within the identified Area B. Boring MW-2 was intended to be in the approximate location of previous sample SS-2 and planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (15 feet bgs). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-3 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample GEI-4 at 2-3 feet bgs was non-detect for Gx, Dx and VOCs. Ox and PAHs and detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-2 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

4.1.2. Area C

Area C is located off the east side of the of the existing structure. Previous sample SS-3 indicated levels of lube oil at 31,000 mg/kg. Three borings (GEI-1, GEI-2 and MW-1) were performed within the identified Area C. Boring MW-1 was intended to be in the approximate location of previous sample SS-3 and planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (20 feet bgs at boring GEI-1). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-1 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample GEI-2 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-1 at 2-3 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

4.1.3. Area D

Area D is located off the north side of the existing structure. Previous observations indicated the presence of staining and groundwater in the exploration, which was not sampled. Three borings (GEI-4, GEI-6 and MW-3) were performed within the identified Area C. Boring MW-3 was intended to be in the approximate location of previous sample SS-4 and staining. MW-3 was planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (15 feet bgs). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-5 at 7-8 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

- Sample GEI-6 at 7-8 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-3 at 2-3 feet bgs was non-detect for Gx, VOCs and PAHs. Detected Dx, Ox and RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

5.0 CONCLUSIONS

GeoEngineers performed additional sampling at three areas (Area B, C and D) located around the existing structure on the A-1 towing site to further evaluate the potential presence of contaminants related to past uses at the site. Results of the assessment did not identify concentrations of Gx, Dx, Ox, VOCs, PAHs and or RCRA eight metals at concentrations exceeding the MTCA Method A Cleanup Levels. Out of the nine soil samples analyzed, only two identified low concentrations of Dx, Ox and/or PAHs. Groundwater was not encountered at the maximum depth explored at the site of 15 to 20 feet bgs.

Based on the results of the assessment a No Further Action determination should be requested from Ecology.

6.0 LIMITATIONS

We have prepared this report for the exclusive use of WSDOT. 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, experience and discrete sample collection. Contaminants may be present in areas of the site not sampled or tested. No warranty or other conditions, express or implied, should be understood.

Please refer to Appendix C, Report Limitations and Guidelines for Use, for additional information regarding the use of this report.

TABLES

GeoEngineers

Table 1

Soil Chemical Analytical Results - Petroleum Hydrocarbons and VOCs
A-1 Towing
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Field Screening Observation		NWTPH-Gx (mg/kg)	NWTPH-Dx (mg/kg)		VOCs EPA Method 8260 (mg/kg)								
				Sheen	PID (ppm)	Gasoline	Diesel	Heavy Oil	Various	Anthracene	Acenapthene	Acenaphthylene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo(g,h,i)perylene	Benzo (k) fluoranthene	Chrysene
GEI-1	GE-1 (9-10')	10/25/2021	9-10	NS	<1	<3.01	< 4.4	< 10.9	ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	NS	<1	<2.99	< 4.34	< 10.80	ND	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	NS	<1	<3.23	< 4.50	< 11.2	ND	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	NS	<1	<2.97	< 21.8	**166**	ND	< 0.00655	< 0.00655	< 0.00655	**0.0298**	**0.0363**	**0.0500**	**0.0306**	**0.0150**	**0.0354**
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	NS	<1	<3.02	< 4.36	< 10.9	ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	NS	<1	<2.95	< 4.33	< 10.8	ND	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649
MW-1	MW-1 (2-3')	10/25/2021	2-3	NS	<1	<3.43	< 4.69	< 11.7	ND	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703
MW- 2	MW-2 (9-10')	10/25/2021	9-10	NS	<1	<3.08	< 4.43	< 11.1	ND	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665
MW- 3	MW-3 (2-3')	10/25/2021	2-3	NS	<1	<3.35	**5.55**	**24.3**	ND	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691
MTCA Method A Cleanup Levels for Unrestricted Land Use						800/1,000	2,000		Various	--	--	--	--	--	--	--	--	--

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Field Screening Observation		NWTPH-Gx (mg/kg)	NWTPH-Dx (mg/kg)				VOCs EPA Method 8260 (mg/kg)										Total cPAHs[1] (mg/kg)
				Sheen	PID (ppm)	Gasoline	Diesel		Heavy Oil		Various	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methyl-naphthalene	2-Methyl-naphthalene	TEQ
GEI-1	GE-1 (9-10')	10/25/2021	9-10	NS	<1	<3.01	< 4.4		< 10.9		ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.0218	< 0.00654	< 0.00654	< 0.0218	< 0.0128	ND
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	NS	<1	<2.99	< 4.34		< 10.80		ND	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.0217	< 0.00650	< 0.00650	< 0.0217	< 0.0217	ND
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	NS	<1	<3.23	< 4.50		< 11.2		ND	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.0225	< 0.00675	< 0.00675	< 0.0225	< 0.0225	ND
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	NS	<1	<2.97	< 22		**166**		ND	**0.00660**	**0.0622**	< 0.0066	**0.0325**	< 0.0218	**0.0244**	**0.0474**	< 0.0218	< 0.0218	**0.0223**
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	NS	<1	<3.02	< 4.4		< 10.9		ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.02180	< 0.00654	< 0.00654	< 0.0218	< 0.0218	ND
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	NS	<1	<2.95	< 4.3		< 10.8		ND	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.0216	< 0.00649	< 0.00649	< 0.0216	< 0.0216	ND
MW-1	MW-1 (2-3')	10/25/2021	2-3	NS	<1	<3.43	< 4.7		< 11.7		ND	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.02340	< 0.00703	< 0.00703	< 0.0234	< 0.0234	ND
MW- 2	MW-2 (9-10')	10/25/2021	9-10	NS	<1	<3.08	< 4.43		< 11.1		ND	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.0222	< 0.00665	< 0.00665	< 0.0222	< 0.0222	ND
MW- 3	MW-3 (2-3')	10/25/2021	2-3	NS	<1	<3.35	**5.6**		**24.3**		ND	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.023	< 0.00691	< 0.00691	< 0.023	< 0.023	ND
MTCA Method A Cleanup Levels for Unrestricted Land Use						800/1,000	2,000				Various		--	--	--	5	--	--	--	--	0.1

Notes:

[1]Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) analyzed by EPA Method 8270D/SIM. Total cPAHs calculated using the toxicity equivalency (TEQ) methodology specified in Washington Administrative Code (WAC) 173-340-780(8); cPAHs that were not detected were assigned half the value of the detection limit for these calculations. Not detected (ND) is indicated for samples which no cPAHs were detected.

<3.01 = analyte not detected at or less than the presented concentration

Bold = analyte was detected at a concentration above the laboratory reported detection limit

-- = not analyzed/no cleanup level

mg/kg = milligrams per kilogram; VOCs = volatile organic compounds

NS = no sheen; ppm = parts per million

PID = Photoionization Detector

ND = Not Detected

TEQ = toxic equivalency

EPA = Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbons

MTCA = Model Toxics Control Act

Table 2

Soil Chemical Analytical Results - Metals
A-1 Towing
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Metals EPA Method 6010D/7471B (mg/kg)							
				Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
GEI-1	GE-1 (9-10')	10/25/2021	9-10	**2.26**	**41.9**	< 1.09	**23.4**	< 2.2	< 0.0436	< 2.72	< 0.545
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	**2.36**	**45.2**	< 1.08	**21.5**	< 2.17	< 0.0434	< 2.71	< 0.542
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	**2.93**	**25.3**	< 1.12	**11.8**	< 2.25	< 0.0450	< 2.81	< 0.562
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	**6.28**	**72.2**	< 1.09	**33.9**	**27.6**	**0.0731**	< 2.73	< 0.546
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	**2.58**	**39.6**	< 1.09	**21.1**	< 2.18	< 0.0436	< 2.73	< 0.545
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	**2.31**	**35.1**	< 1.08	**16.3**	< 2.16	< 0.0433	< 2.71	< 0.541
MW-1	MW-1 (2-3')	10/25/2021	2-3	**3.70**	**61.0**	< 1.17	**26.7**	< 2.34	< 0.0469	< 2.93	< 0.0586
MW- 2	MW-2 (9-10')	10/25/2021	9-10	**3.17**	**44.9**	< 1.11	**24.4**	< 2.22	< 0.0443	< 2.77	< 0.554
MW- 3	MW-3 (2-3')	10/25/2021	2-3	**7.77**	**58.8**	< 1.15	**41.6**	**3.16**	< 0.0460	< 2.88	< 0.575
MTCA Method A Cleanup Levels for Unrestricted Land Use				21	--	2	2,000	250	2	400	400
MTCA Cleanup Level for the Protection of Groundwater				--	1,600	--	--	--	--	5	14

Notes:

<1.09 = analyte not detected

Bold = analyte was detected at a concentration above the laboratory method detection limit

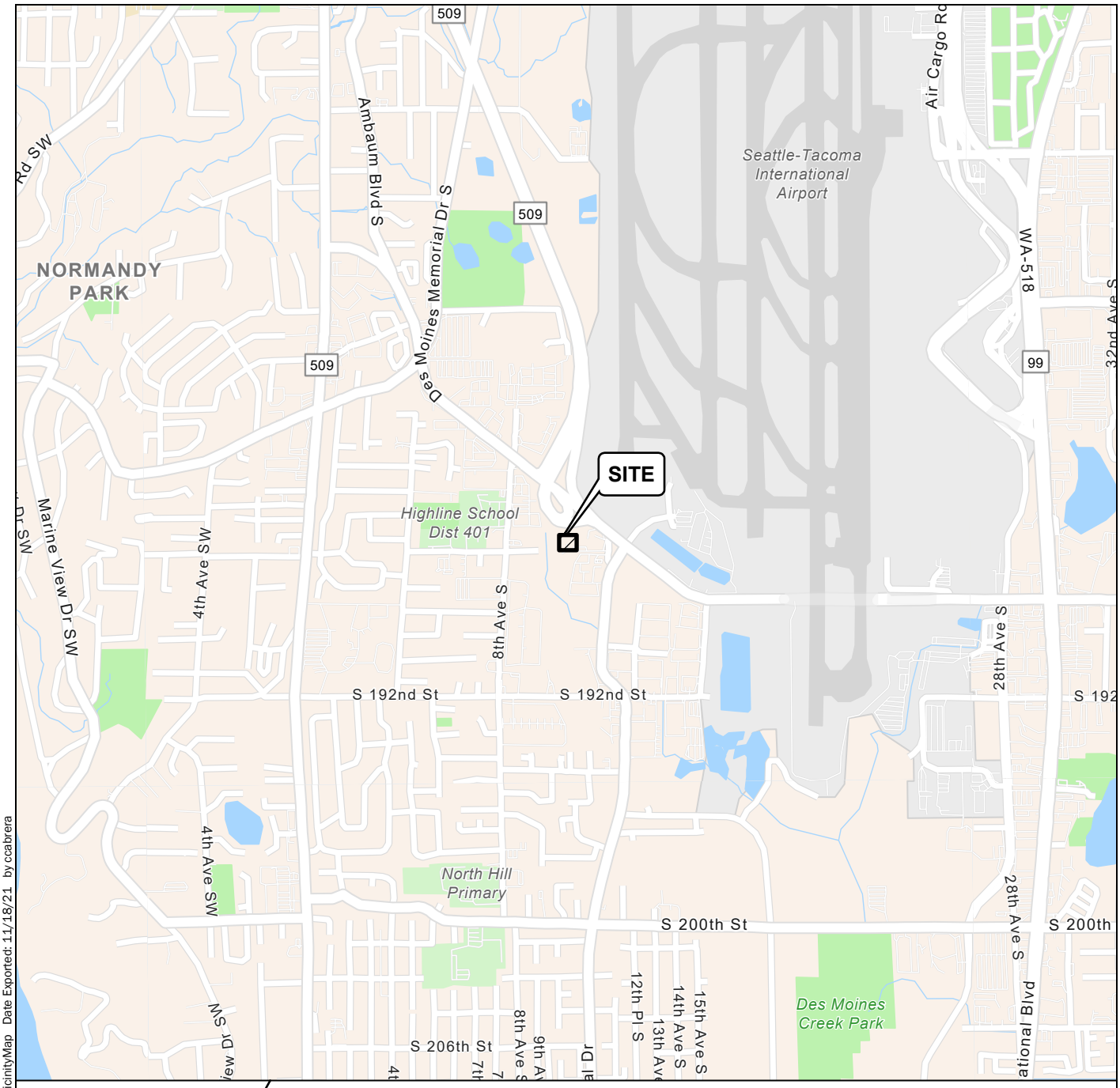
mg/kg = milligrams per kilogram

EPA = Environmental Protection Agency

MTCA = Model Toxics Control Act

FIGURES

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Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

WSDOT - A-1 Towing
SeaTac, Washington

GeoEngineers

Figure 1

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Boring Number and Approximate Location

Monitoring Well Number and Approximate Location

Previous WSDOT Explorations (2016)

Drum Storage

Assessment Area

Data Source: ESRI Clarity

N

W E

S

30 0 30

Feet

Exploration Locations

WSDOT - A-1 Towing
SeaTac, Washington

GeoEngineers

Figure 2

P:\0\0180393\GIS\0180393Project\0180393Project.aprx\0180393_F02_ExplorationLocations Date Exported: 12/01/21 by ccabrera

Notes:

Legend

APPENDICES

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APPENDIX A
Boring Logs

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

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

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

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.

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
VS	Vane shear

Sheen Classification

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

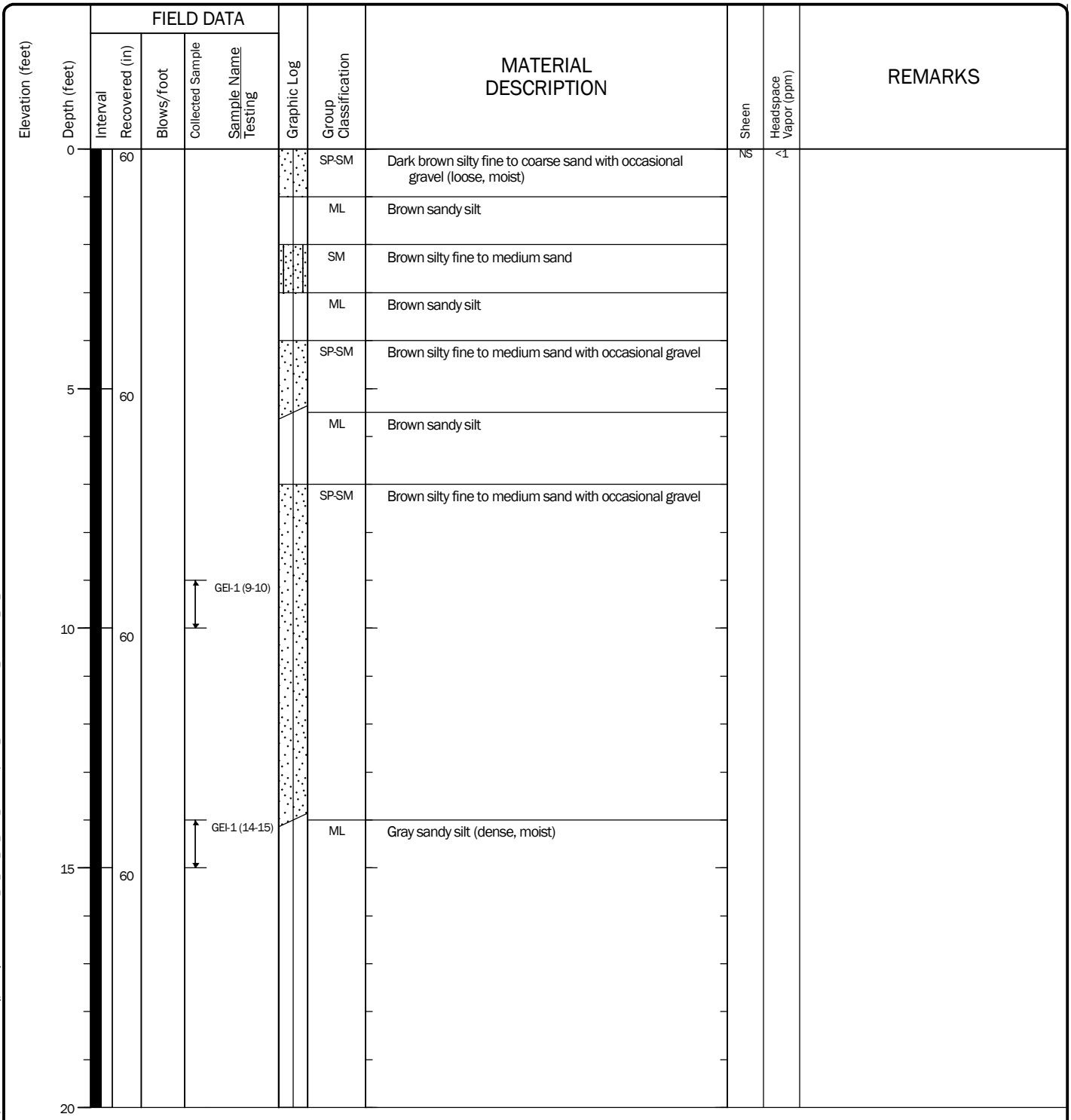
NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative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

Key to Exploration Logs

GeoEngineers

Figure A-1

Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 20	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data		Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-1

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-2
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 10/25/2021	End 10/25/2021	Total Depth (ft)	15	Logged By	DC	Checked By	CJW	Driller	Holocene Drilling, Inc.	Drilling Method	Direct-push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe 7822T		
Easting (X) Northing (Y)					System Datum				Groundwater not observed at time of exploration			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		60					SP	Brown silty fine to medium coarse sand (loose, moist)	NS	<1	
								ML	Brown sandy silt (loose, moist)			
								SM	Brown silty fine to medium sand with occasional gravel (loose, moist)			
	5		60									
						GEI-2 (9-10)						
	10		36									
						GEI-2 (14-15)		SM	Gray silty fine to medium sand (loose, moist)			
	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-2

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-3
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 10/25/2021	End 10/25/2021	Total Depth (ft)	15	Logged By	DC	Checked By	CJW	Driller	Holocene Drilling, Inc.	Drilling Method	Direct-push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe 7822T		
Easting (X) Northing (Y)					System Datum				Groundwater not observed at time of exploration			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36					DUF	Forest duff, sandy silt with organic matter and wood debris	NS	<1	
								SM	Brown silty fine to medium sand (loose, moist)			
								ML	Brown sandy silt (loose, moist)			
	5		60					SM	Brown silty fine to medium sand with occasional gravel			
						GEI-3 (9-10)						
	10		60									
						GEI-3 (14-15)		ML	Gray sandy silt (loose, moist)			
	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-3

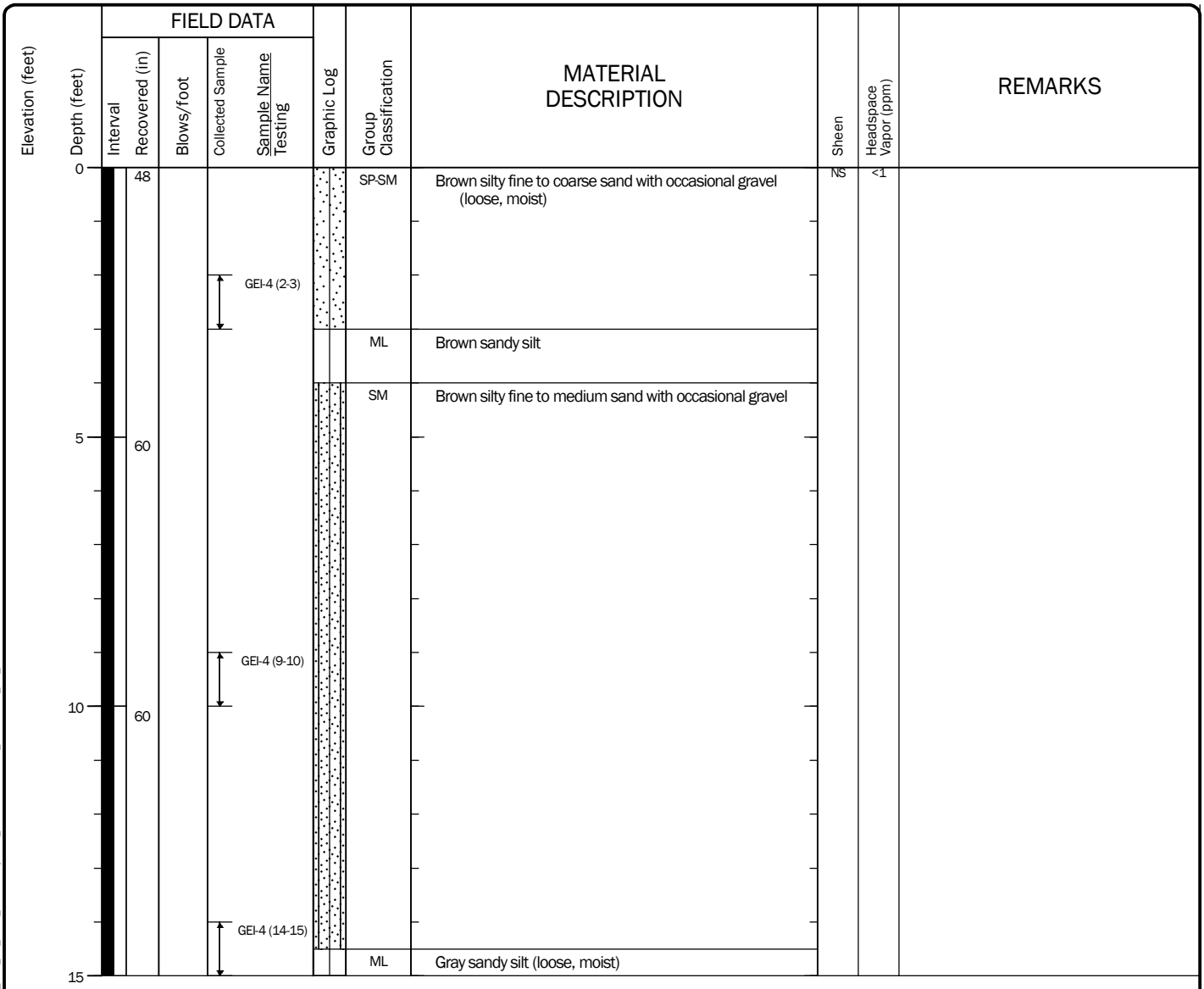
GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-4
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 15	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data		Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-4

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

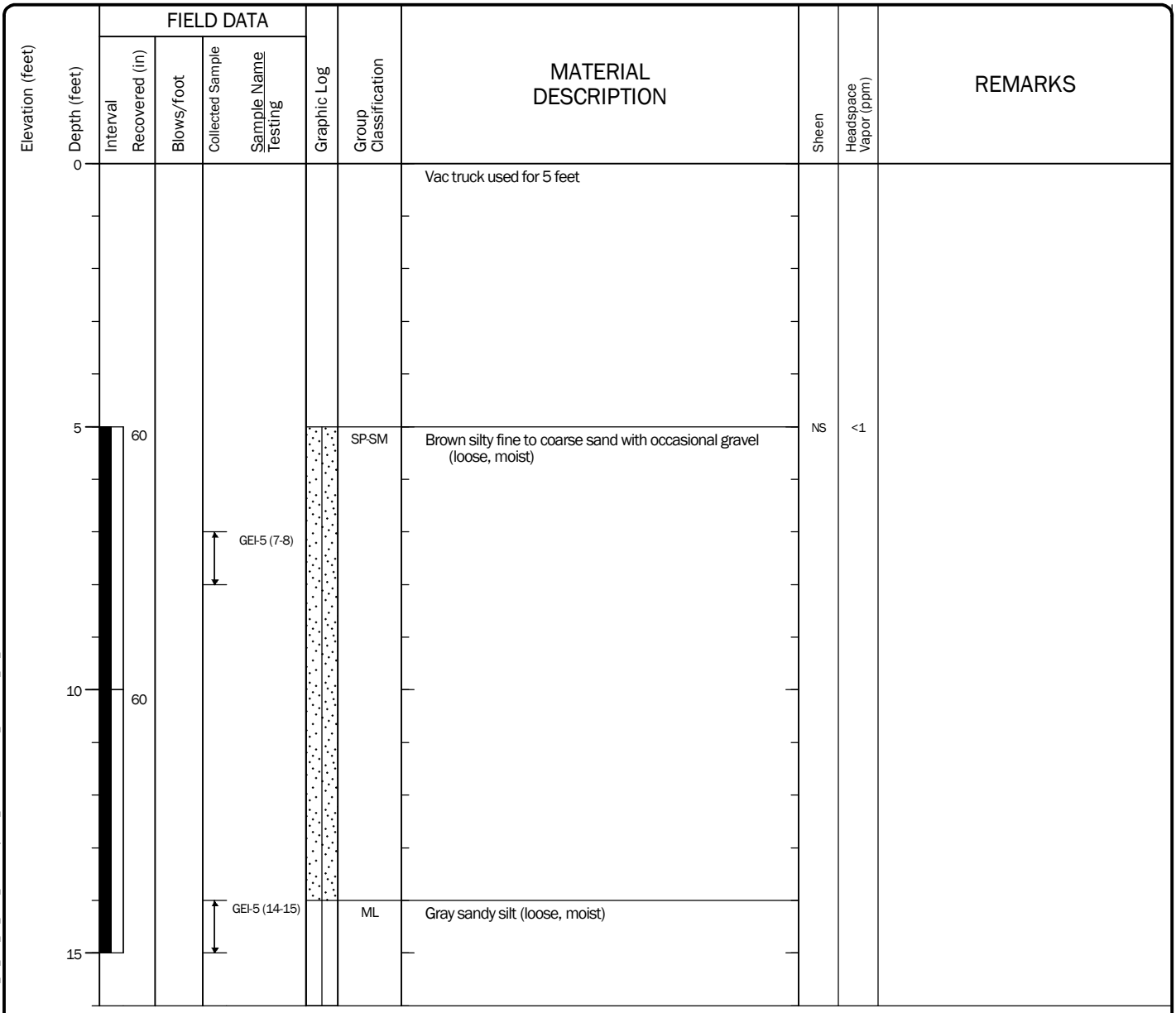
Figure A-5
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 10/26/2021	End 10/26/2021	Total Depth (ft)	16	Logged By	DC	Driller	Holocene Drilling, Inc.	Drilling Method	Direct-push
Checked By					CJW					

Surface Elevation (ft) Vertical Datum	Undetermined	Hammer Data		Drilling Equipment	Geoprobe 7822T
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-5

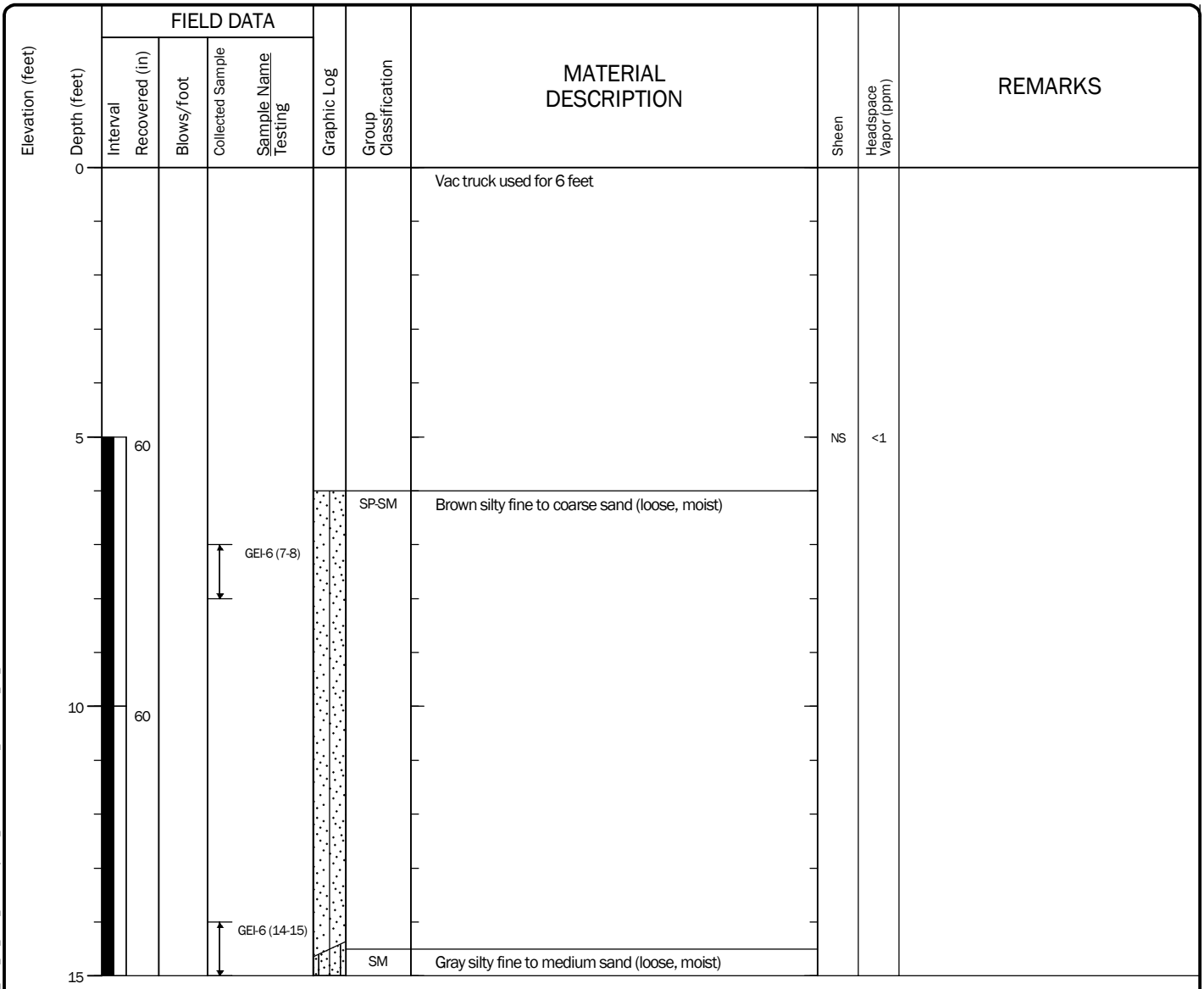
GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-6
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 10/26/2021 End 10/26/2021	Total Depth (ft) 15	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data		Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-6

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-7
Sheet 1 of 1

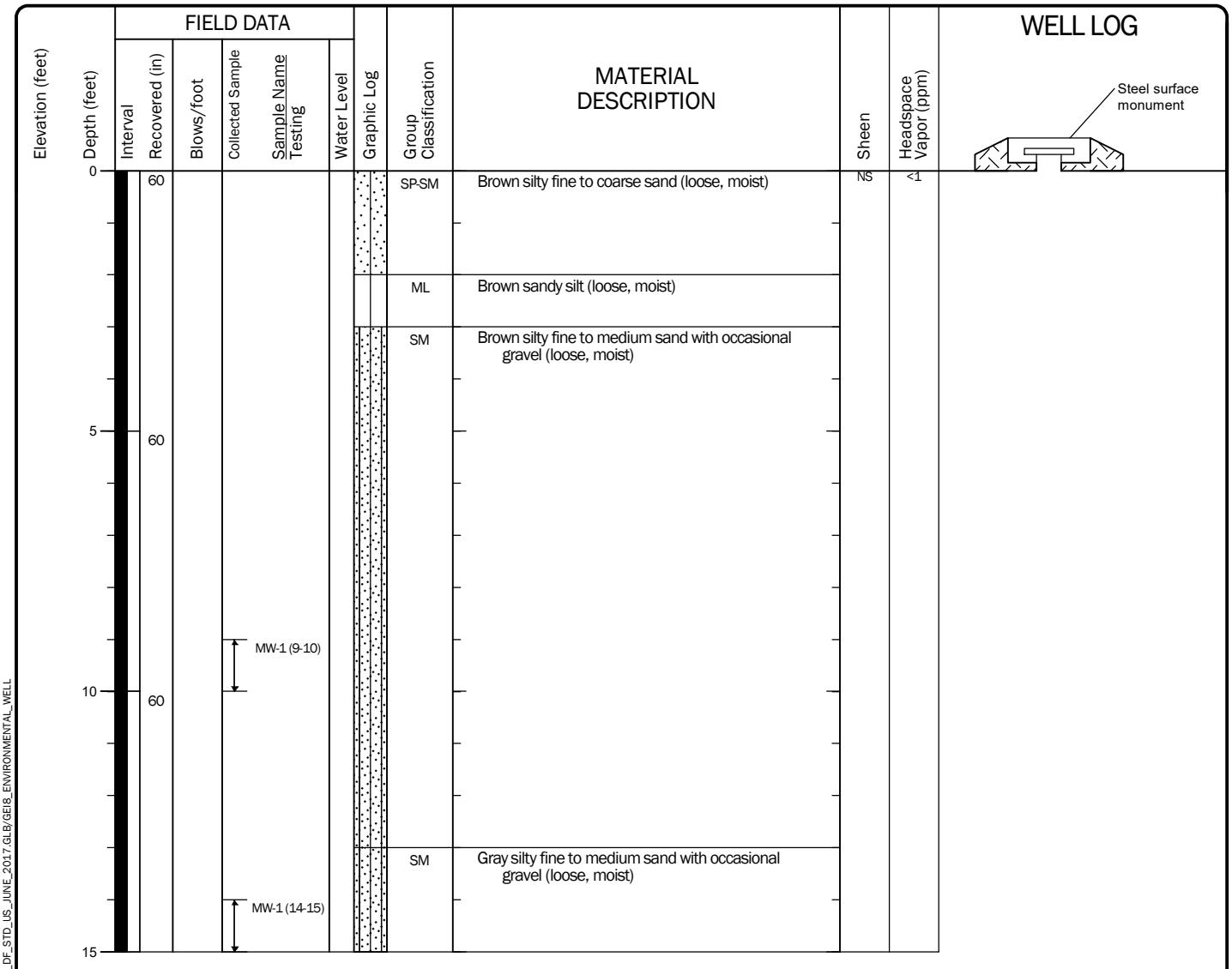
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Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 15	Logged By DC / Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push
Hammer Data		Drilling Equipment Geoprobe 7822T		
Surface Elevation (ft) Vertical Datum Undetermined		Top of Casing Elevation (ft)		
Easting (X) Northing (Y)		Horizontal Datum		

A 2-in well was installed on 10/25/2021 to a depth of 15 ft.

Groundwater: Date Measured | Depth to Water (ft) | Elevation (ft)

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring MW-1

GeoEngineers

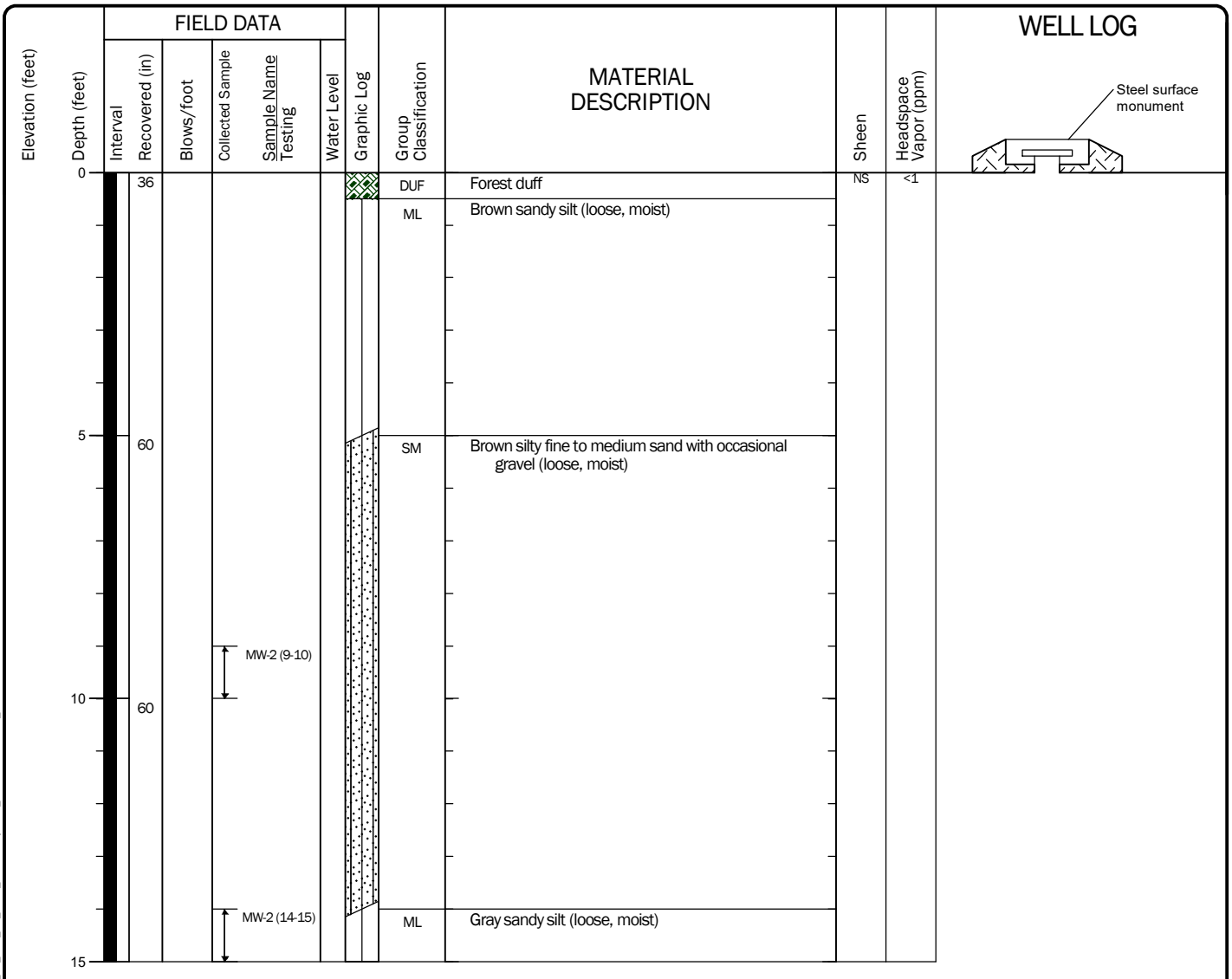
Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-8
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 15	Logged By DC / Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push
Hammer Data		Drilling Equipment Geoprobe 7822T		A 2-in well was installed on 10/26/2021 to a depth of 15 ft.
Surface Elevation (ft) Vertical Datum Undetermined		Top of Casing Elevation (ft)		Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)
Easting (X) Northing (Y)		Horizontal Datum		

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring MW-2

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-9
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393GPJ DBLibrary\Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled	Start 10/26/2021	End 10/26/2021	Total Depth (ft)	16	Logged By	DC	Checked By	CJW	Driller	Holocene Drilling, Inc.	Drilling Method	Direct-push

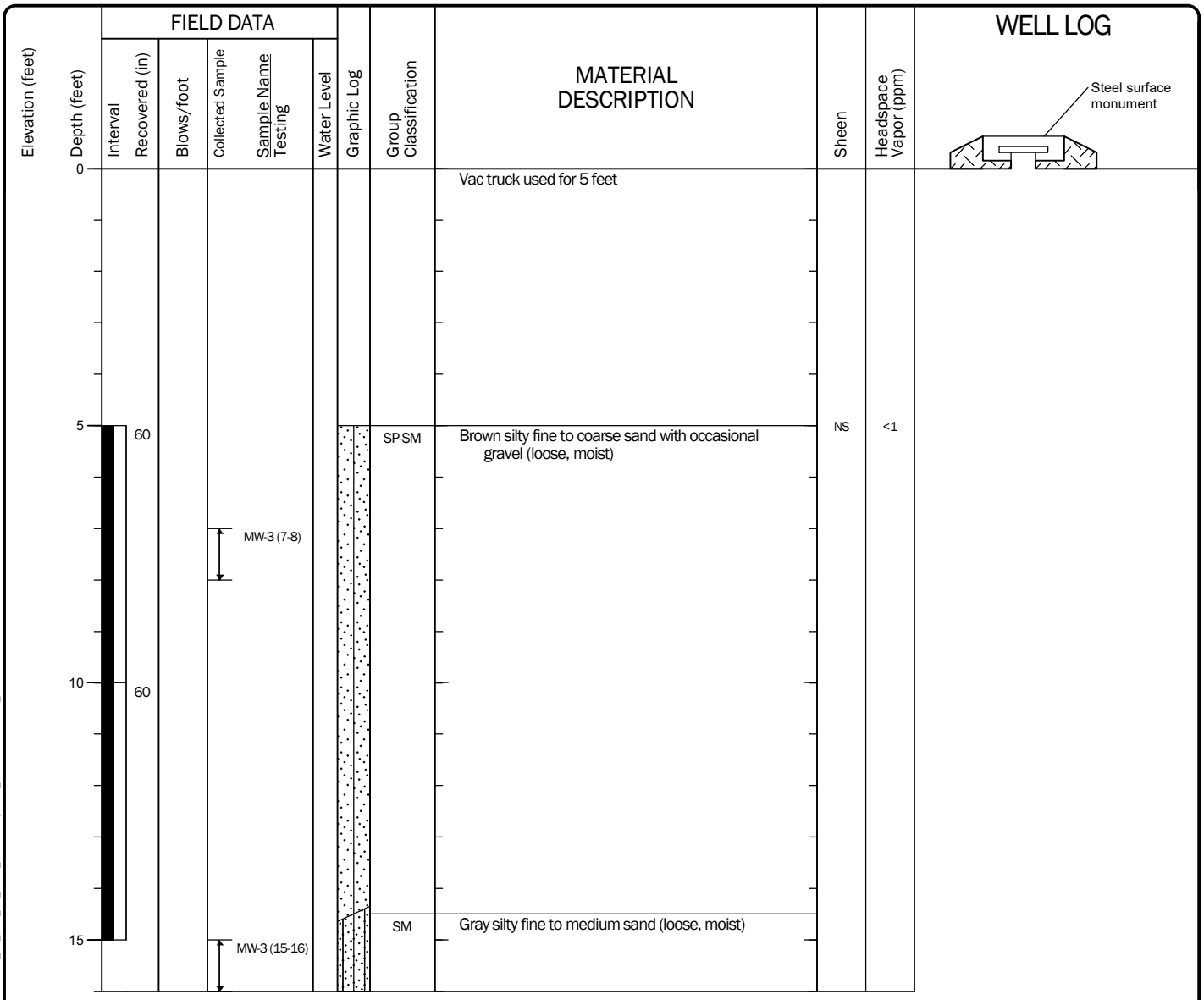
Hammer Data		Drilling Equipment	Geoprobe 7822T
Surface Elevation (ft) Vertical Datum	Undetermined	Top of Casing Elevation (ft)	
Easting (X) Northing (Y)		Horizontal Datum	

A 2-in well was installed on 10/26/2021 to a depth of 16 ft.

Groundwater

Date Measured	Depth to Water (ft)	Elevation (ft)

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring MW-3

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-10
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

APPENDIX B
Chemical Analytical Program

APPENDIX B
CHEMICAL ANALYTICAL PROGRAM

Analytical Methods

Chain-of-custody procedures were followed during the transport of the field 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

Quality controls were within required limits including duplicates. The data is of acceptable quality for their intended use.

ANALYTICAL REPORT

November 09, 2021

GeoEngineers- Portland, OR

Sample Delivery Group:	L1423266
Samples Received:	10/27/2021
Project Number:	0180-393-00
Description:	WSDOT-A-1 Towing

Report To:

Cris Watkins
4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego, OR 97035

Entire Report Reviewed By:

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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GEI-1-9-10 L1423266-01 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 11:20 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:04	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:25	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765532	25	10/25/21 11:20	10/29/21 11:17	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 11:20	10/31/21 03:56	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:15	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:00	AAT	Mt. Juliet, TN

GEI-2-9-10 L1423266-03 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 11:40 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:07	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:28	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765532	25	10/25/21 11:40	10/29/21 11:38	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 11:40	10/31/21 04:15	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:11	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:18	AAT	Mt. Juliet, TN

GEI-3-9-10 L1423266-05 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 13:45 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:09	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:32	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765532	25	10/25/21 13:45	10/29/21 12:00	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 13:45	10/31/21 04:34	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:24	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:35	AAT	Mt. Juliet, TN

MW-2-9-10 L1423266-11 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 14:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:12	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:35	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/25/21 14:00	10/29/21 04:21	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 14:00	10/31/21 04:53	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:36	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:52	AAT	Mt. Juliet, TN

GEI-4-2-3 L1423266-13 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:15	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:39	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 10:00	10/29/21 04:43	MGF	Mt. Juliet, TN

GEI-4-2-3 L1423266-13 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 10:00	10/31/21 05:12	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	5	11/02/21 03:07	11/03/21 15:22	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 16:11	AAT	Mt. Juliet, TN

MW-1-2-3 L1423266-14 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:20 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:22	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:42	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 10:20	10/29/21 05:05	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 10:20	10/31/21 05:31	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:49	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 14:27	AAT	Mt. Juliet, TN

GEI-5-7-8 L1423266-15 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:40 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:25	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:46	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 10:40	10/29/21 05:27	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 10:40	10/31/21 05:49	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:02	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 14:44	AAT	Mt. Juliet, TN

MW-3-2-3 L1423266-17 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 11:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:27	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:49	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 11:00	10/29/21 05:49	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 11:00	10/31/21 06:08	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:54	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 15:02	AAT	Mt. Juliet, TN

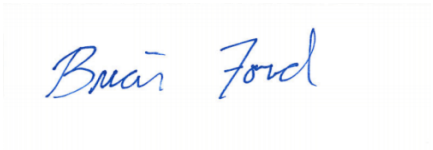
GEI-6-7-8 L1423266-20 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 12:05 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:30	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:52	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 12:05	10/29/21 06:11	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 12:05	10/31/21 06:27	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:41	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 15:19	AAT	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.8		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0436	1	11/02/2021 15:04	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.26		1.09	5	11/03/2021 18:25	WG1765966
Barium	41.9		2.72	5	11/03/2021 18:25	WG1765966
Cadmium	ND		1.09	5	11/03/2021 18:25	WG1765966
Chromium	23.4		5.45	5	11/03/2021 18:25	WG1765966
Lead	ND		2.18	5	11/03/2021 18:25	WG1765966
Selenium	ND		2.72	5	11/03/2021 18:25	WG1765966
Silver	ND		0.545	5	11/03/2021 18:25	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.01	25	10/29/2021 11:17	WG1765532
(S) a,a,a-Trifluorotoluene(FID)	*119*		*77.0-120*		*10/29/2021 11:17*	WG1765532

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0607	1	10/31/2021 03:56	WG1766323
Acrylonitrile	ND	C3	0.0152	1	10/31/2021 03:56	WG1766323
Benzene	ND		0.00121	1	10/31/2021 03:56	WG1766323
Bromobenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
Bromodichloromethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Bromoform	ND		0.0303	1	10/31/2021 03:56	WG1766323
Bromomethane	ND		0.0152	1	10/31/2021 03:56	WG1766323
n-Butylbenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
sec-Butylbenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
tert-Butylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Carbon tetrachloride	ND		0.00607	1	10/31/2021 03:56	WG1766323
Chlorobenzene	ND		0.00303	1	10/31/2021 03:56	WG1766323
Chlorodibromomethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Chloroethane	ND		0.00607	1	10/31/2021 03:56	WG1766323
Chloroform	ND		0.00303	1	10/31/2021 03:56	WG1766323
Chloromethane	ND		0.0152	1	10/31/2021 03:56	WG1766323
2-Chlorotoluene	ND		0.00303	1	10/31/2021 03:56	WG1766323
4-Chlorotoluene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0303	1	10/31/2021 03:56	WG1766323
1,2-Dibromoethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Dibromomethane	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2-Dichlorobenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,3-Dichlorobenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,4-Dichlorobenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Dichlorodifluoromethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1-Dichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,2-Dichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00303	1	10/31/2021 03:56	WG1766323
cis-1,2-Dichloroethene	ND		0.00303	1	10/31/2021 03:56	WG1766323
trans-1,2-Dichloroethene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2-Dichloropropane	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,1-Dichloropropene	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,3-Dichloropropane	ND		0.00607	1	10/31/2021 03:56	WG1766323
cis-1,3-Dichloropropene	ND		0.00303	1	10/31/2021 03:56	WG1766323
trans-1,3-Dichloropropene	ND		0.00607	1	10/31/2021 03:56	WG1766323
2,2-Dichloropropane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Di-isopropyl ether	ND		0.00121	1	10/31/2021 03:56	WG1766323
Ethylbenzene	ND		0.00303	1	10/31/2021 03:56	WG1766323
Hexachloro-1,3-butadiene	ND		0.0303	1	10/31/2021 03:56	WG1766323
Isopropylbenzene	ND		0.00303	1	10/31/2021 03:56	WG1766323
p-Isopropyltoluene	ND		0.00607	1	10/31/2021 03:56	WG1766323
2-Butanone (MEK)	ND		0.121	1	10/31/2021 03:56	WG1766323
Methylene Chloride	ND		0.0303	1	10/31/2021 03:56	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0303	1	10/31/2021 03:56	WG1766323
Methyl tert-butyl ether	ND		0.00121	1	10/31/2021 03:56	WG1766323
Naphthalene	ND		0.0152	1	10/31/2021 03:56	WG1766323
n-Propylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Styrene	ND		0.0152	1	10/31/2021 03:56	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Tetrachloroethene	ND		0.00303	1	10/31/2021 03:56	WG1766323
Toluene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0152	1	10/31/2021 03:56	WG1766323
1,2,4-Trichlorobenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
1,1,1-Trichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1,2-Trichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Trichloroethene	ND		0.00121	1	10/31/2021 03:56	WG1766323
Trichlorofluoromethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,2,3-Trichloropropane	ND		0.0152	1	10/31/2021 03:56	WG1766323
1,2,4-Trimethylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2,3-Trimethylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,3,5-Trimethylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Vinyl chloride	ND		0.00303	1	10/31/2021 03:56	WG1766323
Xylenes, Total	ND		0.00789	1	10/31/2021 03:56	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 03:56*	WG1766323
(S) 4-Bromofluorobenzene	*99.6*		*67.0-138*		*10/31/2021 03:56*	WG1766323
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*10/31/2021 03:56*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.36	1	11/03/2021 07:15	WG1766948
Residual Range Organics (RRO)	ND		10.9	1	11/03/2021 07:15	WG1766948
(S) o-Terphenyl	*53.8*		*18.0-148*		*11/03/2021 07:15*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Acenaphthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Acenaphthylene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(a)anthracene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(a)pyrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(b)fluoranthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(g,h,i)perylene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(k)fluoranthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Chrysene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Dibenz(a,h)anthracene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Fluoranthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Fluorene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Naphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
Phenanthrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Pyrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
1-Methylnaphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
2-Methylnaphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
2-Chloronaphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
(S) Nitrobenzene-d5	*85.9*		*14.0-149*		*10/30/2021 13:00*	WG1765811
(S) 2-Fluorobiphenyl	*70.0*		*34.0-125*		*10/30/2021 13:00*	WG1765811
(S) p-Terphenyl-d14	*110*		*23.0-120*		*10/30/2021 13:00*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0434	1	11/02/2021 15:07	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.36		1.08	5	11/03/2021 18:28	WG1765966
Barium	45.2		2.71	5	11/03/2021 18:28	WG1765966
Cadmium	ND		1.08	5	11/03/2021 18:28	WG1765966
Chromium	21.5		5.42	5	11/03/2021 18:28	WG1765966
Lead	ND		2.17	5	11/03/2021 18:28	WG1765966
Selenium	ND		2.71	5	11/03/2021 18:28	WG1765966
Silver	ND		0.542	5	11/03/2021 18:28	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		2.99	25	10/29/2021 11:38	WG1765532
(S) a,a,a-Trifluorotoluene(FID)	*119*		*77.0-120*		*10/29/2021 11:38*	WG1765532

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0594	1	10/31/2021 04:15	WG1766323
Acrylonitrile	ND	C3	0.0148	1	10/31/2021 04:15	WG1766323
Benzene	ND		0.00119	1	10/31/2021 04:15	WG1766323
Bromobenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
Bromodichloromethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Bromoform	ND		0.0297	1	10/31/2021 04:15	WG1766323
Bromomethane	ND		0.0148	1	10/31/2021 04:15	WG1766323
n-Butylbenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
sec-Butylbenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
tert-Butylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Carbon tetrachloride	ND		0.00594	1	10/31/2021 04:15	WG1766323
Chlorobenzene	ND		0.00297	1	10/31/2021 04:15	WG1766323
Chlorodibromomethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Chloroethane	ND		0.00594	1	10/31/2021 04:15	WG1766323
Chloroform	ND		0.00297	1	10/31/2021 04:15	WG1766323
Chloromethane	ND		0.0148	1	10/31/2021 04:15	WG1766323
2-Chlorotoluene	ND		0.00297	1	10/31/2021 04:15	WG1766323
4-Chlorotoluene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0297	1	10/31/2021 04:15	WG1766323
1,2-Dibromoethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Dibromomethane	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2-Dichlorobenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,3-Dichlorobenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,4-Dichlorobenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Dichlorodifluoromethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1-Dichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,2-Dichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00297	1	10/31/2021 04:15	WG1766323
cis-1,2-Dichloroethene	ND		0.00297	1	10/31/2021 04:15	WG1766323
trans-1,2-Dichloroethene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2-Dichloropropane	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,1-Dichloropropene	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,3-Dichloropropane	ND		0.00594	1	10/31/2021 04:15	WG1766323
cis-1,3-Dichloropropene	ND		0.00297	1	10/31/2021 04:15	WG1766323
trans-1,3-Dichloropropene	ND		0.00594	1	10/31/2021 04:15	WG1766323
2,2-Dichloropropane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Di-isopropyl ether	ND		0.00119	1	10/31/2021 04:15	WG1766323
Ethylbenzene	ND		0.00297	1	10/31/2021 04:15	WG1766323
Hexachloro-1,3-butadiene	ND		0.0297	1	10/31/2021 04:15	WG1766323
Isopropylbenzene	ND		0.00297	1	10/31/2021 04:15	WG1766323
p-Isopropyltoluene	ND		0.00594	1	10/31/2021 04:15	WG1766323
2-Butanone (MEK)	ND		0.119	1	10/31/2021 04:15	WG1766323
Methylene Chloride	ND		0.0297	1	10/31/2021 04:15	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0297	1	10/31/2021 04:15	WG1766323
Methyl tert-butyl ether	ND		0.00119	1	10/31/2021 04:15	WG1766323
Naphthalene	ND		0.0148	1	10/31/2021 04:15	WG1766323
n-Propylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Styrene	ND		0.0148	1	10/31/2021 04:15	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Tetrachloroethene	ND		0.00297	1	10/31/2021 04:15	WG1766323
Toluene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0148	1	10/31/2021 04:15	WG1766323
1,2,4-Trichlorobenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
1,1,1-Trichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1,2-Trichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Trichloroethene	ND		0.00119	1	10/31/2021 04:15	WG1766323
Trichlorofluoromethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,2,3-Trichloropropane	ND		0.0148	1	10/31/2021 04:15	WG1766323
1,2,4-Trimethylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2,3-Trimethylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,3,5-Trimethylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Vinyl chloride	ND		0.00297	1	10/31/2021 04:15	WG1766323
Xylenes, Total	ND		0.00772	1	10/31/2021 04:15	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 04:15*	WG1766323
(S) 4-Bromofluorobenzene	*96.9*		*67.0-138*		*10/31/2021 04:15*	WG1766323
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*10/31/2021 04:15*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.34	1	11/03/2021 06:11	WG1766948
Residual Range Organics (RRO)	ND		10.8	1	11/03/2021 06:11	WG1766948
(S) o-Terphenyl	*37.8*		*18.0-148*		*11/03/2021 06:11*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Acenaphthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Acenaphthylene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(a)anthracene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(a)pyrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(b)fluoranthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(g,h,i)perylene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(k)fluoranthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Chrysene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Dibenz(a,h)anthracene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Fluoranthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Fluorene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Naphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
Phenanthrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Pyrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
1-Methylnaphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
2-Methylnaphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
2-Chloronaphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
(S) Nitrobenzene-d5	*98.0*		*14.0-149*		*10/30/2021 13:18*	WG1765811
(S) 2-Fluorobiphenyl	*77.9*		*34.0-125*		*10/30/2021 13:18*	WG1765811
(S) p-Terphenyl-d14	*96.1*		*23.0-120*		*10/30/2021 13:18*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.0		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0450	1	11/02/2021 15:09	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.93		1.12	5	11/03/2021 18:32	WG1765966
Barium	25.3		2.81	5	11/03/2021 18:32	WG1765966
Cadmium	ND		1.12	5	11/03/2021 18:32	WG1765966
Chromium	11.8		5.62	5	11/03/2021 18:32	WG1765966
Lead	ND		2.25	5	11/03/2021 18:32	WG1765966
Selenium	ND		2.81	5	11/03/2021 18:32	WG1765966
Silver	ND		0.562	5	11/03/2021 18:32	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.23	25	10/29/2021 12:00	WG1765532
(S) a,a,a-Trifluorotoluene(FID)	*119*		*77.0-120*		*10/29/2021 12:00*	WG1765532

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0646	1	10/31/2021 04:34	WG1766323
Acrylonitrile	ND	C3	0.0161	1	10/31/2021 04:34	WG1766323
Benzene	ND		0.00129	1	10/31/2021 04:34	WG1766323
Bromobenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
Bromodichloromethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Bromoform	ND		0.0323	1	10/31/2021 04:34	WG1766323
Bromomethane	ND		0.0161	1	10/31/2021 04:34	WG1766323
n-Butylbenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
sec-Butylbenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
tert-Butylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Carbon tetrachloride	ND		0.00646	1	10/31/2021 04:34	WG1766323
Chlorobenzene	ND		0.00323	1	10/31/2021 04:34	WG1766323
Chlorodibromomethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Chloroethane	ND		0.00646	1	10/31/2021 04:34	WG1766323
Chloroform	ND		0.00323	1	10/31/2021 04:34	WG1766323
Chloromethane	ND		0.0161	1	10/31/2021 04:34	WG1766323
2-Chlorotoluene	ND		0.00323	1	10/31/2021 04:34	WG1766323
4-Chlorotoluene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0323	1	10/31/2021 04:34	WG1766323
1,2-Dibromoethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Dibromomethane	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2-Dichlorobenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,3-Dichlorobenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,4-Dichlorobenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Dichlorodifluoromethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1-Dichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,2-Dichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00323	1	10/31/2021 04:34	WG1766323
cis-1,2-Dichloroethene	ND		0.00323	1	10/31/2021 04:34	WG1766323
trans-1,2-Dichloroethene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2-Dichloropropane	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,1-Dichloropropene	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,3-Dichloropropane	ND		0.00646	1	10/31/2021 04:34	WG1766323
cis-1,3-Dichloropropene	ND		0.00323	1	10/31/2021 04:34	WG1766323
trans-1,3-Dichloropropene	ND		0.00646	1	10/31/2021 04:34	WG1766323
2,2-Dichloropropane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Di-isopropyl ether	ND		0.00129	1	10/31/2021 04:34	WG1766323
Ethylbenzene	ND		0.00323	1	10/31/2021 04:34	WG1766323
Hexachloro-1,3-butadiene	ND		0.0323	1	10/31/2021 04:34	WG1766323
Isopropylbenzene	ND		0.00323	1	10/31/2021 04:34	WG1766323
p-Isopropyltoluene	ND		0.00646	1	10/31/2021 04:34	WG1766323
2-Butanone (MEK)	ND		0.129	1	10/31/2021 04:34	WG1766323
Methylene Chloride	ND		0.0323	1	10/31/2021 04:34	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0323	1	10/31/2021 04:34	WG1766323
Methyl tert-butyl ether	ND		0.00129	1	10/31/2021 04:34	WG1766323
Naphthalene	ND		0.0161	1	10/31/2021 04:34	WG1766323
n-Propylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Styrene	ND		0.0161	1	10/31/2021 04:34	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Tetrachloroethene	ND		0.00323	1	10/31/2021 04:34	WG1766323
Toluene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0161	1	10/31/2021 04:34	WG1766323
1,2,4-Trichlorobenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
1,1,1-Trichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1,2-Trichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Trichloroethene	ND		0.00129	1	10/31/2021 04:34	WG1766323
Trichlorofluoromethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,2,3-Trichloropropane	ND		0.0161	1	10/31/2021 04:34	WG1766323
1,2,4-Trimethylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2,3-Trimethylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,3,5-Trimethylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Vinyl chloride	ND		0.00323	1	10/31/2021 04:34	WG1766323
Xylenes, Total	ND		0.00839	1	10/31/2021 04:34	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 04:34*	WG1766323
(S) 4-Bromofluorobenzene	*99.4*		*67.0-138*		*10/31/2021 04:34*	WG1766323
(S) 1,2-Dichloroethane-d4	*99.4*		*70.0-130*		*10/31/2021 04:34*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.50	1	11/03/2021 06:24	WG1766948
Residual Range Organics (RRO)	ND		11.2	1	11/03/2021 06:24	WG1766948
(S) o-Terphenyl	*45.3*		*18.0-148*		*11/03/2021 06:24*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Acenaphthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Acenaphthylene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(a)anthracene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(a)pyrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(b)fluoranthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(g,h,i)perylene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(k)fluoranthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Chrysene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Dibenz(a,h)anthracene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Fluoranthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Fluorene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Naphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
Phenanthrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Pyrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
1-Methylnaphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
2-Methylnaphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
2-Chloronaphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
(S) Nitrobenzene-d5	*93.3*		*14.0-149*		*10/30/2021 13:35*	WG1765811
(S) 2-Fluorobiphenyl	*75.9*		*34.0-125*		*10/30/2021 13:35*	WG1765811
(S) p-Terphenyl-d14	*96.6*		*23.0-120*		*10/30/2021 13:35*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.2		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0443	1	11/02/2021 15:12	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.17		1.11	5	11/03/2021 18:35	WG1765966
Barium	44.9		2.77	5	11/03/2021 18:35	WG1765966
Cadmium	ND		1.11	5	11/03/2021 18:35	WG1765966
Chromium	24.4		5.54	5	11/03/2021 18:35	WG1765966
Lead	ND		2.22	5	11/03/2021 18:35	WG1765966
Selenium	ND		2.77	5	11/03/2021 18:35	WG1765966
Silver	ND		0.554	5	11/03/2021 18:35	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.08	25	10/29/2021 04:21	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*91.8*		*77.0-120*		*10/29/2021 04:21*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0616	1	10/31/2021 04:53	WG1766323
Acrylonitrile	ND	C3	0.0154	1	10/31/2021 04:53	WG1766323
Benzene	ND		0.00123	1	10/31/2021 04:53	WG1766323
Bromobenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
Bromodichloromethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Bromoform	ND		0.0308	1	10/31/2021 04:53	WG1766323
Bromomethane	ND		0.0154	1	10/31/2021 04:53	WG1766323
n-Butylbenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
sec-Butylbenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
tert-Butylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Carbon tetrachloride	ND		0.00616	1	10/31/2021 04:53	WG1766323
Chlorobenzene	ND		0.00308	1	10/31/2021 04:53	WG1766323
Chlorodibromomethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Chloroethane	ND		0.00616	1	10/31/2021 04:53	WG1766323
Chloroform	ND		0.00308	1	10/31/2021 04:53	WG1766323
Chloromethane	ND		0.0154	1	10/31/2021 04:53	WG1766323
2-Chlorotoluene	ND		0.00308	1	10/31/2021 04:53	WG1766323
4-Chlorotoluene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0308	1	10/31/2021 04:53	WG1766323
1,2-Dibromoethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Dibromomethane	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2-Dichlorobenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,3-Dichlorobenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,4-Dichlorobenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Dichlorodifluoromethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1-Dichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,2-Dichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00308	1	10/31/2021 04:53	WG1766323
cis-1,2-Dichloroethene	ND		0.00308	1	10/31/2021 04:53	WG1766323
trans-1,2-Dichloroethene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2-Dichloropropane	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,1-Dichloropropene	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,3-Dichloropropane	ND		0.00616	1	10/31/2021 04:53	WG1766323
cis-1,3-Dichloropropene	ND		0.00308	1	10/31/2021 04:53	WG1766323
trans-1,3-Dichloropropene	ND		0.00616	1	10/31/2021 04:53	WG1766323
2,2-Dichloropropane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Di-isopropyl ether	ND		0.00123	1	10/31/2021 04:53	WG1766323
Ethylbenzene	ND		0.00308	1	10/31/2021 04:53	WG1766323
Hexachloro-1,3-butadiene	ND		0.0308	1	10/31/2021 04:53	WG1766323
Isopropylbenzene	ND		0.00308	1	10/31/2021 04:53	WG1766323
p-Isopropyltoluene	ND		0.00616	1	10/31/2021 04:53	WG1766323
2-Butanone (MEK)	ND		0.123	1	10/31/2021 04:53	WG1766323
Methylene Chloride	ND		0.0308	1	10/31/2021 04:53	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0308	1	10/31/2021 04:53	WG1766323
Methyl tert-butyl ether	ND		0.00123	1	10/31/2021 04:53	WG1766323
Naphthalene	ND		0.0154	1	10/31/2021 04:53	WG1766323
n-Propylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Styrene	ND		0.0154	1	10/31/2021 04:53	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Tetrachloroethene	ND		0.00308	1	10/31/2021 04:53	WG1766323
Toluene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0154	1	10/31/2021 04:53	WG1766323
1,2,4-Trichlorobenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
1,1,1-Trichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1,2-Trichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Trichloroethene	ND		0.00123	1	10/31/2021 04:53	WG1766323
Trichlorofluoromethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,2,3-Trichloropropane	ND		0.0154	1	10/31/2021 04:53	WG1766323
1,2,4-Trimethylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2,3-Trimethylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,3,5-Trimethylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Vinyl chloride	ND		0.00308	1	10/31/2021 04:53	WG1766323
Xylenes, Total	ND		0.00801	1	10/31/2021 04:53	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 04:53*	WG1766323
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*10/31/2021 04:53*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 04:53*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.43	1	11/03/2021 06:36	WG1766948
Residual Range Organics (RRO)	ND		11.1	1	11/03/2021 06:36	WG1766948
(S) o-Terphenyl	*45.8*		*18.0-148*		*11/03/2021 06:36*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Acenaphthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Acenaphthylene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(a)anthracene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(a)pyrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(b)fluoranthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(g,h,i)perylene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(k)fluoranthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Chrysene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Dibenz(a,h)anthracene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Fluoranthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Fluorene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Naphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
Phenanthrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Pyrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
1-Methylnaphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
2-Methylnaphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
2-Chloronaphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
(S) Nitrobenzene-d5	*94.9*		*14.0-149*		*10/30/2021 13:52*	WG1765811
(S) 2-Fluorobiphenyl	*81.7*		*34.0-125*		*10/30/2021 13:52*	WG1765811
(S) p-Terphenyl-d14	*95.1*		*23.0-120*		*10/30/2021 13:52*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.6		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0731		0.0437	1	11/02/2021 15:15	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	6.28		1.09	5	11/03/2021 18:39	WG1765966
Barium	72.2		2.73	5	11/03/2021 18:39	WG1765966
Cadmium	ND		1.09	5	11/03/2021 18:39	WG1765966
Chromium	33.9		5.46	5	11/03/2021 18:39	WG1765966
Lead	27.6		2.18	5	11/03/2021 18:39	WG1765966
Selenium	ND		2.73	5	11/03/2021 18:39	WG1765966
Silver	ND		0.546	5	11/03/2021 18:39	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		2.97	25	10/29/2021 04:43	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.7*		*77.0-120*		*10/29/2021 04:43*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0594	1	10/31/2021 05:12	WG1766323
Acrylonitrile	ND	C3	0.0148	1	10/31/2021 05:12	WG1766323
Benzene	ND		0.00119	1	10/31/2021 05:12	WG1766323
Bromobenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
Bromodichloromethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Bromoform	ND		0.0297	1	10/31/2021 05:12	WG1766323
Bromomethane	ND		0.0148	1	10/31/2021 05:12	WG1766323
n-Butylbenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
sec-Butylbenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
tert-Butylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Carbon tetrachloride	ND		0.00594	1	10/31/2021 05:12	WG1766323
Chlorobenzene	ND		0.00297	1	10/31/2021 05:12	WG1766323
Chlorodibromomethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Chloroethane	ND		0.00594	1	10/31/2021 05:12	WG1766323
Chloroform	ND		0.00297	1	10/31/2021 05:12	WG1766323
Chloromethane	ND		0.0148	1	10/31/2021 05:12	WG1766323
2-Chlorotoluene	ND		0.00297	1	10/31/2021 05:12	WG1766323
4-Chlorotoluene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0297	1	10/31/2021 05:12	WG1766323
1,2-Dibromoethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Dibromomethane	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2-Dichlorobenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,3-Dichlorobenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,4-Dichlorobenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Dichlorodifluoromethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1-Dichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,2-Dichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00297	1	10/31/2021 05:12	WG1766323
cis-1,2-Dichloroethene	ND		0.00297	1	10/31/2021 05:12	WG1766323
trans-1,2-Dichloroethene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2-Dichloropropane	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,1-Dichloropropene	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,3-Dichloropropane	ND		0.00594	1	10/31/2021 05:12	WG1766323
cis-1,3-Dichloropropene	ND		0.00297	1	10/31/2021 05:12	WG1766323
trans-1,3-Dichloropropene	ND		0.00594	1	10/31/2021 05:12	WG1766323
2,2-Dichloropropane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Di-isopropyl ether	ND		0.00119	1	10/31/2021 05:12	WG1766323
Ethylbenzene	ND		0.00297	1	10/31/2021 05:12	WG1766323
Hexachloro-1,3-butadiene	ND		0.0297	1	10/31/2021 05:12	WG1766323
Isopropylbenzene	ND		0.00297	1	10/31/2021 05:12	WG1766323
p-Isopropyltoluene	ND		0.00594	1	10/31/2021 05:12	WG1766323
2-Butanone (MEK)	ND		0.119	1	10/31/2021 05:12	WG1766323
Methylene Chloride	ND		0.0297	1	10/31/2021 05:12	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0297	1	10/31/2021 05:12	WG1766323
Methyl tert-butyl ether	ND		0.00119	1	10/31/2021 05:12	WG1766323
Naphthalene	ND		0.0148	1	10/31/2021 05:12	WG1766323
n-Propylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Styrene	ND		0.0148	1	10/31/2021 05:12	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Tetrachloroethene	ND		0.00297	1	10/31/2021 05:12	WG1766323
Toluene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0148	1	10/31/2021 05:12	WG1766323
1,2,4-Trichlorobenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
1,1,1-Trichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1,2-Trichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Trichloroethene	ND		0.00119	1	10/31/2021 05:12	WG1766323
Trichlorofluoromethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,2,3-Trichloropropane	ND		0.0148	1	10/31/2021 05:12	WG1766323
1,2,4-Trimethylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2,3-Trimethylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,3,5-Trimethylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Vinyl chloride	ND		0.00297	1	10/31/2021 05:12	WG1766323
Xylenes, Total	ND		0.00772	1	10/31/2021 05:12	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 05:12*	WG1766323
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*10/31/2021 05:12*	WG1766323
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*10/31/2021 05:12*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		21.8	5	11/03/2021 15:22	WG1766948
Residual Range Organics (RRO)	166		54.6	5	11/03/2021 15:22	WG1766948
(S) o-Terphenyl	*60.1*		*18.0-148*		*11/03/2021 15:22*	WG1766948

Sample Narrative:

L1423266-13 WG1766948: Cannot run at lower dilution due to viscosity of extract

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Acenaphthene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Acenaphthylene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(a)anthracene	0.0298		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(a)pyrene	0.0363		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(b)fluoranthene	0.0500		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(g,h,i)perylene	0.0306		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(k)fluoranthene	0.0150		0.00655	1	10/30/2021 16:11	WG1765811
Chrysene	0.0354		0.00655	1	10/30/2021 16:11	WG1765811
Dibenz(a,h)anthracene	0.00660		0.00655	1	10/30/2021 16:11	WG1765811
Fluoranthene	0.0622		0.00655	1	10/30/2021 16:11	WG1765811
Fluorene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Indeno(1,2,3-cd)pyrene	0.0325		0.00655	1	10/30/2021 16:11	WG1765811
Naphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
Phenanthrene	0.0244		0.00655	1	10/30/2021 16:11	WG1765811
Pyrene	0.0474		0.00655	1	10/30/2021 16:11	WG1765811
1-Methylnaphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
2-Methylnaphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
2-Chloronaphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
(S) Nitrobenzene-d5	*113*		*14.0-149*		*10/30/2021 16:11*	WG1765811
(S) 2-Fluorobiphenyl	*81.7*		*34.0-125*		*10/30/2021 16:11*	WG1765811
(S) p-Terphenyl-d14	*99.3*		*23.0-120*		*10/30/2021 16:11*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.4		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0469	1	11/02/2021 15:22	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.70		1.17	5	11/03/2021 18:42	WG1765966
Barium	61.0		2.93	5	11/03/2021 18:42	WG1765966
Cadmium	ND		1.17	5	11/03/2021 18:42	WG1765966
Chromium	26.7		5.86	5	11/03/2021 18:42	WG1765966
Lead	ND		2.34	5	11/03/2021 18:42	WG1765966
Selenium	ND		2.93	5	11/03/2021 18:42	WG1765966
Silver	ND		0.586	5	11/03/2021 18:42	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.43	25	10/29/2021 05:05	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*88.3*		*77.0-120*		*10/29/2021 05:05*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0686	1	10/31/2021 05:31	WG1766323
Acrylonitrile	ND	C3	0.0171	1	10/31/2021 05:31	WG1766323
Benzene	ND		0.00137	1	10/31/2021 05:31	WG1766323
Bromobenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
Bromodichloromethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Bromoform	ND		0.0343	1	10/31/2021 05:31	WG1766323
Bromomethane	ND		0.0171	1	10/31/2021 05:31	WG1766323
n-Butylbenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
sec-Butylbenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
tert-Butylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Carbon tetrachloride	ND		0.00686	1	10/31/2021 05:31	WG1766323
Chlorobenzene	ND		0.00343	1	10/31/2021 05:31	WG1766323
Chlorodibromomethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Chloroethane	ND		0.00686	1	10/31/2021 05:31	WG1766323
Chloroform	ND		0.00343	1	10/31/2021 05:31	WG1766323
Chloromethane	ND		0.0171	1	10/31/2021 05:31	WG1766323
2-Chlorotoluene	ND		0.00343	1	10/31/2021 05:31	WG1766323
4-Chlorotoluene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0343	1	10/31/2021 05:31	WG1766323
1,2-Dibromoethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Dibromomethane	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2-Dichlorobenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,3-Dichlorobenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,4-Dichlorobenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Dichlorodifluoromethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1-Dichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,2-Dichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00343	1	10/31/2021 05:31	WG1766323
cis-1,2-Dichloroethene	ND		0.00343	1	10/31/2021 05:31	WG1766323
trans-1,2-Dichloroethene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2-Dichloropropane	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,1-Dichloropropene	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,3-Dichloropropane	ND		0.00686	1	10/31/2021 05:31	WG1766323
cis-1,3-Dichloropropene	ND		0.00343	1	10/31/2021 05:31	WG1766323
trans-1,3-Dichloropropene	ND		0.00686	1	10/31/2021 05:31	WG1766323
2,2-Dichloropropane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Di-isopropyl ether	ND		0.00137	1	10/31/2021 05:31	WG1766323
Ethylbenzene	ND		0.00343	1	10/31/2021 05:31	WG1766323
Hexachloro-1,3-butadiene	ND		0.0343	1	10/31/2021 05:31	WG1766323
Isopropylbenzene	ND		0.00343	1	10/31/2021 05:31	WG1766323
p-Isopropyltoluene	ND		0.00686	1	10/31/2021 05:31	WG1766323
2-Butanone (MEK)	ND		0.137	1	10/31/2021 05:31	WG1766323
Methylene Chloride	ND		0.0343	1	10/31/2021 05:31	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0343	1	10/31/2021 05:31	WG1766323
Methyl tert-butyl ether	ND		0.00137	1	10/31/2021 05:31	WG1766323
Naphthalene	ND		0.0171	1	10/31/2021 05:31	WG1766323
n-Propylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Styrene	ND		0.0171	1	10/31/2021 05:31	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Tetrachloroethene	ND		0.00343	1	10/31/2021 05:31	WG1766323
Toluene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0171	1	10/31/2021 05:31	WG1766323
1,2,4-Trichlorobenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
1,1,1-Trichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1,2-Trichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Trichloroethene	ND		0.00137	1	10/31/2021 05:31	WG1766323
Trichlorofluoromethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,2,3-Trichloropropane	ND		0.0171	1	10/31/2021 05:31	WG1766323
1,2,4-Trimethylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2,3-Trimethylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,3,5-Trimethylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Vinyl chloride	ND		0.00343	1	10/31/2021 05:31	WG1766323
Xylenes, Total	ND		0.00892	1	10/31/2021 05:31	WG1766323
(S) Toluene-d8	*105*		*75.0-131*		*10/31/2021 05:31*	WG1766323
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*10/31/2021 05:31*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 05:31*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.69	1	11/03/2021 06:49	WG1766948
Residual Range Organics (RRO)	ND		11.7	1	11/03/2021 06:49	WG1766948
(S) o-Terphenyl	*32.5*		*18.0-148*		*11/03/2021 06:49*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Acenaphthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Acenaphthylene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(a)anthracene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(a)pyrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(b)fluoranthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(g,h,i)perylene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(k)fluoranthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Chrysene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Dibenz(a,h)anthracene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Fluoranthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Fluorene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Naphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
Phenanthrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Pyrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
1-Methylnaphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
2-Methylnaphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
2-Chloronaphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
(S) Nitrobenzene-d5	*85.6*		*14.0-149*		*10/30/2021 14:27*	WG1765811
(S) 2-Fluorobiphenyl	*75.7*		*34.0-125*		*10/30/2021 14:27*	WG1765811
(S) p-Terphenyl-d14	*89.7*		*23.0-120*		*10/30/2021 14:27*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.7		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0436	1	11/02/2021 15:25	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.58		1.09	5	11/03/2021 18:46	WG1765966
Barium	39.6		2.73	5	11/03/2021 18:46	WG1765966
Cadmium	ND		1.09	5	11/03/2021 18:46	WG1765966
Chromium	21.1		5.45	5	11/03/2021 18:46	WG1765966
Lead	ND		2.18	5	11/03/2021 18:46	WG1765966
Selenium	ND		2.73	5	11/03/2021 18:46	WG1765966
Silver	ND		0.545	5	11/03/2021 18:46	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.02	25	10/29/2021 05:27	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.5*		*77.0-120*		*10/29/2021 05:27*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0604	1	10/31/2021 05:49	WG1766323
Acrylonitrile	ND	C3	0.0151	1	10/31/2021 05:49	WG1766323
Benzene	ND		0.00121	1	10/31/2021 05:49	WG1766323
Bromobenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
Bromodichloromethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Bromoform	ND		0.0302	1	10/31/2021 05:49	WG1766323
Bromomethane	ND		0.0151	1	10/31/2021 05:49	WG1766323
n-Butylbenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
sec-Butylbenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
tert-Butylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Carbon tetrachloride	ND		0.00604	1	10/31/2021 05:49	WG1766323
Chlorobenzene	ND		0.00302	1	10/31/2021 05:49	WG1766323
Chlorodibromomethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Chloroethane	ND		0.00604	1	10/31/2021 05:49	WG1766323
Chloroform	ND		0.00302	1	10/31/2021 05:49	WG1766323
Chloromethane	ND		0.0151	1	10/31/2021 05:49	WG1766323
2-Chlorotoluene	ND		0.00302	1	10/31/2021 05:49	WG1766323
4-Chlorotoluene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0302	1	10/31/2021 05:49	WG1766323
1,2-Dibromoethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Dibromomethane	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2-Dichlorobenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,3-Dichlorobenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,4-Dichlorobenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Dichlorodifluoromethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1-Dichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,2-Dichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00302	1	10/31/2021 05:49	WG1766323
cis-1,2-Dichloroethene	ND		0.00302	1	10/31/2021 05:49	WG1766323
trans-1,2-Dichloroethene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2-Dichloropropane	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,1-Dichloropropene	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,3-Dichloropropane	ND		0.00604	1	10/31/2021 05:49	WG1766323
cis-1,3-Dichloropropene	ND		0.00302	1	10/31/2021 05:49	WG1766323
trans-1,3-Dichloropropene	ND		0.00604	1	10/31/2021 05:49	WG1766323
2,2-Dichloropropane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Di-isopropyl ether	ND		0.00121	1	10/31/2021 05:49	WG1766323
Ethylbenzene	ND		0.00302	1	10/31/2021 05:49	WG1766323
Hexachloro-1,3-butadiene	ND		0.0302	1	10/31/2021 05:49	WG1766323
Isopropylbenzene	ND		0.00302	1	10/31/2021 05:49	WG1766323
p-Isopropyltoluene	ND		0.00604	1	10/31/2021 05:49	WG1766323
2-Butanone (MEK)	ND		0.121	1	10/31/2021 05:49	WG1766323
Methylene Chloride	ND		0.0302	1	10/31/2021 05:49	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0302	1	10/31/2021 05:49	WG1766323
Methyl tert-butyl ether	ND		0.00121	1	10/31/2021 05:49	WG1766323
Naphthalene	ND		0.0151	1	10/31/2021 05:49	WG1766323
n-Propylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Styrene	ND		0.0151	1	10/31/2021 05:49	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Tetrachloroethene	ND		0.00302	1	10/31/2021 05:49	WG1766323
Toluene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0151	1	10/31/2021 05:49	WG1766323
1,2,4-Trichlorobenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
1,1,1-Trichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1,2-Trichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Trichloroethene	ND		0.00121	1	10/31/2021 05:49	WG1766323
Trichlorofluoromethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,2,3-Trichloropropane	ND		0.0151	1	10/31/2021 05:49	WG1766323
1,2,4-Trimethylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2,3-Trimethylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,3,5-Trimethylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Vinyl chloride	ND		0.00302	1	10/31/2021 05:49	WG1766323
Xylenes, Total	ND		0.00785	1	10/31/2021 05:49	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 05:49*	WG1766323
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*10/31/2021 05:49*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 05:49*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.36	1	11/03/2021 07:02	WG1766948
Residual Range Organics (RRO)	ND		10.9	1	11/03/2021 07:02	WG1766948
(S) o-Terphenyl	*31.1*		*18.0-148*		*11/03/2021 07:02*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Acenaphthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Acenaphthylene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(a)anthracene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(a)pyrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(b)fluoranthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(g,h,i)perylene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(k)fluoranthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Chrysene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Dibenz(a,h)anthracene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Fluoranthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Fluorene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Naphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
Phenanthrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Pyrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
1-Methylnaphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
2-Methylnaphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
2-Chloronaphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
(S) Nitrobenzene-d5	*86.5*		*14.0-149*		*10/30/2021 14:44*	WG1765811
(S) 2-Fluorobiphenyl	*71.6*		*34.0-125*		*10/30/2021 14:44*	WG1765811
(S) p-Terphenyl-d14	*97.4*		*23.0-120*		*10/30/2021 14:44*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.9		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0460	1	11/02/2021 15:27	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	7.77		1.15	5	11/03/2021 18:49	WG1765966
Barium	58.8		2.88	5	11/03/2021 18:49	WG1765966
Cadmium	ND		1.15	5	11/03/2021 18:49	WG1765966
Chromium	41.6		5.75	5	11/03/2021 18:49	WG1765966
Lead	3.16		2.30	5	11/03/2021 18:49	WG1765966
Selenium	ND		2.88	5	11/03/2021 18:49	WG1765966
Silver	ND		0.575	5	11/03/2021 18:49	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.35	25	10/29/2021 05:49	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.3*		*77.0-120*		*10/29/2021 05:49*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0669	1	10/31/2021 06:08	WG1766323
Acrylonitrile	ND	C3	0.0167	1	10/31/2021 06:08	WG1766323
Benzene	ND		0.00134	1	10/31/2021 06:08	WG1766323
Bromobenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
Bromodichloromethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Bromoform	ND		0.0335	1	10/31/2021 06:08	WG1766323
Bromomethane	ND		0.0167	1	10/31/2021 06:08	WG1766323
n-Butylbenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
sec-Butylbenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
tert-Butylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Carbon tetrachloride	ND		0.00669	1	10/31/2021 06:08	WG1766323
Chlorobenzene	ND		0.00335	1	10/31/2021 06:08	WG1766323
Chlorodibromomethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Chloroethane	ND		0.00669	1	10/31/2021 06:08	WG1766323
Chloroform	ND		0.00335	1	10/31/2021 06:08	WG1766323
Chloromethane	ND		0.0167	1	10/31/2021 06:08	WG1766323
2-Chlorotoluene	ND		0.00335	1	10/31/2021 06:08	WG1766323
4-Chlorotoluene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0335	1	10/31/2021 06:08	WG1766323
1,2-Dibromoethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Dibromomethane	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2-Dichlorobenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,3-Dichlorobenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,4-Dichlorobenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Dichlorodifluoromethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1-Dichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,2-Dichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00335	1	10/31/2021 06:08	WG1766323
cis-1,2-Dichloroethene	ND		0.00335	1	10/31/2021 06:08	WG1766323
trans-1,2-Dichloroethene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2-Dichloropropane	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,1-Dichloropropene	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,3-Dichloropropane	ND		0.00669	1	10/31/2021 06:08	WG1766323
cis-1,3-Dichloropropene	ND		0.00335	1	10/31/2021 06:08	WG1766323
trans-1,3-Dichloropropene	ND		0.00669	1	10/31/2021 06:08	WG1766323
2,2-Dichloropropane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Di-isopropyl ether	ND		0.00134	1	10/31/2021 06:08	WG1766323
Ethylbenzene	ND		0.00335	1	10/31/2021 06:08	WG1766323
Hexachloro-1,3-butadiene	ND		0.0335	1	10/31/2021 06:08	WG1766323
Isopropylbenzene	ND		0.00335	1	10/31/2021 06:08	WG1766323
p-Isopropyltoluene	ND		0.00669	1	10/31/2021 06:08	WG1766323
2-Butanone (MEK)	ND		0.134	1	10/31/2021 06:08	WG1766323
Methylene Chloride	ND		0.0335	1	10/31/2021 06:08	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0335	1	10/31/2021 06:08	WG1766323
Methyl tert-butyl ether	ND		0.00134	1	10/31/2021 06:08	WG1766323
Naphthalene	ND		0.0167	1	10/31/2021 06:08	WG1766323
n-Propylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Styrene	ND		0.0167	1	10/31/2021 06:08	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Tetrachloroethene	ND		0.00335	1	10/31/2021 06:08	WG1766323
Toluene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0167	1	10/31/2021 06:08	WG1766323
1,2,4-Trichlorobenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
1,1,1-Trichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1,2-Trichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Trichloroethene	ND		0.00134	1	10/31/2021 06:08	WG1766323
Trichlorofluoromethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,2,3-Trichloropropane	ND		0.0167	1	10/31/2021 06:08	WG1766323
1,2,4-Trimethylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2,3-Trimethylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,3,5-Trimethylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Vinyl chloride	ND		0.00335	1	10/31/2021 06:08	WG1766323
Xylenes, Total	ND		0.00870	1	10/31/2021 06:08	WG1766323
(S) Toluene-d8	*102*		*75.0-131*		*10/31/2021 06:08*	WG1766323
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*10/31/2021 06:08*	WG1766323
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*10/31/2021 06:08*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5.55		4.60	1	11/03/2021 07:54	WG1766948
Residual Range Organics (RRO)	24.3		11.5	1	11/03/2021 07:54	WG1766948
(S) o-Terphenyl	*61.6*		*18.0-148*		*11/03/2021 07:54*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Acenaphthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Acenaphthylene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(a)anthracene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(a)pyrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(b)fluoranthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(g,h,i)perylene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(k)fluoranthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Chrysene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Dibenz(a,h)anthracene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Fluoranthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Fluorene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Naphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
Phenanthrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Pyrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
1-Methylnaphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
2-Methylnaphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
2-Chloronaphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
(S) Nitrobenzene-d5	*77.8*		*14.0-149*		*10/30/2021 15:02*	WG1765811
(S) 2-Fluorobiphenyl	*62.6*		*34.0-125*		*10/30/2021 15:02*	WG1765811
(S) p-Terphenyl-d14	*80.0*		*23.0-120*		*10/30/2021 15:02*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.4		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0433	1	11/02/2021 15:30	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.31		1.08	5	11/03/2021 18:52	WG1765966
Barium	35.1		2.71	5	11/03/2021 18:52	WG1765966
Cadmium	ND		1.08	5	11/03/2021 18:52	WG1765966
Chromium	16.3		5.41	5	11/03/2021 18:52	WG1765966
Lead	ND		2.16	5	11/03/2021 18:52	WG1765966
Selenium	ND		2.71	5	11/03/2021 18:52	WG1765966
Silver	ND		0.541	5	11/03/2021 18:52	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		2.95	25	10/29/2021 06:11	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.3*		*77.0-120*		*10/29/2021 06:11*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0590	1	10/31/2021 06:27	WG1766323
Acrylonitrile	ND	C3	0.0147	1	10/31/2021 06:27	WG1766323
Benzene	ND		0.00118	1	10/31/2021 06:27	WG1766323
Bromobenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
Bromodichloromethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Bromoform	ND		0.0295	1	10/31/2021 06:27	WG1766323
Bromomethane	ND		0.0147	1	10/31/2021 06:27	WG1766323
n-Butylbenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
sec-Butylbenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
tert-Butylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Carbon tetrachloride	ND		0.00590	1	10/31/2021 06:27	WG1766323
Chlorobenzene	ND		0.00295	1	10/31/2021 06:27	WG1766323
Chlorodibromomethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Chloroethane	ND		0.00590	1	10/31/2021 06:27	WG1766323
Chloroform	ND		0.00295	1	10/31/2021 06:27	WG1766323
Chloromethane	ND		0.0147	1	10/31/2021 06:27	WG1766323
2-Chlorotoluene	ND		0.00295	1	10/31/2021 06:27	WG1766323
4-Chlorotoluene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0295	1	10/31/2021 06:27	WG1766323
1,2-Dibromoethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Dibromomethane	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2-Dichlorobenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,3-Dichlorobenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,4-Dichlorobenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Dichlorodifluoromethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1-Dichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,2-Dichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00295	1	10/31/2021 06:27	WG1766323
cis-1,2-Dichloroethene	ND		0.00295	1	10/31/2021 06:27	WG1766323
trans-1,2-Dichloroethene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2-Dichloropropane	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,1-Dichloropropene	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,3-Dichloropropane	ND		0.00590	1	10/31/2021 06:27	WG1766323
cis-1,3-Dichloropropene	ND		0.00295	1	10/31/2021 06:27	WG1766323
trans-1,3-Dichloropropene	ND		0.00590	1	10/31/2021 06:27	WG1766323
2,2-Dichloropropane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Di-isopropyl ether	ND		0.00118	1	10/31/2021 06:27	WG1766323
Ethylbenzene	ND		0.00295	1	10/31/2021 06:27	WG1766323
Hexachloro-1,3-butadiene	ND		0.0295	1	10/31/2021 06:27	WG1766323
Isopropylbenzene	ND		0.00295	1	10/31/2021 06:27	WG1766323
p-Isopropyltoluene	ND		0.00590	1	10/31/2021 06:27	WG1766323
2-Butanone (MEK)	ND		0.118	1	10/31/2021 06:27	WG1766323
Methylene Chloride	ND		0.0295	1	10/31/2021 06:27	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0295	1	10/31/2021 06:27	WG1766323
Methyl tert-butyl ether	ND		0.00118	1	10/31/2021 06:27	WG1766323
Naphthalene	ND		0.0147	1	10/31/2021 06:27	WG1766323
n-Propylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Styrene	ND		0.0147	1	10/31/2021 06:27	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Tetrachloroethene	ND		0.00295	1	10/31/2021 06:27	WG1766323
Toluene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0147	1	10/31/2021 06:27	WG1766323
1,2,4-Trichlorobenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
1,1,1-Trichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1,2-Trichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Trichloroethene	ND		0.00118	1	10/31/2021 06:27	WG1766323
Trichlorofluoromethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,2,3-Trichloropropane	ND		0.0147	1	10/31/2021 06:27	WG1766323
1,2,4-Trimethylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2,3-Trimethylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,3,5-Trimethylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Vinyl chloride	ND		0.00295	1	10/31/2021 06:27	WG1766323
Xylenes, Total	ND		0.00767	1	10/31/2021 06:27	WG1766323
(S) Toluene-d8	*103*		*75.0-131*		*10/31/2021 06:27*	WG1766323
(S) 4-Bromofluorobenzene	*96.5*		*67.0-138*		*10/31/2021 06:27*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 06:27*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.33	1	11/03/2021 07:41	WG1766948
Residual Range Organics (RRO)	ND		10.8	1	11/03/2021 07:41	WG1766948
(S) o-Terphenyl	*48.8*		*18.0-148*		*11/03/2021 07:41*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Acenaphthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Acenaphthylene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(a)anthracene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(a)pyrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(b)fluoranthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(g,h,i)perylene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(k)fluoranthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Chrysene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Dibenz(a,h)anthracene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Fluoranthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Fluorene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Naphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
Phenanthrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Pyrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
1-Methylnaphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
2-Methylnaphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
2-Chloronaphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
(S) Nitrobenzene-d5	*99.3*		*14.0-149*		*10/30/2021 15:19*	WG1765811
(S) 2-Fluorobiphenyl	*86.3*		*34.0-125*		*10/30/2021 15:19*	WG1765811
(S) p-Terphenyl-d14	*121*	J1	*23.0-120*		*10/30/2021 15:19*	WG1765811

Method Blank (MB)

(MB) R3723681-1 10/30/21 16:39

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1423266-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1423266-05 10/30/21 16:39 • (DUP) R3723681-3 10/30/21 16:39

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	89.0	89.2	1	0.237		10

Laboratory Control Sample (LCS)

(LCS) R3723681-2 10/30/21 16:39

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

QUALITY CONTROL SUMMARY

L1423266-01,03,05,11,13,14,15,17,20

Method Blank (MB)

(MB) R3724558-1 11/02/21 14:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3724558-2 11/02/21 14:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.509	102	80.0-120	

L1423622-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423622-05 11/02/21 14:57 • (MS) R3724558-3 11/02/21 14:59 • (MSD) R3724558-4 11/02/21 15:02

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.669	ND	0.790	0.736	111	103	1	75.0-125			7.13	20

QUALITY CONTROL SUMMARY

L1423266-01,03,05,11,13,14,15,17,20

Method Blank (MB)

(MB) R3725162-1 11/03/21 17:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Lead	U		0.0990	2.00
Selenium	0.208	J	0.180	2.50
Silver	U		0.0865	0.500

Laboratory Control Sample (LCS)

(LCS) R3725162-2 11/03/21 17:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	91.7	91.7	80.0-120	
Barium	100	90.8	90.8	80.0-120	
Cadmium	100	101	101	80.0-120	
Chromium	100	96.7	96.7	80.0-120	
Lead	100	93.1	93.1	80.0-120	
Selenium	100	98.2	98.2	80.0-120	
Silver	20.0	19.7	98.4	80.0-120	

L1423646-29 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423646-29 11/03/21 17:59 • (MS) R3725162-5 11/03/21 18:09 • (MSD) R3725162-6 11/03/21 18:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	29.6	112	116	82.6	85.9	5	75.0-125			2.90	20
Barium	100	382	476	502	94.4	120	5	75.0-125			5.33	20
Cadmium	100	ND	91.5	98.6	90.9	98.0	5	75.0-125			7.48	20
Chromium	100	26.3	113	115	86.4	88.8	5	75.0-125			2.09	20
Lead	100	19.4	106	110	86.2	91.0	5	75.0-125			4.46	20
Selenium	100	ND	91.3	98.2	90.2	97.1	5	75.0-125			7.27	20
Silver	20.0	ND	17.6	18.6	88.2	93.0	5	75.0-125			5.36	20

Method Blank (MB)

(MB) R3725739-3 10/29/21 04:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*117*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3725739-2 10/29/21 03:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHG C6 - C12	5.50	6.17	112	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*104*	*77.0-120*	

L1423058-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423058-01 10/29/21 08:23 • (MS) R3725739-6 10/29/21 13:48 • (MSD) R3725739-7 10/29/21 14:10

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	162	ND	199	188	123	117	25	50.0-150			5.36	27
(S) a,a,a-Trifluorotoluene(FID)					*110*	*109*		*77.0-120*				

Method Blank (MB)

(MB) R3723041-2 10/29/21 03:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*93.8*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3723041-1 10/29/21 03:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.50	5.75	105	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*100*	*77.0-120*	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3725864-2 10/31/21 00:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

Method Blank (MB)

(MB) R3725864-2 10/31/21 00:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	0.0821	J	0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*100*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3725864-1 10/30/21 23:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.554	88.6	10.0-160	
Acrylonitrile	0.625	0.518	82.9	45.0-153	
Benzene	0.125	0.112	89.6	70.0-123	
Bromobenzene	0.125	0.125	100	73.0-121	
Bromodichloromethane	0.125	0.115	92.0	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R3725864-1 10/30/21 23:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromoform	0.125	0.112	89.6	64.0-132	
Bromomethane	0.125	0.114	91.2	56.0-147	
n-Butylbenzene	0.125	0.109	87.2	68.0-135	
sec-Butylbenzene	0.125	0.108	86.4	74.0-130	
tert-Butylbenzene	0.125	0.111	88.8	75.0-127	
Carbon tetrachloride	0.125	0.113	90.4	66.0-128	
Chlorobenzene	0.125	0.115	92.0	76.0-128	
Chlorodibromomethane	0.125	0.110	88.0	74.0-127	
Chloroethane	0.125	0.121	96.8	61.0-134	
Chloroform	0.125	0.114	91.2	72.0-123	
Chloromethane	0.125	0.133	106	51.0-138	
2-Chlorotoluene	0.125	0.117	93.6	75.0-124	
4-Chlorotoluene	0.125	0.114	91.2	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.104	83.2	59.0-130	
1,2-Dibromoethane	0.125	0.117	93.6	74.0-128	
Dibromomethane	0.125	0.125	100	75.0-122	
1,2-Dichlorobenzene	0.125	0.115	92.0	76.0-124	
1,3-Dichlorobenzene	0.125	0.114	91.2	76.0-125	
1,4-Dichlorobenzene	0.125	0.112	89.6	77.0-121	
Dichlorodifluoromethane	0.125	0.107	85.6	43.0-156	
1,1-Dichloroethane	0.125	0.115	92.0	70.0-127	
1,2-Dichloroethane	0.125	0.128	102	65.0-131	
1,1-Dichloroethene	0.125	0.110	88.0	65.0-131	
cis-1,2-Dichloroethene	0.125	0.113	90.4	73.0-125	
trans-1,2-Dichloroethene	0.125	0.105	84.0	71.0-125	
1,2-Dichloropropane	0.125	0.117	93.6	74.0-125	
1,1-Dichloropropene	0.125	0.120	96.0	73.0-125	
1,3-Dichloropropane	0.125	0.120	96.0	80.0-125	
cis-1,3-Dichloropropene	0.125	0.121	96.8	76.0-127	
trans-1,3-Dichloropropene	0.125	0.124	99.2	73.0-127	
2,2-Dichloropropane	0.125	0.0921	73.7	59.0-135	
Di-isopropyl ether	0.125	0.116	92.8	60.0-136	
Ethylbenzene	0.125	0.107	85.6	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.145	116	57.0-150	
Isopropylbenzene	0.125	0.106	84.8	72.0-127	
p-Isopropyltoluene	0.125	0.101	80.8	72.0-133	
2-Butanone (MEK)	0.625	0.531	85.0	30.0-160	
Methylene Chloride	0.125	0.111	88.8	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.603	96.5	56.0-143	
Methyl tert-butyl ether	0.125	0.111	88.8	66.0-132	

Laboratory Control Sample (LCS)

(LCS) R3725864-1 10/30/21 23:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.116	92.8	59.0-130	
n-Propylbenzene	0.125	0.111	88.8	74.0-126	
Styrene	0.125	0.107	85.6	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.104	83.2	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.109	87.2	68.0-128	
Tetrachloroethene	0.125	0.123	98.4	70.0-136	
Toluene	0.125	0.113	90.4	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.122	97.6	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.126	101	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.128	102	62.0-137	
1,1,1-Trichloroethane	0.125	0.107	85.6	69.0-126	
1,1,2-Trichloroethane	0.125	0.120	96.0	78.0-123	
Trichloroethene	0.125	0.126	101	76.0-126	
Trichlorofluoromethane	0.125	0.113	90.4	61.0-142	
1,2,3-Trichloropropane	0.125	0.113	90.4	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.105	84.0	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.103	82.4	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.106	84.8	73.0-127	
Vinyl chloride	0.125	0.125	100	63.0-134	
Xylenes, Total	0.375	0.325	86.7	72.0-127	
(S) Toluene-d8			*103*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*108*	*70.0-130*	

Method Blank (MB)

(MB) R3724440-1 11/02/21 07:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*53.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3724440-2 11/02/21 07:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	32.2	64.4	50.0-150	
(S) o-Terphenyl			*70.6*	*18.0-148*	

L1423415-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423415-01 11/02/21 16:57 • (MS) R3724440-3 11/02/21 17:10 • (MSD) R3724440-4 11/02/21 17:22

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	47.8	ND	33.5	42.3	53.9	71.3	5	50.0-150		J3	23.2	20
(S) o-Terphenyl					*129*	*62.5*		*18.0-148*				

Method Blank (MB)

(MB) R3723791-2 10/30/21 10:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	*105*			*14.0-149*
(S) 2-Fluorobiphenyl	*87.4*			*34.0-125*
(S) p-Terphenyl-d14	*109*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3723791-1 10/30/21 10:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0587	73.4	50.0-126	
Acenaphthene	0.0800	0.0587	73.4	50.0-120	
Acenaphthylene	0.0800	0.0573	71.6	50.0-120	
Benzo(a)anthracene	0.0800	0.0587	73.4	45.0-120	
Benzo(a)pyrene	0.0800	0.0532	66.5	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0611	76.4	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0611	76.4	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0601	75.1	49.0-125	
Chrysene	0.0800	0.0615	76.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0610	76.3	47.0-125	
Fluoranthene	0.0800	0.0596	74.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3723791-1 10/30/21 10:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0620	77.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0590	73.8	46.0-125	
Naphthalene	0.0800	0.0582	72.8	50.0-120	
Phenanthrene	0.0800	0.0627	78.4	47.0-120	
Pyrene	0.0800	0.0593	74.1	43.0-123	
1-Methylnaphthalene	0.0800	0.0548	68.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0538	67.3	50.0-120	
2-Chloronaphthalene	0.0800	0.0555	69.4	50.0-120	
(S) Nitrobenzene-d5			*107*	*14.0-149*	
(S) 2-Fluorobiphenyl			*79.1*	*34.0-125*	
(S) p-Terphenyl-d14			*103*	*23.0-120*	

L1422174-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1422174-01 10/30/21 16:46 • (MS) R3723791-3 10/30/21 17:04 • (MSD) R3723791-4 10/30/21 17:21

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0760	0.00867	0.0599	0.0670	67.4	76.8	1	10.0-145			11.2	30
Acenaphthene	0.0760	ND	0.0537	0.0618	63.3	73.9	1	14.0-127			14.0	27
Acenaphthylene	0.0760	ND	0.0555	0.0625	73.0	82.2	1	21.0-124			11.9	25
Benzo(a)anthracene	0.0760	0.0208	0.0739	0.0757	69.9	72.2	1	10.0-139			2.41	30
Benzo(a)pyrene	0.0760	0.0134	0.0567	0.0634	57.0	65.8	1	10.0-141			11.2	31
Benzo(b)fluoranthene	0.0760	0.0366	0.0795	0.0783	56.4	54.9	1	10.0-140			1.52	36
Benzo(g,h,i)perylene	0.0760	0.0259	0.0604	0.0733	45.4	62.4	1	10.0-140			19.3	33
Benzo(k)fluoranthene	0.0760	0.00795	0.0550	0.0627	61.9	72.0	1	10.0-137			13.1	31
Chrysene	0.0760	0.0322	0.0986	0.0974	87.4	85.8	1	10.0-145			1.22	30
Dibenz(a,h)anthracene	0.0760	ND	0.0479	0.0656	56.6	79.9	1	10.0-132		J3	31.2	31
Fluoranthene	0.0760	0.0456	0.0859	0.0880	53.0	55.8	1	10.0-153			2.42	33
Fluorene	0.0760	ND	0.0620	0.0633	81.6	83.3	1	11.0-130			2.08	29
Indeno(1,2,3-cd)pyrene	0.0760	0.0145	0.0627	0.0731	63.4	77.1	1	10.0-137			15.3	32
Naphthalene	0.0760	0.0545	0.0884	0.0944	44.6	52.5	1	10.0-135			6.56	27
Phenanthrene	0.0760	0.137	0.160	0.145	30.3	10.5	1	10.0-144			9.84	31
Pyrene	0.0760	0.0469	0.0944	0.0809	62.5	44.7	1	10.0-148			15.4	35
1-Methylnaphthalene	0.0760	0.0965	0.119	0.123	29.6	34.9	1	10.0-142			3.31	28
2-Methylnaphthalene	0.0760	0.121	0.143	0.138	28.9	22.4	1	10.0-137			3.56	28
2-Chloronaphthalene	0.0760	ND	0.0497	0.0601	65.4	79.1	1	29.0-120			18.9	24
(S) Nitrobenzene-d5					*114*	*128*		*14.0-149*				
(S) 2-Fluorobiphenyl					*81.2*	*84.2*		*34.0-125*				
(S) p-Terphenyl-d14					*98.9*	*104*		*23.0-120*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company/Address:
GeoEngineers- Portland, OR

4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego. OR 97035

Billing Information:
Accounts Payable (Marlee Johnston)
17425 NE Union Hill Rd, Suite 250
Redmond, WA 98052

Pres Chk

Report to: **Cris Watkins**

Email To: **cwatkins@geoengineers.com**

Project Description:

City/State Collected: Seeton, WA

Please Circle: PT MT CT ET

Phone: **503-603-6661**

Client Project # **0180-393-00**

Lab Project # **GEOENGPOR-018039300**

Collected by (print): Dexter Chan

Site/Facility ID #

P.O. #

Collected by (Signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day X 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX no silica 8ozClr-NoPres	NWTPHDX w/ silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	PAHs 8270ESIM 8ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	H2O			Remarks	Sample # (lab only)
GEL-1-9-10		SS	9-10	10/25/21	1120	3							X				-01
GEL-1-14-15		SS	14-15		1125								X				-02
GEL-2-9-10		SS	9-10		1140								X				-03
GEL-2-14-15		SS	14-15		1145								X				-04
GEL-3-9-10		SS	9-10		1155								X				-05
GEL-3-14-15		SS	14-15		1250								X				-06
GEL-4-9-10		SS	9-10		~~1330~~ 1335								X				-07
GEL-4-14-15		SS	14-15		~~1340~~ 1350								X				-08
MW-1-9-10		SS	9-10		1225								X				-09
MW-1-14-15		SS	14-15		1230								X				-10

Analysis / Container / Preservative

Chain of Custody Page 1 of 3

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SDG # 1423266

J226

Acctnum: GEOENGPOR
Template: T197917
Prelogin: P882161
PM: 110 - Brian Ford
PB:
Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking # 5217 3314 1922

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	10/26/21	1503			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.7 °C Bottles Received: 5	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/27/21 Time: 930	Hold: Condition: NCF / OK

Company Name/Address:
GeoEngineers- Portland, OR

4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego, OR 97035

Billing Information:
Accounts Payable (Marlee Johnston)
17425 NE Union Hill Rd, Suite 250
Redmond, WA 98052

Pres Chk

Report to: **Cris Watkins**

Email To: **cwatkins@geoengineers.com**

Project Description:

City/State Collected: Seattle, WA

Please Circle: PT MT CT ET

Phone: **503-603-6661**

Client Project # **0180-393-00**

Lab Project # **GEOENGPOR-018039300**

Collected by (print): Dexter Chen

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day X 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX no silica 8ozClr-NoPres	NWTPHDX w/ silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	PAHs 8270ESIM 8ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	HOLD			Remarks	Sample # (lab only)
MW-2-9-10		SS	9-10	10/25/21	1400	3							X				-11
MW-2-14-15		SS	14-15	10/25/21	1405								X				-12
GEI-4-2-3		SS	2-3	10/26/21	1000								X				-13
MW-1-2-3		SS	2-3		1020								X				-14
GEI-5-7-8		SS	7-8		1040								X				-15
GEI-5-15-16		SS	15-16		1045								X				-16
MW-3-2-3		SS	2-3		1100								X				-17
MW-3-7-8		SS	7-8		1105								X				-18
MW-3-14-15		SS	14-15		1110								X				-19
GEI-6-7-8		SS	7-8		1205								X				-20

Analysis / Container / Preservative

Chain of Custody Page 2 of 3

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SDG # 423268

Table #

Acctnum: **GEOENGPOR**

Template: **T197917**

Prelogin: **P882161**

PM: **110 - Brian Ford**

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # "

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	10/26/21	1520			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.3R °C Bottles Received: 1.7+0=W 63	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/27/21 Time: 930	Hold: / Condition: NCF / OK

Company/Address:
GeoEngineers- Portland, OR

4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego, OR 97035

Billing Information:
Accounts Payable (Marlee Johnston)
17425 NE Union Hill Rd, Suite 250
Redmond, WA 98052

Pres Chk

Report to: **Cris Watkins**

Email To: **cwatkins@geoengineers.com**

Project Description:

City/State Collected: Seatac, WA

Please Circle: PT MT CT ET

Phone: **503-603-6661**

Client Project # **0180-393-00**

Lab Project # **GEOENGPOR-018039300**

Collected by (print): Dexter Chan

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX no silica 8ozClr-NoPres	NWTPHDX w/ silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	PAHs 8270ESIM 8ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	HSL				Remarks	Sample # (lab only)
GEI-6-14-15		SS	14-15	10/26/21	1210	3							X					-21

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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SDG # 1423266

Table #

Acctnum: **GEOENGPOR**

Template: **T197917**

Prelogin: **P882161**

PM: **110 - Brian Ford**

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date: 10/26/21	Time: 1500	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.7 °C Bottles Received: 5 63
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/27/21 Time: 930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Brian Ford

From: Cris J. Watkins <cwatkins@geoengineers.com>
Sent: Thursday, October 28, 2021 5:54 PM
To: Brian Ford
Cc: Phil D. Welker
Subject: RE: updated analysis request FW: L1423266 Proj 0180-393-00 Hold Samples Received

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.
Also – please update the project name to WSDOT-A-1 Towing. Thanks,

Cris J. Watkins
Senior Environmental Scientist | GeoEngineers, Inc.
Telephone: 503.603.6687
Mobile: 971.235.6147

From: Cris J. Watkins
Sent: Thursday, October 28, 2021 3:53 PM
To: Brian Ford <Brian.Ford@pacelabs.com>
Cc: Phil D. Welker <pwelker@geoengineers.com>
Subject: updated analysis request FW: L1423266 Proj 0180-393-00 Hold Samples Received

Hey Brian,

Can you run the following samples on a 5-day TAT:

GEI-1-9-10
GEI-2-9-10
GEI-3-9-10
GEI-4-2-3
GEI-5-7-8
GEI-6-7-8
MW-1-2-3
MW-2-9-10
MW-3-2-3

We will run Dx-no silica, Gx, PAHs, RCRA 8 and VOCs.

Thanks,

Cris J. Watkins
Senior Environmental Scientist | GeoEngineers, Inc.
Telephone: 503.603.6687
Mobile: 971.235.6147

From: Brian Ford <Brian.Ford@pacelabs.com>
Sent: Thursday, October 28, 2021 8:22 AM
To: Cris J. Watkins <cwatkins@geoengineers.com>
Subject: L1423266 Proj 0180-393-00 Hold Samples Received

[EXTERNAL]

Thanks,

Brian Ford
Project Manager 2 / Pace National
12065 Lebanon Road | Mt. Juliet, TN 37122
Office: 615.773.9772
brian.ford@pacelabs.com

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Please consider the environment before printing this email

Confidentiality: This message is confidential and intended solely for use of the individual or entity to whom it is addressed. If you are not the person for whom this message is intended, please delete it and notify me immediately, and please do not copy or send this message to anyone else.

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.

Read These Provisions Closely

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 "Report Limitations and Guidelines for Use" apply to your project or site.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for the exclusive use of the WSDOT, their authorized agents and regulatory agencies. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental site assessment or remedial action 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 project site. No one except WSDOT should rely on this plan without first conferring with GeoEngineers. This report should not be applied for any purpose or project except the one originally contemplated.

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

This report applies to the King County Tax Parcel 3223049048 project located in Des Moines, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not 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 important project changes were made.

If important changes are made after the date of this remedial action plan, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

---

[1] Developed based on material provided by Geoprofessional Business Association (GBA), Professional Firms Practicing in the GeoSciences, www.geoprofesional.org.

Reliance Conditions for Third Parties

No third party may rely on the product of our services unless GeoEngineers agrees in advance, and in writing to such reliance. 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.

Environmental Regulations Are Always Evolving

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, 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 substance, change or if more stringent environmental standards are developed in the future.

Subsurface Conditions Can Change

This report is based on conditions that existed at the time our site studies were performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Always contact GeoEngineers before applying this report to determine if it is still applicable.

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 sites or for other on-site uses of the affected media (soil and/or groundwater). Note that hazardous substances may be present in some of the 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 Site or reuse of the affected media on Site to evaluate the potential for associated environmental liabilities. We cannot be responsible for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject site to another location or its reuse on site in instances that we were not aware of or could not control.

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.

If the Client desires these specialized services, they should be obtained from a consultant who offers services in this specialized field.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproduction is acceptable, but recognize that separating logs from the report can elevate risk.

Geotechnical, Geologic and Environmental Reports Should Not Be Interchanged

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from the sampling locations at the site documented in past reports. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. There is always a potential that areas of contamination exist in portions of the site that were not sampled or tested during this or previous studies. Our remedial action plan, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

GeoEngineers

Phase II Environmental Site Assessment, Soil Sampling Report
State Route (SR) 509
Foreman Property 18451 12th Avenue South

Prepared for

Washington State Department of Transportation
SR 509 Project Office

Prepared by

Headquarters Hazardous Materials and Solid Waste Program
Environmental Services Office

Washington State Department of Transportation

January 24, 2019

Table of Contents

1.0 INTRODUCTION **3**
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3.0 FIELD INVESTIGATION…….. **4**
4.0 ANALYTICAL SAMPLING RESULTS **4**
5.0 FIELD ACTIVITIES…… …… . **5**
6.0 SUMMARY AND CONCLUSIONS **5**

Appendix 1 - Vicinity with Sample & Background Map
Appendix 2 - Summary Tables
Appendix 3 - Laboratory Reports
Appendix 4 - Disposal Tickets
Appendix 5 - Photos

Acronyms and Abbreviations

ASTM E 1903-11	American Society for Testing and Materials Standard Practice for Environmental Site Assessments: Phase II Environmental Assessment Process, Designation: E 1903-11
bgs	Below ground surface
CUL	Cleanup Level
Ecology	Washington State Department of Ecology
ESA	Environmental Site Assessment
ESO	Environmental Services Office
HazMat Program	Hazardous Materials and Solid Waste Program
HQ	Headquarters
MTCA	Model Toxics Control Act
NFA	No Further Action
NWR	Northwest Region
RCRA	Resource Conservation and Recovery Act
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

1.0 INTRODUCTION

The Washington State Department of Transportation (WSDOT) Headquarters (HQ) Hazardous Materials and Solid Waste (HazMat) Program prepared this Phase II Environmental Site Assessment (ESA) Report to provide a summary of information associated with soil investigation and excavation activities within existing unconstructed WSDOT right-of-way (ROW) at 18451 12th Avenue South in Des Moines, WA (Site) (See Appendix 1).. The Site is associated with the WSDOT 509 Project Office in support of the future construction of the State Route (SR) 509 Roadway Project.

The Phase II ESA soil sampling activities assesses soil conditions within the property and confirms the presence or absence of contaminated soil after cleanup activities. A contractor, Marine Vacuum Incorporated (Marine Vac.) remediated two areas of confirmed and suspected contaminated materials.

HazMat conducted this Phase II ESA in general accordance with the American Society for Testing and Materials Standard Practice for Environmental Site Assessments (ASTM): Phase II Environmental Site Assessment Process, Designation: E 1903-11 (ASTM 1903-1) and the WSDOT Environmental Manual (EM) 31-11, Chapter 447.

1.1 SITE INFORMATION

The following sections provide information pertaining to the background, physical, geological and hydrogeological setting of the site.

1.1.1 Physical Setting and Historical Background

WSDOT purchased this Site as part of the future SR 509 Project, and leased the property to tenants since 2000. The Site is located near the intersection of Des Moines Memorial Drive and South 188 Street and the intersection of SR 509 and South 188 Street. The previous tenant, Mr. Foreman, conducted welding activities on this property from 2000 through 2016. In the summer of 2016, WSDOT allowed the Washington State Patrol (WSP) to use a portion of the property to dismantle seized vehicles. Currently, A-1 Towing leases the property as a towing yard, which includes parking vehicles throughout the site and repairing the vehicles within the garage structure.

1.2.1 Geologic and Hydrogeologic Setting

Based upon review available information near the Site vicinity, soils from surface to six feet (ft.) below ground surface (bgs) are defined as poorly graded sand, medium dense, olive gray, moist and homogenous. Soils from six to 10 ft. are defined as poorly graded sand, medium dense, olive gray, moist, and homogeneous. Soils from 10 to 15 ft. are defined as silty sand, dense, grayish brown, moist, and homogenous.

Groundwater depth varied across the Site; although, it was encountered as shallow as three ft. bgs in select locations.

2.0 BACKGROUND INFORMATION

The following provides a chronological order of the relevant events that led up to the cleanup of contaminated soils on the Site. The background describes two separate sample events prior to the contaminated soil remedial activities and confirmation sampling.

In October 2016, WSDOT Northwest Region (NWR) Real Estate Services (RES) requested the WSDOT NWR Hazardous Materials Specialist to perform a limited Phase II Environmental Site Assessment (ESA) after MR. Foreman's lease terminated. WSDOT NWR sampled four locations (A, B, C, & D) (See Appendix 1) of suspected contaminated soil identified on the property. NWR HazMat identified two relatively large heavily stained areas, numerous small stains located on the north end of the site, and abandoned solid waste debris and trash scattered throughout. WSDOT collected a total of four representative samples (SS1 in Area A, SS2 in Area B, SS3 in Area C, and SS4 in Area D). WSDOT collected samples in areas where large stains were evident (A and C), numerous small stains (D), unusual odors (A-D), and solid wastes like trash and debris were abandoned (B and D). The soil samples were analyzed using the following methods:

- Northwest Total Petroleum Hydrocarbons - Method NWTPH – Benzene, Toluene, Ethylbenzene, and Xylene (BTEX))
- Diesel and Heavy Oil - Method NWTPH (Dx)
- SVOCs - EPA Method 8270
- RCRA 8 Metals - EPA Method 6010

Analytical results of one the four soil samples indicated that that lube range petroleum hydrocarbons were detected at a concentration greater than current Model Toxics Control Act (MTCA) Method A cleanup level (CUL) of 2,000 milligrams per kilograms (SS-3 31,000 mg/kg). WSDOT considered this asphalt. The analytical results of another sample indicated that arsenic were detected at a concentration greater the current MTCA Method A CUL of 20 milligrams per kilograms (SS-2 35 mg/kg). The remaining analytes sampled were either non-detect or below MTCA Method A cleanup levels. Based upon the sample results, field remediation of contaminated soils was needed in area B (SS-2) and C (SS-3).

In April 2017, WSDOT contracted Marine Vacuum Incorporated (Marine Vac.) to cleanup areas on the Site with trash, debris, and soils with notable detectable analytes below MTCA Method A CULs.

In January 2018 A-1 Towing, the lessee, graded and displaced Site soils. Some soils were contaminated. The soils were displaced from previously sampled areas A and B. There also was a new stockpile located just north of area D.

On March 15, 2018, WSDOT Headquarters (HQ) HazMat Program collected four soil samples (SS1a, SS2a, SS3a, and SS4a) on the Site in areas previously defined as A, B, and in a new location. The HazMat Program collected a sample if there was an indication of grading with known or suspected soil contamination, or where displaced/graded soils appeared to be consolidated into a stock pile generated by the lessee. Areas C and D did not have these indicators and did not warrant additional sampling. The stock pile location is just north of area D and was estimated to contain approximately 25 cubic yards of material.

The analytical results from the March 2018 investigative sampling, individual chemical constituents detected in each soil sample were analyzed using:

- NWTPH-Gx,
- NWTPH-Dx,
- Volatiles EPA Method 8260C,
- Semi-Volatiles Method 8270D,
- Total metals EPA Method 6010D.

No sample results were above MTCA Method A cleanup standards.

3.0 FIELD INVESTIGATION

On September 21, 2018, HQ HazMat collected two soil confirmation samples (Fcl1 and Fcl2) using a pre-cleaned stainless steel spoon. HQ HazMat decontaminated the stainless steel spoon with a phosphate free cleaner (Alconox) and rinsed it with distilled water between the confirmation sample locations. HQ HazMat collected the two confirmation samples in areas remediated where:

- Soils were previously identified in concentrations that exceeded MTCA Method A cleanup levels (CULs) for lube oil; and
- Numerous stains were located throughout the area.

The Fcl1 confirmation sample was collected at the bottom from the center of where the crushed asphalt was removed.

The depth of the excavation trench for the 2nd confirmation sample could not safely be accessed. Therefore, the Fcl2 confirmation sample was collected from soil excavated with a backhoe bucket taken from the center of the bottom of the excavation.

4.0 ANALYTICAL SAMPLING RESULTS

The analytical data was reviewed and deemed acceptable. The individual chemical constituents in each soil sample was evaluated against the MTCA Method A cleanup levels for unrestricted land use. The sample results were below MTCA Method A cleanup levels. All chemical results from each of the soil sample events are presented in its entirety in Appendix 3. All of the soil samples were delivered to OnSite Environmental Incorporated located in Redmond, WA.

The analytical results from the September 2018 confirmation samples, individual constituents detected in each soil sample was evaluated against:

- NWTPH-Dx
- Semi-Volatiles EPA Method 8260C
- MTCA Metals

The laboratory analytical results from the two confirmation samples were either non-detect or at concentrations below MTCA Method A CULs.

5.0 FIELD ACTIVITIES

On September 20 and 21, 2018, Marine Vac. conducted excavation activities to address lube oil concentrations exceeding MTCA Method A CULs. Additionally, Marine Vac. excavated an area to remediate suspected contaminated materials (See Appendix 1 areas C and D). During site cleanup activities, excavated soils were segregated based on field screening results. Soils included in the direct haul to Marine Vac. for disposal as contaminated included soils based up sight, olfactory indicators, and/or had Photoionization Indication Detector (PID) levels above 10 ppm. The non-suspect soils were placed off to the side in a designated area lined and covered with 6 mil polyethylene sheeting. On September 24, 2018, Marine Vac. filled and graded the excavation areas with the existing non-suspect soils.

A total of about 8.4 cubic yards of suspected and/or confirmed contaminated material was excavated and transported for disposal by Marine Vac. Waste disposal receipts are located in Appendix 4.

No groundwater was encountered during cleanup activities.

6.0 SUMMARY AND CONCLUSIONS

WSDOT completed soil investigation and excavation activities within the Site. WSDOT investigated the soils on the Site at the end of an existing long term lease and also after the new lessee displaced and graded soils. Confirmed and suspect contamination existed on the site. Approximately 8.4 cubic yards of confirmed and suspected contaminated soil was disposed. Based on the laboratory analytical results from the confirmation sample locations, it was determined that no contamination remains on the property.

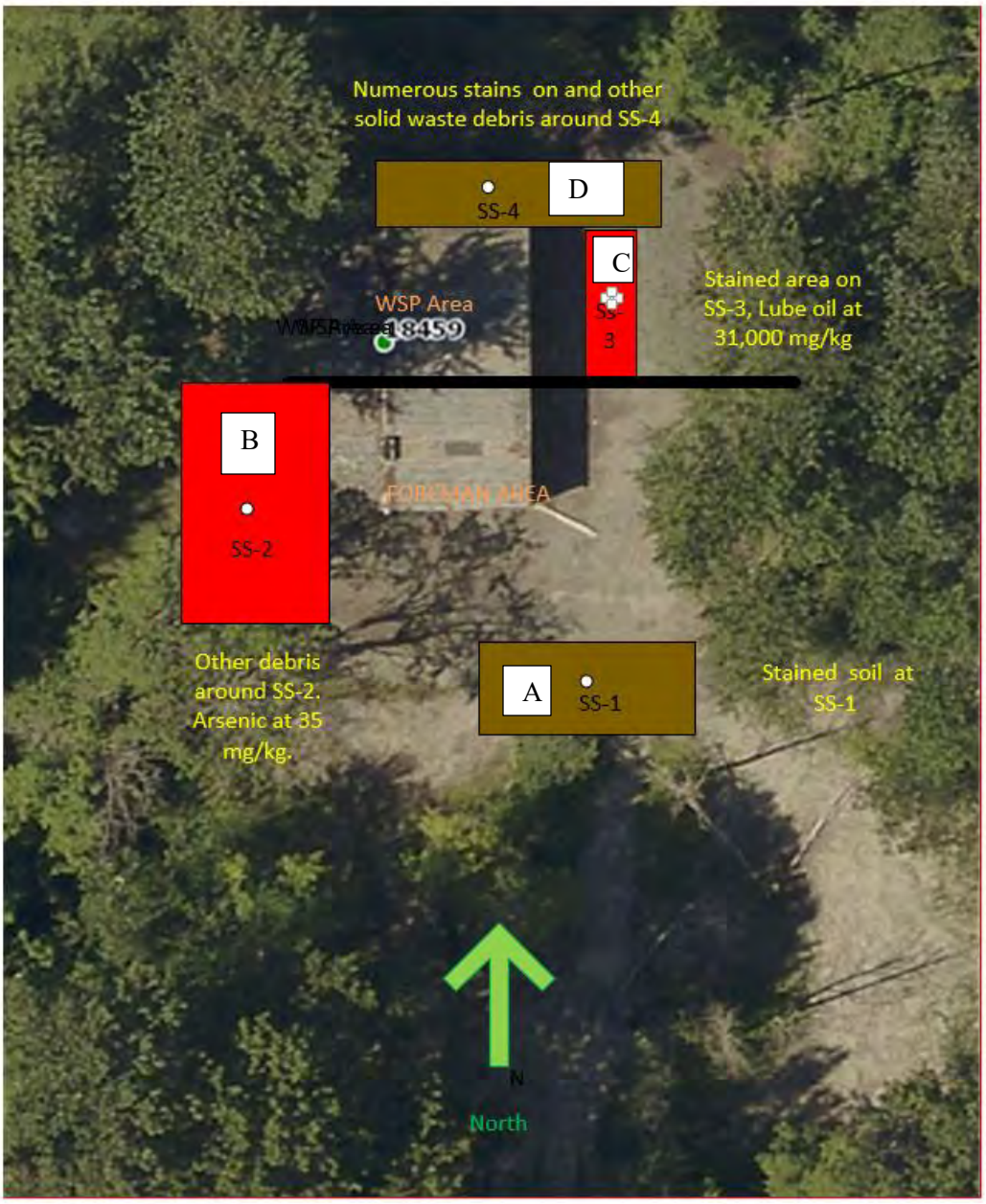
Based on the cleanup activities and the laboratory analytical results, it appears that the subsequent environmental investigation removed the confirmed or suspected contamination; therefore, with no immediate threat to human health or the environment no additional environmental investigation appears warranted at this time. WSDOT recommends Washington State Department of Ecology to accept this Site as a No Further Action.

APPENDIX 1 – VICINITY MAP and SAMPLE POINTS & BACKGROUND

VICINITY MAP WITH SAMPLE POINTS



BACKGROUND AREA



◯ Sample locations

APPENDIX 2 SUMMARY TABLES

BACKGROUND CONDITION

Sample Collected (10/2016)	Gasoline mg/kg	Diesel mg/kg	Lube Oil mg/kg	Benzene mg/kg	Chromium mg/kg	Arsenic mg/kg
SS 1	ND	ND	1900	ND	48	ND
SS 2	ND	ND	220	0.022 (0.03)	46	**35**
SS 3	ND	ND	**31,000**	ND	22	ND
SS 4 *MTCA Method A Cleanup levels mg/kg*	ND *30 mg/kg with Benzene 100 mg/kg without Benzene*	ND *2000 mg/kg*	60 *2000 mg/kg*	ND *0.03*	42 *100 mg/kg(replaced by values for III (2000) and VI (19))*	ND *20 mg/kg*

MARCH 2018 INVESTIGATION

Sample Collected (10/2016)	Gasoline mg/kg	Diesel mg/kg	Lube Oil mg/kg	Benzene mg/kg	Chromium mg/kg	Arsenic mg/kg
SS 1	ND	ND	82	ND	41	ND
SS 2	ND	58	370	ND	52	ND
SS 3 (STOCKPILE)	ND	ND	470	ND	47	ND
SS 4 (STOCKPILE)	ND	ND	260	ND	60	ND
MTCA Method A Cleanup levels mg/kg	*30 mg/kg with Benzene 100 mg/kg without Benzene*	*2000 mg/kg*	*2000 mg/kg*	*0.03 mg/kg*	*100 mg/kg(replaced by values for III (2000) and VI (19))*	*5 mg/kg*

CONFIRMATION SAMPLE

Sample Collected 8/21/2018	Lube Oil
FC1-1 (Baseline ss3)	590
FC1-2 (Baseline ss4)	ND
MTCA Method A cleanup level mg/kg	*2000 mg/kg*

APPENDIX 3 LABORATORY REPORTS

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

November 8, 2016

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project SR 509 - 12th Street
Laboratory Reference No. 1610-295

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on October 26, 2016.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

Case Narrative

Samples were collected on October 25, 2016 and received by the laboratory on October 26, 2016. 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.

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.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Semivolatiles EPA 8270D/SIM Analysis

Sample SS 4 had one surrogate recovery out of control limits. This was due to a large co-eluting non-target analyte peak, tentatively identified as 2-butoxy ethanol by spectral library search.

The Spike Blank/Spike Blank Duplicate had one recovery slightly above control limits, due to a small upward bias in the instruments' calibration and the sample was non-detect for this analyte. No further action was taken.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	10-31-16	
Toluene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
Ethyl Benzene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
m,p-Xylene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
o-Xylene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
Gasoline	**ND**	5.1	NWTPH-Gx	10-28-16	10-31-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*63-124*				
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
Benzene	**0.022**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	9.4	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*63-124*				
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	4.8	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*63-124*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	5.5	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*63-124*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1028S1					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	10-28-16	
Toluene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
Ethyl Benzene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
m,p-Xylene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
o-Xylene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
Gasoline	**ND**	5.0	NWTPH-Gx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*63-124*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-293-16										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*100*	*95*	*63-124*			
SPIKE BLANKS											
Laboratory ID:	SB1028S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.929**	**0.914**	1.00	1.00		**93**	**91**	70-124	2	12	
Toluene	**0.935**	**0.927**	1.00	1.00		**94**	**93**	73-119	1	12	
Ethyl Benzene	**0.953**	**0.942**	1.00	1.00		**95**	**94**	74-117	1	12	
m,p-Xylene	**0.905**	**0.907**	1.00	1.00		**91**	**91**	75-117	0	13	
o-Xylene	**0.943**	**0.932**	1.00	1.00		**94**	**93**	75-116	1	12	
Surrogate:											
Fluorobenzene						*95*	*91*	*63-124*			

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
Diesel Range Organics	**ND**	550	NWTPH-Dx	10-28-16	10-28-16	U1
Lube Oil	**1900**	56	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
Diesel Range Organics	**ND**	46	NWTPH-Dx	10-28-16	10-28-16	U1
Lube Oil Range Organics	**220**	70	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
Diesel Range Organics	**ND**	6000	NWTPH-Dx	10-28-16	10-31-16	U1
Lube Oil	**31000**	1100	NWTPH-Dx	10-28-16	10-31-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*---*	*50-150*				S
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
Diesel Range Organics	**ND**	30	NWTPH-Dx	10-28-16	10-28-16	
Lube Oil Range Organics	**60**	59	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1028S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	10-28-16	10-28-16	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-295-01									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	U1
Lube Oil	**1670**	**1670**	NA	NA		NA	NA	0	NA	
Surrogate:										
o-Terphenyl						*84* *100*	*50-150*			

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
n-Nitrosodimethylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.37	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**0.0099**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Fluorene	**0.0088**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**0.014**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**0.011**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.37	EPA 8270D	11-2-16	11-3-16	
Pyrene	**0.018**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**0.053**	0.037	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Chrysene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
bis(2-Ethylhexyl)phthalate	**0.26**	0.037	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*51*	*18 - 109*				
Phenol-d6	*63*	*25 - 111*				
Nitrobenzene-d5	*64*	*22 - 113*				
2-Fluorobiphenyl	*82*	*30 - 114*				
2,4,6-Tribromophenol	*88*	*22 - 116*				
Terphenyl-d14	*78*	*33 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.46	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**0.30**	0.23	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**0.044**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**0.026**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**0.014**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Fluorene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**0.012**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**0.0098**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.46	EPA 8270D	11-2-16	11-3-16	
Pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Chrysene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
bis(2-Ethylhexyl)phthalate	**0.059**	0.046	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*28*	*18 - 109*				
Phenol-d6	*29*	*25 - 111*				
Nitrobenzene-d5	*49*	*22 - 113*				
2-Fluorobiphenyl	*57*	*30 - 114*				
2,4,6-Tribromophenol	*51*	*22 - 116*				
Terphenyl-d14	*57*	*33 - 114*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
n-Nitrosodimethylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Pyridine	**ND**	1.8	EPA 8270D	11-2-16	11-4-16	
Phenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Aniline	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroethyl)ether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Chlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,3-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,4-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Benzyl alcohol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
1,2-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Methylphenol (o-Cresol)	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroisopropyl)ether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
n-Nitroso-di-n-propylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Hexachloroethane	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Nitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Isophorone	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Nitrophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dimethylphenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroethoxy)methane	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2,4-Trichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Naphthalene	**0.011**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Hexachlorobutadiene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Chloro-3-methylphenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Methylnaphthalene	**0.042**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**0.030**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4,6-Trichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3-Dichloroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4,5-Trichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Chloronaphthalene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,4-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Dimethylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,3-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,6-Dinitrotoluene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Acenaphthylene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
3-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
2,4-Dinitrophenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Acenaphthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
4-Nitrophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dinitrotoluene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Dibenzofuran	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Diethylphthalate	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
4-Chlorophenyl-phenylether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Fluorene	**0.15**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
4,6-Dinitro-2-methylphenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
n-Nitrosodiphenylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2-Diphenylhydrazine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Bromophenyl-phenylether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Hexachlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Pentachlorophenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Phenanthrene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Anthracene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Carbazole	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Di-n-butylphthalate	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Fluoranthene	**0.18**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzidine	**ND**	1.8	EPA 8270D	11-2-16	11-4-16	
Pyrene	**0.30**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
3,3'-Dichlorobenzidine	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Benzo[a]anthracene	**0.21**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Chrysene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Benzo[b]fluoranthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo(j,k)fluoranthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[a]pyrene	**0.12**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Indeno[1,2,3-cd]pyrene	**0.078**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Dibenz[a,h]anthracene	**ND**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[g,h,i]perylene	**0.15**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*53*	*18 - 109*				
Phenol-d6	*62*	*25 - 111*				
Nitrobenzene-d5	*67*	*22 - 113*				
2-Fluorobiphenyl	*68*	*30 - 114*				
2,4,6-Tribromophenol	*76*	*22 - 116*				
Terphenyl-d14	*38*	*33 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Pyridine	**ND**	0.40	EPA 8270D	11-2-16	11-7-16	
Phenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Aniline	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Chlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Benzyl alcohol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Hexachloroethane	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Nitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Isophorone	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Nitrophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Naphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4-Chloroaniline	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Dimethylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Acenaphthylene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
3-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Acenaphthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4-Nitrophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Dibenzofuran	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Diethylphthalate	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Fluorene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Pentachlorophenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Phenanthrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Carbazole	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzidine	**ND**	0.40	EPA 8270D	11-2-16	11-7-16	
Pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Butylbenzylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis-2-Ethylhexyladipate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Benzo[a]anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Chrysene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Di-n-octylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo(j,k)fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo[g,h,i]perylene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*1.6*	*18 - 109*				Q
Phenol-d6	*75*	*25 - 111*				
Nitrobenzene-d5	*78*	*22 - 113*				
2-Fluorobiphenyl	*83*	*30 - 114*				
2,4,6-Tribromophenol	*92*	*22 - 116*				
Terphenyl-d14	*85*	*33 - 114*				

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.33	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.33	EPA 8270D	11-2-16	11-3-16	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*69*	*18 - 109*				
Phenol-d6	*70*	*25 - 111*				
Nitrobenzene-d5	*72*	*22 - 113*				
2-Fluorobiphenyl	*74*	*30 - 114*				
2,4,6-Tribromophenol	*76*	*22 - 116*				
Terphenyl-d14	*81*	*33 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1102S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.07**	**1.02**	1.33	1.33	80	77	37 - 107	5	39	
2-Chlorophenol	**1.08**	**1.01**	1.33	1.33	81	76	36 - 107	7	40	
1,4-Dichlorobenzene	**0.503**	**0.485**	0.667	0.667	75	73	28 - 108	4	41	
n-Nitroso-di-n-propylamine	**0.488**	**0.465**	0.667	0.667	73	70	28 - 113	5	33	
1,2,4-Trichlorobenzene	**0.505**	**0.489**	0.667	0.667	76	73	33 - 106	3	38	
4-Chloro-3-methylphenol	**1.15**	**1.11**	1.33	1.33	86	83	52 - 106	4	30	
Acenaphthene	**0.525**	**0.510**	0.667	0.667	79	76	52 - 90	3	30	
4-Nitrophenol	**1.44**	**1.48**	1.33	1.33	108	111	30 - 109	3	32	I
2,4-Dinitrotoluene	**0.576**	**0.569**	0.667	0.667	86	85	50 - 101	1	32	
Pentachlorophenol	**0.981**	**0.855**	1.33	1.33	74	64	21 - 114	14	40	
Pyrene	**0.590**	**0.592**	0.667	0.667	88	89	52 - 104	0	30	
Surrogate:										
2-Fluorophenol					*79*	*75*	*18 - 109*			
Phenol-d6					*84*	*78*	*25 - 111*			
Nitrobenzene-d5					*81*	*76*	*22 - 113*			
2-Fluorobiphenyl					*87*	*80*	*30 - 114*			
2,4,6-Tribromophenol					*90*	*94*	*22 - 116*			
Terphenyl-d14					*95*	*92*	*33 - 114*			

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-295-01					
Client ID:	**Soil Sample 1**					
Arsenic	**ND**	11	6010C	10-27-16	10-27-16	
Barium	**79**	2.8	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.56	6010C	10-27-16	10-27-16	
Chromium	**48**	0.56	6010C	10-27-16	10-27-16	
Lead	**6.2**	5.6	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.28	7471B	10-27-16	10-27-16	
Selenium	**ND**	11	6010C	10-27-16	10-27-16	
Silver	**ND**	1.1	6010C	10-27-16	10-27-16	
Lab ID:	10-295-02					
Client ID:	**Soil Sample 2**					
Arsenic	**35**	14	6010C	10-27-16	10-27-16	
Barium	**170**	3.5	6010C	10-27-16	10-27-16	
Cadmium	**0.77**	0.70	6010C	10-27-16	10-27-16	
Chromium	**45**	0.70	6010C	10-27-16	10-27-16	
Lead	**37**	7.0	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.35	7471B	10-27-16	10-27-16	
Selenium	**ND**	14	6010C	10-27-16	10-27-16	
Silver	**ND**	1.4	6010C	10-27-16	10-27-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-295-03					
Client ID:	**Soil Sample 3**					
Arsenic	**ND**	11	6010C	10-27-16	10-27-16	
Barium	**55**	2.8	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.55	6010C	10-27-16	10-27-16	
Chromium	**22**	0.55	6010C	10-27-16	10-27-16	
Lead	**45**	5.5	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.28	7471B	10-27-16	10-27-16	
Selenium	**ND**	11	6010C	10-27-16	10-27-16	
Silver	**ND**	1.1	6010C	10-27-16	10-27-16	
Lab ID:	10-295-04					
Client ID:	**SS 4**					
Arsenic	**ND**	12	6010C	10-27-16	10-27-16	
Barium	**73**	3.0	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.59	6010C	10-27-16	10-27-16	
Chromium	**42**	0.59	6010C	10-27-16	10-27-16	
Lead	**ND**	5.9	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.30	7471B	10-27-16	10-27-16	
Selenium	**ND**	12	6010C	10-27-16	10-27-16	
Silver	**ND**	1.2	6010C	10-27-16	10-27-16	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-27-16
Date Analyzed:	10-27-16
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1027SM1,MB1027SM2&MB1027S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-289-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**47.1**	**46.5**	1	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**50.1**	**48.5**	3	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-289-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**92.3**	92	**91.8**	92	0	
Barium	100	**148**	101	**142**	95	4	
Cadmium	50.0	**48.7**	97	**48.3**	97	1	
Chromium	100	**135**	85	**137**	86	1	
Lead	250	**265**	106	**250**	100	6	
Mercury	0.500	**0.535**	107	**0.542**	108	1	
Selenium	100	**92.3**	92	**91.9**	92	0	
Silver	25.0	**20.8**	83	**21.0**	84	1	

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Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

% MOISTURE

Date Analyzed: 10-27-16

Client ID	Lab ID	% Moisture
Soil Sample 1	10-295-01	11
Soil Sample 2	10-295-02	28
Soil Sample 3	10-295-03	10
SS 4	10-295-04	16

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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-napthalene) 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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

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Chain of Custody

Page (of)

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

Company: WSDOT
Project Number:
Project Name: SR509 - 12th St
Project Manager: PAT SVOBODA
Sampled by: WSDOT

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: 10-295

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Volatiles 8270D/SIM (with low-level PAHs) SVOCs	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A						% Moisture
1	Soil Sample 1	10/25/16	3:10	SOIL	3		X		X			X						X				NO					X
2	Soil Sample 2	10/25/16	3:20																			DO					X
3	Soil Sample 3	10/25/16	3:30																			83					X
4	SS 4	10/25/16	3:45																								X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	Patti Sloan	WSDOT	10/26/2016	8:15A	
Received	Diane Wyatt	SPEEDY	10-26-16	8:15A	
Relinquished	Diane Wyatt	SPEEDY	10-26-16	11:10A	
Received		0082	10/26/16	1110	
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

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

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

March 27, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project SR509 Foreman Property
Laboratory Reference No. 1803-152

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on March 16, 2018.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

Case Narrative

Samples were collected on March 15, 2018 and received by the laboratory on March 16, 2018. 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.

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.

Semivolatiles EPA 8270D/SIM Analysis

The spike blank duplicate had one recovery slightly above control limits. The samples were non-detect for this analyte, further action was taken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Gasoline	**ND**	7.3	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*66-130*				
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Gasoline	**ND**	12	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*66-130*				
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Gasoline	**ND**	5.4	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*66-130*				
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Gasoline	**ND**	10	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*66-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Gx
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Gasoline	**ND**	5.0	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*66-130*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-145-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*95*	*97*	*66-130*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Diesel Range Organics	**ND**	35	NWTPH-Dx	3-19-18	3-19-18	
Lube Oil Range Organics	**82**	71	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Diesel Range Organics	**58**	34	NWTPH-Dx	3-19-18	3-19-18	N
Lube Oil Range Organics	**370**	68	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Diesel Range Organics	**ND**	60	NWTPH-Dx	3-19-18	3-20-18	
Lube Oil	**470**	120	NWTPH-Dx	3-19-18	3-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Diesel Range Organics	**ND**	33	NWTPH-Dx	3-19-18	3-19-18	U1
Lube Oil	**260**	61	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*79*	*50-150*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	3-19-18	3-19-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-145-01										
	ORIG	DUP									
Diesel Range Organics	**64.2**	**42.0**	NA	NA		NA		NA	42	NA	
Lube Oil Range Organics	**188**	**137**	NA	NA		NA		NA	31	NA	
Surrogate:											
o-Terphenyl						*88*	*81*	*50-150*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Acetone	0.023	0.0054	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0022	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*120*	*75-131*				
Toluene-d8	*119*	*83-130*				
4-Bromofluorobenzene	*115*	*78-130*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Acetone	0.0075	0.0063	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0025	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*75-131*				
Toluene-d8	*104*	*83-130*				
4-Bromofluorobenzene	*100*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0022	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*123*	*75-131*				
Toluene-d8	*119*	*83-130*				
4-Bromofluorobenzene	*115*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
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Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0032	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*119*	*75-131*				
Toluene-d8	*121*	*83-130*				
4-Bromofluorobenzene	*118*	*78-130*				

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0319S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0319S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0020	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*75-131*				
Toluene-d8	*102*	*83-130*				
4-Bromofluorobenzene	*103*	*78-130*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0319S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0518**	**0.0521**	0.0500	0.0500	104	104	58-126	1	20	
Benzene	**0.0538**	**0.0549**	0.0500	0.0500	108	110	72-122	2	19	
Trichloroethene	**0.0503**	**0.0497**	0.0500	0.0500	101	99	75-120	1	20	
Toluene	**0.0506**	**0.0503**	0.0500	0.0500	101	101	78-123	1	19	
Chlorobenzene	**0.0453**	**0.0456**	0.0500	0.0500	91	91	75-120	1	18	
Surrogate:										
Dibromofluoromethane					*109*	*103*	*75-131*			
Toluene-d8					*109*	*99*	*83-130*			
4-Bromofluorobenzene					*105*	*99*	*78-130*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
n-Nitrosodimethylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.47	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
2,4-Dinitrophenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.47	EPA 8270D	3-21-18	3-22-18	
Pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*68*	*18 - 113*				
Phenol-d6	*71*	*19 - 119*				
Nitrobenzene-d5	*71*	*19 - 119*				
2-Fluorobiphenyl	*78*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*74*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.46	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**2.9**	1.1	EPA 8270D	3-21-18	3-23-18	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**0.016**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**0.014**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.028**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.46	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.023**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.022**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.028**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**0.012**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**0.012**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**0.020**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*61*	*18 - 113*				
Phenol-d6	*67*	*19 - 119*				
Nitrobenzene-d5	*67*	*19 - 119*				
2-Fluorobiphenyl	*77*	*33 - 109*				
2,4,6-Tribromophenol	*79*	*19 - 121*				
Terphenyl-d14	*76*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**0.12**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.013**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.012**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**0.51**	0.20	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.0092**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**0.25**	0.20	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.011**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**0.014**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*55*	*18 - 113*				
Phenol-d6	*68*	*19 - 119*				
Nitrobenzene-d5	*61*	*19 - 119*				
2-Fluorobiphenyl	*76*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*77*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**0.0097**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.012**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.013**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.0084**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.011**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*63*	*18 - 113*				
Phenol-d6	*67*	*19 - 119*				
Nitrobenzene-d5	*68*	*19 - 119*				
2-Fluorobiphenyl	*75*	*33 - 109*				
2,4,6-Tribromophenol	*74*	*19 - 121*				
Terphenyl-d14	*71*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0321S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Pyridine	**ND**	0.33	EPA 8270D	3-21-18	3-21-18	
Phenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Aniline	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Chlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Benzyl alcohol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Hexachloroethane	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Nitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Isophorone	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Nitrophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4-Chloroaniline	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Dimethylphthalate	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
3-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0321S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4-Nitrophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Dibenzofuran	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Diethylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Pentachlorophenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Carbazole	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzidine	**ND**	0.33	EPA 8270D	3-21-18	3-21-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*85*	*18 - 113*				
Phenol-d6	*86*	*19 - 119*				
Nitrobenzene-d5	*85*	*19 - 119*				
2-Fluorobiphenyl	*89*	*33 - 109*				
2,4,6-Tribromophenol	*85*	*19 - 121*				
Terphenyl-d14	*81*	*30 - 116*				

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0321S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.11**	**1.15**	1.33	1.33	83	86	39 - 109	4	36	
2-Chlorophenol	**1.18**	**1.28**	1.33	1.33	89	96	42 - 105	8	35	
1,4-Dichlorobenzene	**0.561**	**0.613**	0.667	0.667	84	92	31 - 103	9	37	
n-Nitroso-di-n-propylamine	**0.598**	**0.615**	0.667	0.667	90	92	36 - 104	3	34	
1,2,4-Trichlorobenzene	**0.601**	**0.618**	0.667	0.667	90	93	32 - 104	3	38	
4-Chloro-3-methylphenol	**1.17**	**1.21**	1.33	1.33	88	91	48 - 107	3	31	
Acenaphthene	**0.554**	**0.597**	0.667	0.667	83	90	38 - 102	7	33	
4-Nitrophenol	**1.21**	**1.23**	1.33	1.33	91	92	27 - 121	2	35	
2,4-Dinitrotoluene	**0.551**	**0.582**	0.667	0.667	83	87	36 - 103	5	34	
Pentachlorophenol	**1.43**	**1.53**	1.33	1.33	108	115	21 - 114	7	37	I
Pyrene	**0.585**	**0.619**	0.667	0.667	88	93	46 - 108	6	31	
Surrogate:										
2-Fluorophenol					*86*	*90*	*18 - 113*			
Phenol-d6					*87*	*90*	*19 - 119*			
Nitrobenzene-d5					*84*	*87*	*19 - 119*			
2-Fluorobiphenyl					*85*	*86*	*33 - 109*			
2,4,6-Tribromophenol					*90*	*92*	*19 - 121*			
Terphenyl-d14					*83*	*86*	*30 - 116*			

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-152-01					
Client ID:	**SS1 N A'**					
Arsenic	**ND**	14	6010D	3-21-18	3-21-18	
Barium	**84**	3.5	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.71	6010D	3-21-18	3-21-18	
Chromium	**41**	0.71	6010D	3-21-18	3-21-18	
Lead	**ND**	7.1	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.35	7471B	3-19-18	3-19-18	
Selenium	**ND**	14	6010D	3-21-18	3-21-18	
Silver	**ND**	1.4	6010D	3-21-18	3-21-18	
Lab ID:	03-152-02					
Client ID:	**SS2**					
Arsenic	**ND**	14	6010D	3-21-18	3-21-18	
Barium	**110**	3.4	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.68	6010D	3-21-18	3-21-18	
Chromium	**52**	0.68	6010D	3-21-18	3-21-18	
Lead	**53**	6.8	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.34	7471B	3-19-18	3-19-18	
Selenium	**ND**	14	6010D	3-21-18	3-21-18	
Silver	**ND**	1.4	6010D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-152-03					
Client ID:	**SS3**					
Arsenic	**ND**	12	6010D	3-21-18	3-21-18	
Barium	**61**	3.0	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.60	6010D	3-21-18	3-21-18	
Chromium	**47**	0.60	6010D	3-21-18	3-21-18	
Lead	**27**	6.0	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.30	7471B	3-19-18	3-19-18	
Selenium	**ND**	12	6010D	3-21-18	3-21-18	
Silver	**ND**	1.2	6010D	3-21-18	3-21-18	
Lab ID:	03-152-04					
Client ID:	**SS4**					
Arsenic	**ND**	12	6010D	3-21-18	3-21-18	
Barium	**160**	3.0	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.61	6010D	3-21-18	3-21-18	
Chromium	**60**	0.61	6010D	3-21-18	3-21-18	
Lead	**23**	6.1	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.30	7471B	3-19-18	3-19-18	
Selenium	**ND**	12	6010D	3-21-18	3-21-18	
Silver	**ND**	1.2	6010D	3-21-18	3-21-18	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0321SM1

Analyte	Method	Result	PQL
Arsenic	6010D	**ND**	10
Barium	6010D	**ND**	2.5
Cadmium	6010D	**ND**	0.50
Chromium	6010D	**ND**	0.50
Lead	6010D	**ND**	5.0
Selenium	6010D	**ND**	10
Silver	6010D	**ND**	1.0

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-19-18
Date Analyzed:	3-19-18
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0319S1

Analyte	Method	Result	PQL
Mercury	7471B	**ND**	0.25

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
DUPLICATE QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**83.0**	**68.1**	20	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**30.1**	**36.9**	20	0.50	
Lead	**57.3**	**49.0**	16	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: March 27, 2018
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Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 3-19-18
Date Analyzed: 3-19-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.25	

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Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
MS/MSD QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**95.4**	95	**90.7**	91	5	
Barium	100	**175**	92	**181**	98	4	
Cadmium	50.0	**46.4**	93	**45.9**	92	1	
Chromium	100	**123**	93	**122**	92	1	
Lead	250	**291**	93	**290**	93	0	
Selenium	100	**97.3**	97	**94.8**	95	3	
Silver	25.0	**19.3**	77	**18.8**	75	3	

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TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 3-19-18
Date Analyzed: 3-19-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.510**	102	**0.490**	98	4	

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Date of Report: March 27, 2018
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% MOISTURE

Date Analyzed: 3-19-18

Client ID	Lab ID	% Moisture
SS1 N A'	03-152-01	29
SS2	03-152-02	27
SS3	03-152-03	16
SS4	03-152-04	18

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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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

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Chain of Custody

Page 1 of 1

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

Company: WSDOT
Project Number:
Project Name: SR509 Foreman Property
Project Manager: PATRICK SVOBODA
Sampled by:

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: 03-152

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	SS1 NA	3/15/18	12:30	S	5
2	SS2	3/15/18	1:00		
3	SS3	3/15/18	2:00		
4	SS4	3/15/18	2:15		

Lab ID	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	✓	✓	✓	✓	✓		✓	✓					✓	✓				✓
2	✓	✓	✓		✓		✓	✓					✓	✓				✓
3	✓	✓	✓		✓		✓	✓					✓	✓				✓
4	✓	✓	✓		✓		✓	✓					✓	✓				✓

	Signature	Company	Date	Time
Relinquished	Patrick Svoboda	WSDOT	3/16/18	8:30
Received	Eileen Clark	Alpha	3/16/18	8:30
Relinquished	Eileen Clark	Alpha	3/16/18	11:23
Received			3/16/18	11:23
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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

September 24, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project Foreman
Laboratory Reference No. 1809-229

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on September 21, 2018.

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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

Case Narrative

Samples were collected on September 20 and 21, 2018 and received by the laboratory on September 21, 2018. 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.

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.

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

September 24, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
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Project Manager

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Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

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Samples were collected on September 20 and 21, 2018 and received by the laboratory on September 21, 2018. 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.

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.

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

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:	**FC1-1**					
Laboratory ID:	09-229-01					
Diesel Range Organics	**ND**	41	NWTPH-Dx	9-21-18	9-21-18	U1
Lube Oil	**590**	57	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
Diesel Range Organics	**ND**	27	NWTPH-Dx	9-21-18	9-21-18	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*81*	*50-150*				

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

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:	MB0921S3					
Diesel Range Organics	**ND**	25	NWTPH-Dx	9-21-18	9-21-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-217-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range Organics	**178**	**164**	NA	NA		NA		NA	8	NA	
Surrogate:											
o-Terphenyl						*82*	*80*	*50-150*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
n-Nitrosodimethylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	3.8	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
2,4-Dinitrophenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	3.8	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*38*	*19 - 103*				
Phenol-d6	*48*	*30 - 103*				
Nitrobenzene-d5	*44*	*27 - 105*				
2-Fluorobiphenyl	*56*	*36 - 102*				
2,4,6-Tribromophenol	*55*	*33 - 110*				
Terphenyl-d14	*64*	*38 - 108*				

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Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	0.36	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	0.36	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*41*	*19 - 103*				
Phenol-d6	*47*	*30 - 103*				
Nitrobenzene-d5	*43*	*27 - 105*				
2-Fluorobiphenyl	*52*	*36 - 102*				
2,4,6-Tribromophenol	*78*	*33 - 110*				
Terphenyl-d14	*79*	*38 - 108*				

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0921S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	0.33	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0921S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	0.33	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*42*	*19 - 103*				
Phenol-d6	*47*	*30 - 103*				
Nitrobenzene-d5	*43*	*27 - 105*				
2-Fluorobiphenyl	*50*	*36 - 102*				
2,4,6-Tribromophenol	*70*	*33 - 110*				
Terphenyl-d14	*69*	*38 - 108*				

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0921S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**0.782**	**0.896**	1.33	1.33	59	67	45 - 94	14	29	
2-Chlorophenol	**0.770**	**0.879**	1.33	1.33	58	66	46 - 94	13	33	
1,4-Dichlorobenzene	**0.360**	**0.429**	0.667	0.667	54	64	42 - 91	17	37	
n-Nitroso-di-n-propylamine	**0.382**	**0.479**	0.667	0.667	57	72	45 - 100	23	26	
1,2,4-Trichlorobenzene	**0.396**	**0.454**	0.667	0.667	59	68	45 - 100	14	32	
4-Chloro-3-methylphenol	**0.950**	**1.01**	1.33	1.33	71	76	55 - 97	6	21	
Acenaphthene	**0.444**	**0.497**	0.667	0.667	67	75	48 - 91	11	21	
4-Nitrophenol	**1.04**	**1.11**	1.33	1.33	78	83	53 - 102	7	20	
2,4-Dinitrotoluene	**0.496**	**0.524**	0.667	0.667	74	79	47 - 96	5	19	
Pentachlorophenol	**1.32**	**1.35**	1.33	1.33	99	102	35 - 125	2	26	
Pyrene	**0.540**	**0.545**	0.667	0.667	81	82	55 - 110	1	17	
Surrogate:										
2-Fluorophenol					*48*	*55*	*19 - 103*			
Phenol-d6					*55*	*61*	*30 - 103*			
Nitrobenzene-d5					*51*	*57*	*27 - 105*			
2-Fluorobiphenyl					*56*	*64*	*36 - 102*			
2,4,6-Tribromophenol					*76*	*74*	*33 - 110*			
Terphenyl-d14					*71*	*71*	*38 - 108*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
Arsenic	**ND**	11	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.57	EPA 6010D	9-21-18	9-21-18	
Chromium	**64**	0.57	EPA 6010D	9-21-18	9-21-18	
Lead	**27**	5.7	EPA 6010D	9-21-18	9-21-18	
Mercury	**ND**	0.28	EPA 7471B	9-21-18	9-21-18	
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
Arsenic	**ND**	11	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.54	EPA 6010D	9-21-18	9-21-18	
Chromium	**11**	0.54	EPA 6010D	9-21-18	9-21-18	
Lead	**ND**	5.4	EPA 6010D	9-21-18	9-21-18	
Mercury	**ND**	0.27	EPA 7471B	9-21-18	9-21-18	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

TOTAL METALS
EPA 6010D/7471B
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0921SM2					
Arsenic	**ND**	10	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.50	EPA 6010D	9-21-18	9-21-18	
Chromium	**ND**	0.50	EPA 6010D	9-21-18	9-21-18	
Lead	**ND**	5.0	EPA 6010D	9-21-18	9-21-18	
Laboratory ID:	MB0921S1					
Mercury	**ND**	0.25	EPA 7471B	9-21-18	9-21-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-138-01										
	ORIG	DUP									
Arsenic	**14.6**	**14.8**	NA	NA		NA		NA	2	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**43.8**	**50.1**	NA	NA		NA		NA	13	20	
Lead	**52.9**	**55.3**	NA	NA		NA		NA	5	20	
Laboratory ID:	09-213-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	09-138-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**106**	**105**	100	100	14.6	**92**	**91**	75-125	1	20	
Cadmium	**48.0**	**47.1**	50.0	50.0	ND	**96**	**94**	75-125	2	20	
Chromium	**145**	**147**	100	100	43.8	**101**	**103**	75-125	1	20	
Lead	**296**	**287**	250	250	52.9	**97**	**94**	75-125	3	20	
Laboratory ID:	09-213-01										
Mercury	**0.566**	**0.586**	0.500	0.500	0.0548	**102**	**106**	80-120	3	20	

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Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

% MOISTURE

Date Analyzed: 9-21-18

Client ID	Lab ID	% Moisture
FC1-1	09-229-01	12
FC1-2	09-229-02	8

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

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.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, 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.

Z -

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

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Chain of Custody

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

Company: WSDOT
Project Number:
Project Name: Foreman
Project Manager: PAT SVOBODA
Sampled by: WSDOT

Turnaround Request (in working days)

(Check One) 24 hour

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

Laboratory Number: 09-229

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	FC1-1	9/20	14:15	S	6				✓			✓						✓			X
2	FC1-2	9/21	11:00	S	6				✓			✓						✓			X

	Signature	Company	Date	Time
Relinquished	[signature]	WSDOT	9/21/18	11:10
Received	[signature]	ALPHA	9-21-18	11:10
Relinquished	[signature]	ALPHA	9-21-18	12:39
Received	[signature]	ONE	9/21/18	1239
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Call when you receive these.

Chromatograms with final report ☐

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

APPENDIX 4 DISPOSAL TICKETS

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MORE THAN JUST FUEL.

1st + CW 1st Load 401187

Phone (206) 621.9777 **Certified Weight Ticket**

Company _____ **Charge** ____ **Cash** X

Truck # _____ **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** _____

16:53:47 20 Sep 2018

Weigh fee: 10.00
3215 4TH AVE S

Axle 1:	3240 lb
Axle 2:	5620 lb
Axle 3:	5660 lb
Total:	14520 lb

PetroCard™
MORE THAN JUST FUEL.

2nd. Load

401252

Phone (206) 621.9777 **Certified Weight Ticket**

Company X MARINE VACUME SERVICE **Charge** X **Cash** ____

Truck # X _____ **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** X R.B. ALLEN

08:44:47 22 Sep 2018

Weigh fee: 10.00
3215 4TH AVE S

Axle 1: 10680 lb
Axle 2: 7540 lb
Total: 18220 lb

V152

PetroCard™
MORE THAN JUST FUEL.

Light Weight 52

401254

Phone (206) 621.9777 **Certified Weight Ticket**

Company MARINE VACUUM SERVICE **Charge** ____ **Cash** ✓

Truck # X **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** X R B ALLEN

10:13:36 22 Sep 2018

Weigh fee: 10.00 $10.00

3215 4TH AVE S

Axle 1: 3620 lb
Axle 2: 7640 lb
Total: 11260 lb

W

PetroCard™
MORE THAN JUST FUEL.

Light Weight

401254

Phone (206) 621.9777 **Certified Weight Ticket**

Company MARINE VACUUM SERVICE **Charge** ____ **Cash** X

Truck # X **Account #** ____

Trailer # ____ **Card #** ____

Weighmaster ____ **Signature** X R B ALLEN

10:13:36 22 Sep 2018

Weigh fee: 10.00 $10.00

3215 4TH AVE S

Axle 1:	3620 lb
Axle 2:	7640 lb
Total:	11260 lb

WELCOME TO
KITIMAT SEATTLE GULL
TP53888936-001 KITIMAT SEATTLE GULL
3215 4TH AVE S
SEATTLE WA 98134

Descr.	qty	amount
SCALES	1	1.00
Sub Total		1.00
Tax		0.00
TOTAL		1.00
CASH $		1.00

THANKS, COME AGAIN
PLEASE COME AGAIN
206-621-9777
REG# 003 CSH# 009 DR# 01 TRAN# 38855
09/22/18 10:04:24 ST# 20

SEATTLE RECYCLE AND
DISPOSAL STATION

R E C E I P T

Bill Acct:CASH**
CASH CUSTOMERS

SITE:STS South Transfer Static
DATE:09/22/18 TICKET#:41071208
TIME IN:14:19 ID IN:MCA
TIME OUT:14:34 ID OUT:RJO
TURNAROUND TIME: 15
TRUCK:
ROUTE:Z-Not Specified

	LBS	TONS
GROSS:	16160	8.13
TARE:	15240	7.67
NET:	920	0.46

MATERIAL:	QTY	AMT
Package	920	$66.70

TIP FEE:	66.70
SPEC FEE:	0.00
TOTAL FEE:	**$66.70**
TENDERED:	66.70
CHANGE:	0.00

Payment Info:
5 - Credit Car $66.70

SIGNATURE: _____
NOTE:

WELCOME TO
KITIMAT SEATTLE GULL
TP53888936-001 KITIMAT SEATTLE GULL
3215 4TH AVE S
SEATTLE WA 98134

Descr.	qty	amount
< DUPLICATE RECEIPT >		
<CUSTOMER COPY>		
SCALES	1	10.00
Sub Total		10.00
Tax		0.00
TOTAL		10.00
CREDIT $		10.00

CARD TYPE: VISA
ACCT NUMBER: XXXX XXXX XXXX 1811
TRANS TYPE: SALE
APPROVAL: 012223 INVOICE: 036301
AMOUNT: $ 10.00

APPROVED 012223
****

THANKS, COME AGAIN
PLEASE COME AGAIN
206-621-9777
REG# 0003 CSH# 009 DR# 01 TRAN# 38807
09/22/18 08:30:26 ST# 20

APPENDIX 5 PHOTOS



SS-1 during investigation



SS-2 during investigation



SS-3 during investigation



SS-4 during investigation





SS-4 During investigation



General trash and debris scattered around the property



Grading and soil displacement on property



Soil displacement near SS-1



Soil displacement near SS-2



SS-2 Sample near soil displacement



SS3 of stockpile



SS4 of stockpile



Cleanup of SS-3 Area and confirmation sample area



Part of Cleanup of SS-4 area and confirmation sample taken from this area



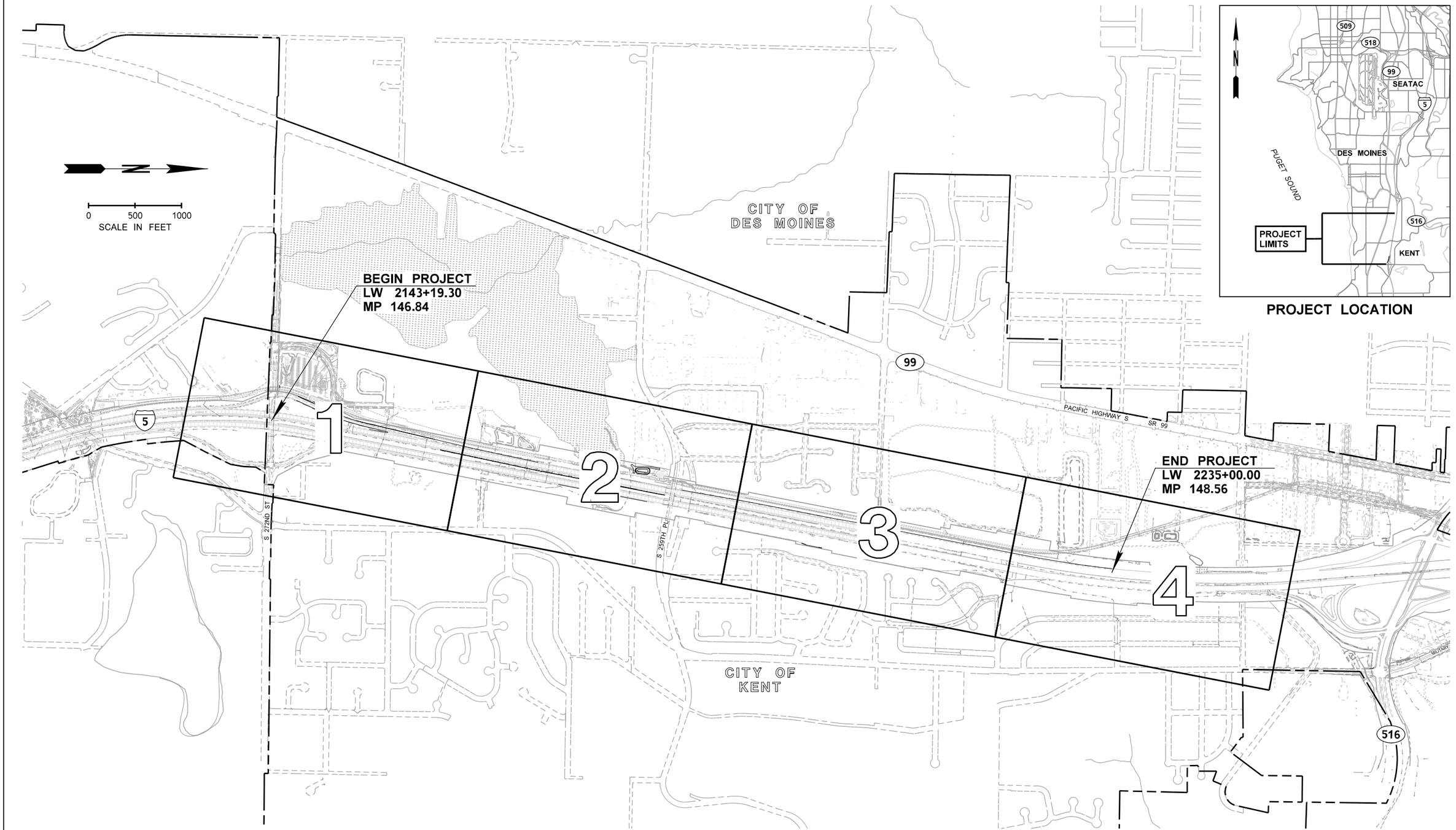
Backfill of front area



Backfill of side area

ATTACHMENT III

Project Specific Temporary Erosion and Sediment Control (TESC) Plans



PROJECT LOCATION

FILE NAME	pw:\\HQOLYMAPPPW03P.WSDOT.LOC:WSDOT\Documents_HQ\PS Gateway\509\-Phase1\Design\Environmental\Stage 2\Permits\NPDES\CAD\XL6298_STG2_PS_ECSVM_001.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
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DATE	8/17/2022				JOB NUMBER		
PLOTTED BY	roegreg						
DESIGNED BY	G. ROE						
ENTERED BY	G. ROE				CONTRACT NO.		LOCATION NO. XL6298
CHECKED BY	D. HOLMQUIST						
PROJ. ENGR.	A. AMIRI						
REGIONAL ADM.	J. WHITE	REVISION	DATE	BY			

HENRY LETINOY LITTLEMORE — STATE OF WASHINGTON — 42795 — REGISTERED PROFESSIONAL ENGINEER

DATE

P.E. STAMP BOX

30% DESIGN PLANS

NOT FOR CONSTRUCTION

Puget Sound **GATEWAY** Program

509 — 5 — 167

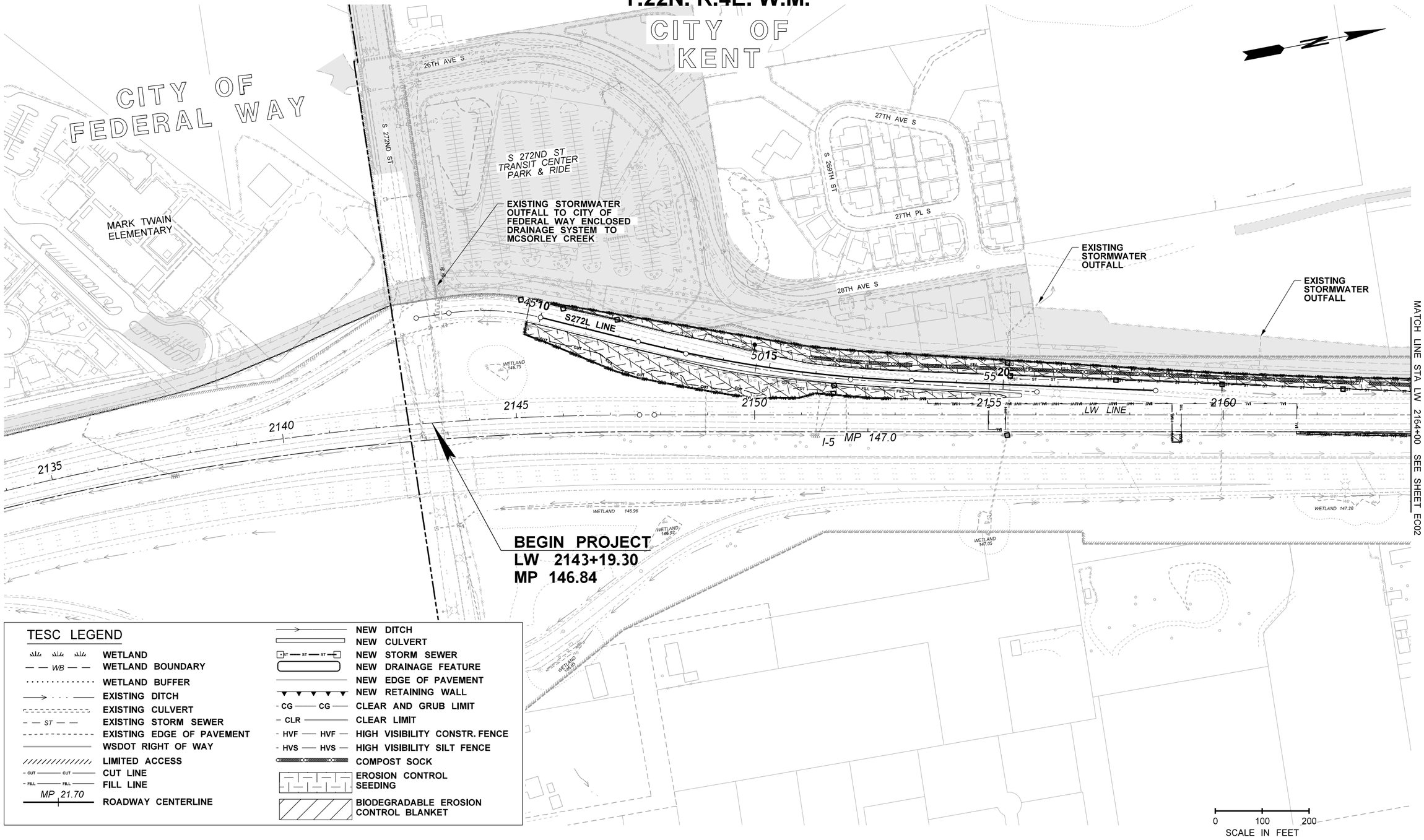
Washington State Department of Transportation

PUGET SOUND GATEWAY PROGRAM
SR 509 COMPLETION - STAGE 2
I-5 AUXILARY LANE PROJECT
TESC VICINITY MAP

VM01

SHEET 1 OF 5 SHEETS

T.22N. R.4E. W.M.



TESC LEGEND

- WETLAND
- WETLAND BOUNDARY
- WETLAND BUFFER
- EXISTING DITCH
- EXISTING CULVERT
- EXISTING STORM SEWER
- EXISTING EDGE OF PAVEMENT
- WSDOT RIGHT OF WAY
- LIMITED ACCESS
- CUT LINE
- FILL LINE
- MP 21.70 ROADWAY CENTERLINE
- NEW DITCH
- NEW CULVERT
- NEW STORM SEWER
- NEW DRAINAGE FEATURE
- NEW EDGE OF PAVEMENT
- NEW RETAINING WALL
- CLEAR AND GRUB LIMIT
- CLEAR LIMIT
- HIGH VISIBILITY CONSTR. FENCE
- HIGH VISIBILITY SILT FENCE
- COMPOST SOCK
- EROSION CONTROL SEEDING
- BIODEGRADABLE EROSION CONTROL BLANKET

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DESIGNED BY	H. LUTZKANOV				CONTRACT NO.		LOCATION NO.
ENTERED BY	G. ROE						XL6298
CHECKED BY	D. HOLMQUIST						
PROJ. ENGR.	A. AMIRI						
REGIONAL ADM.	J. WHITE	REVISION	DATE	BY			

HRISTO VALENTINOV LUTZKANOV — STATE OF WASHINGTON — 32795 — REGISTERED PROFESSIONAL ENGINEER

P.E. STAMP BOX — DATE

30% DESIGN PLANS

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Puget Sound GATEWAY Program

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Washington State Department of Transportation

PUGET SOUND GATEWAY PROGRAM
SR 509 COMPLETION - STAGE 2

I-5 AUXILARY LANE PROJECT

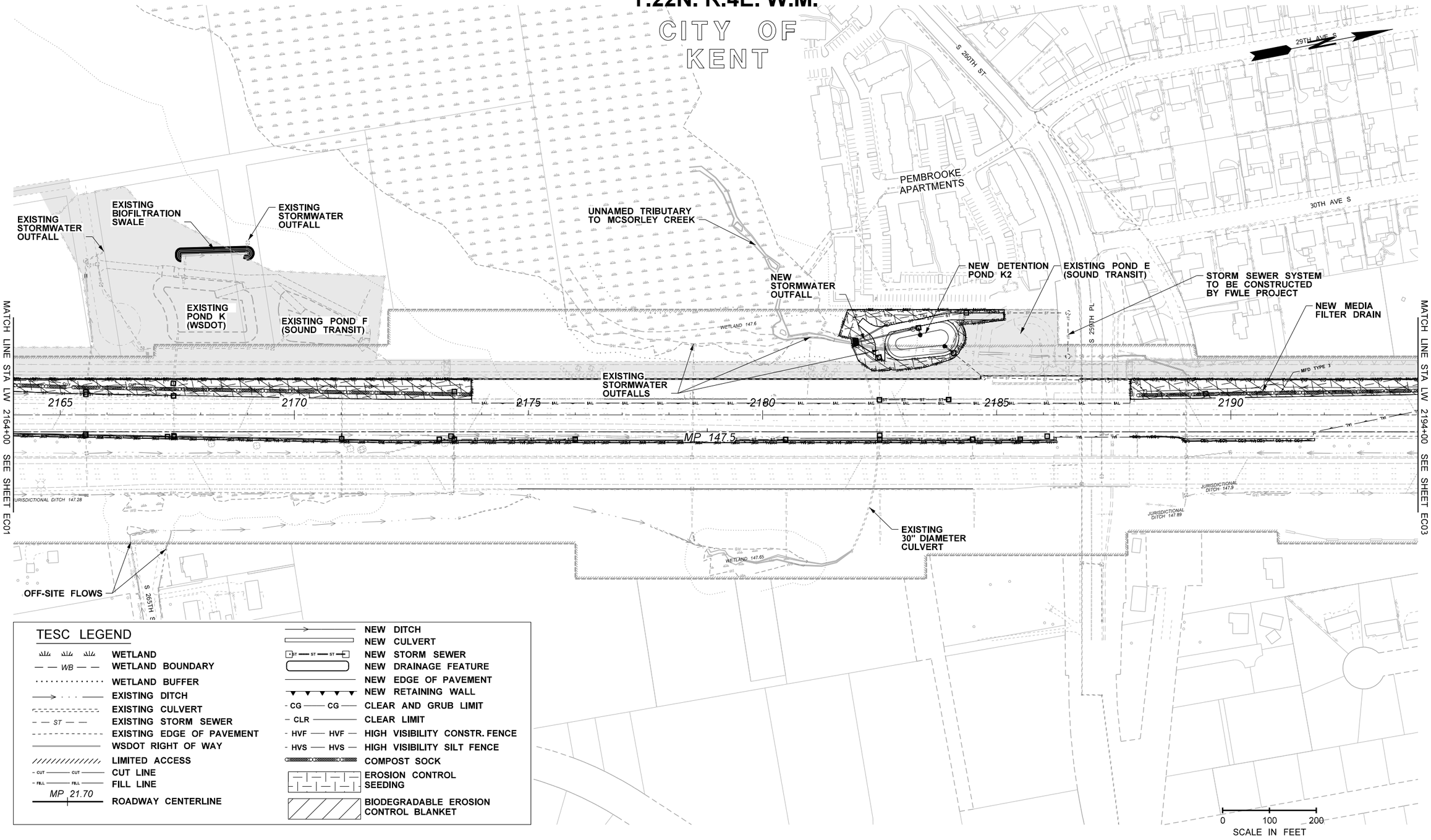
TEMPORARY EROSION & SEDIMENT CONTROL

EC01

SHEET 1 OF 4 SHEETS

T.22N. R.4E. W.M.

CITY OF KENT



TESC LEGEND

WETLAND	NEW DITCH
WETLAND BOUNDARY	NEW CULVERT
WETLAND BUFFER	NEW STORM SEWER
EXISTING DITCH	NEW DRAINAGE FEATURE
EXISTING CULVERT	NEW EDGE OF PAVEMENT
EXISTING STORM SEWER	NEW RETAINING WALL
EXISTING EDGE OF PAVEMENT	CLEAR AND GRUB LIMIT
WSDOT RIGHT OF WAY	CLEAR LIMIT
LIMITED ACCESS	HIGH VISIBILITY CONSTR. FENCE
CUT LINE	HIGH VISIBILITY SILT FENCE
FILL LINE	COMPOST SOCK
MP 21.70 ROADWAY CENTERLINE	EROSION CONTROL SEEDING
	BIODEGRADABLE EROSION CONTROL BLANKET

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DATE	8/17/2022			
PLOTTED BY	roegreg			
DESIGNED BY	H. LUTZKANOV			
ENTERED BY	G. ROE			
CHECKED BY	D. HOLMQUIST			
PROJ. ENGR.	A. AMIRI			
REGIONAL ADM.	J. WHITE	REVISION	DATE	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
CONTRACT NO.		LOCATION NO.
		XL6298

HRISTO ALETINOV LUTZKANOV — STATE OF WASHINGTON — 42795 — REGISTERED PROFESSIONAL ENGINEER

DATE

P.E. STAMP BOX

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Puget Sound GATEWAY Program

509 5 167

Washington State Department of Transportation

PUGET SOUND GATEWAY PROGRAM
SR 509 COMPLETION - STAGE 2

I-5 AUXILARY LANE PROJECT

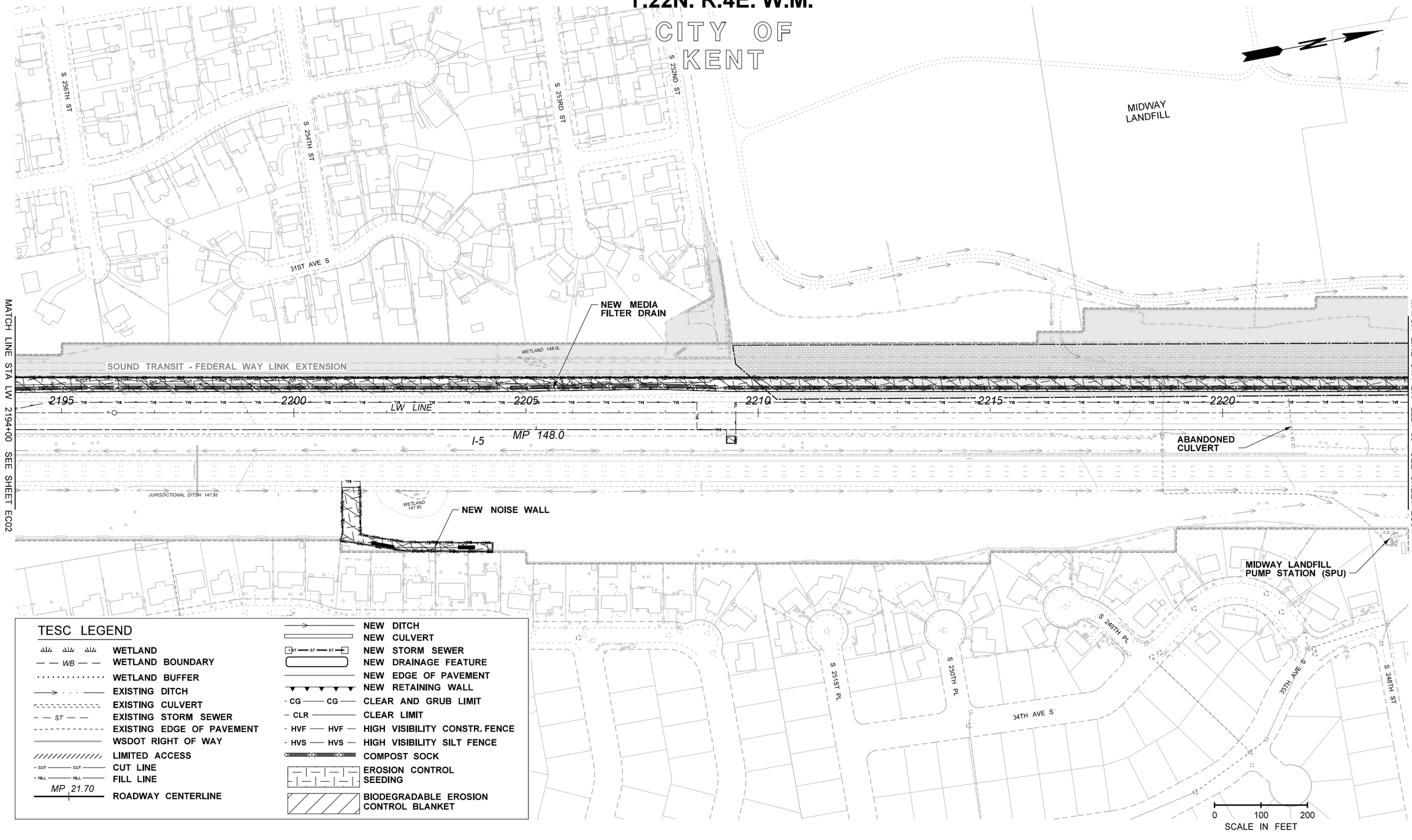
TEMPORARY EROSION & SEDIMENT CONTROL

EC02

SHEET 2 OF 4 SHEETS

T.22N. R.4E. W.M.

CITY OF KENT



TESC LEGEND

- WETLAND
- WETLAND BOUNDARY
- WETLAND BUFFER
- EXISTING DITCH
- EXISTING CULVERT
- EXISTING STORM SEWER
- EXISTING EDGE OF PAVEMENT
- WSDOT RIGHT OF WAY
- LIMITED ACCESS
- CUT LINE
- FILL LINE
- MP 21.70 ROADWAY CENTERLINE
- NEW DITCH
- NEW CULVERT
- NEW STORM SEWER
- NEW DRAINAGE FEATURE
- NEW EDGE OF PAVEMENT
- NEW RETAINING WALL
- CLEAR AND GRUB LIMIT
- CLEAR LIMIT
- HIGH VISIBILITY CONSTR. FENCE
- HIGH VISIBILITY SILT FENCE
- COMPOST SOCK
- EROSION CONTROL SEEDING
- BIODEGRADABLE EROSION CONTROL BLANKET

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DESIGNED BY	H. LUTZKANOV						
ENTERED BY	G. ROE				CONTRACT NO.		LOCATION NO. XL6298
CHECKED BY	D. HOLMQUIST						
PROJ. ENGR.	A. AMIRI						
REGIONAL ADM.	J. WHITE	REVISION	DATE	BY			

P.E. STAMP BOX — DATE

30% DESIGN PLANS

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Puget Sound GATEWAY Program

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Washington State Department of Transportation

PUGET SOUND GATEWAY PROGRAM
SR 509 COMPLETION - STAGE 2

I-5 AUXILARY LANE PROJECT

TEMPORARY EROSION & SEDIMENT CONTROL

EC03

SHEET 3 OF 4 SHEETS

T.22N. R.4E. W.M.

CITY OF KENT

MIDWAY MOBILE HOME/RV PARK

EXISTING MIDWAY LANDFILL POND (SPU)

SOUND TRANSIT POND

EXISTING STORMWATER OUTFALL TO MIDWAY LANDFILL POND

NEW MEDIA FILTER DRAIN

MATCH LINE STA LW 2224+00 SEE SHEET EC03

LW LINE

2225 2230 2235 2240 2245 2250

MP 148.5

END PROJECT
LW 2235+00.00
MP 148.56

OFF-SITE FLOW

OFF-SITE FLOW

TESC LEGEND

- WETLAND
- WETLAND BOUNDARY (WB)
- WETLAND BUFFER
- EXISTING DITCH
- EXISTING CULVERT
- EXISTING STORM SEWER (ST)
- EXISTING EDGE OF PAVEMENT
- WSDOT RIGHT OF WAY
- LIMITED ACCESS
- CUT LINE (CUT)
- FILL LINE (FILL)
- MP 21.70 ROADWAY CENTERLINE
- NEW DITCH
- NEW CULVERT
- NEW STORM SEWER (ST)
- NEW DRAINAGE FEATURE
- NEW EDGE OF PAVEMENT
- NEW RETAINING WALL
- CG CLEAR AND GRUB LIMIT (CG)
- CLR CLEAR LIMIT
- HVF HIGH VISIBILITY CONSTR. FENCE (HVF)
- HVS HIGH VISIBILITY SILT FENCE (HVS)
- COMPOST SOCK
- EROSION CONTROL SEEDING
- BIODEGRADABLE EROSION CONTROL BLANKET

0 100 200
SCALE IN FEET

FILE NAME	pw:\\HQOLYMAPPPW03P.WSDOT.LOC:WSDOT\Documents_HQ\PS Gateway\509\-Phase1\Design\Environmental\Stage 2\Permits\NPDES\CAD\XL6298_STG2_PS_ECS_004.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
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DESIGNED BY	H. LUTZKANOV				CONTRACT NO.		LOCATION NO.
ENTERED BY	G. ROE						XL6298
CHECKED BY	D. HOLMQUIST						
PROJ. ENGR.	A. AMIRI						
REGIONAL ADM.	J. WHITE	REVISION	DATE	BY			

KRISTO VALENTINOV LUTZKANOV STATE OF WASHINGTON 32795 REGISTERED PROFESSIONAL ENGINEER

DATE

P.E. STAMP BOX

30% DESIGN PLANS

NOT FOR CONSTRUCTION

Puget Sound GATEWAY Program

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PUGET SOUND GATEWAY PROGRAM
SR 509 COMPLETION - STAGE 2

I-5 AUXILARY LANE PROJECT

TEMPORARY EROSION & SEDIMENT CONTROL

EC04

SHEET 4 OF 4 SHEETS

ATTACHMENT IV

Laboratory Container Requirements

Parameter	Matrix	Preparation Method	Analytical Method	Container	Preservative	Holding Time (a)
Gasoline Range Organics (GRO)	Aqueous	5030	8015, AK101, NWTPH-Gx	3 x 40 mL Vial	Cool 4°C, pH <2 HCl	7 days (unpreserved) , 14 days (preserved)
Gasoline Range Organics (GRO)	Soil, Sediment	5035	8015, AK101, NWTPH-Gx	3 x 5035 kit or MeOH pres. Vial	Cool 4°C/ Freeze <-7°C	48 hours (4°C) to freeze, 14 days to analysis
MTBE, BTEX	Aqueous	5030	8021B	3 x 40 mL Vial	Cool 4°C, pH <2 HCl	7 days (unpreserved) , 14 days (preserved)
MTBE, BTEX	Soil, Sediment	5035	8021B	3 x 5035 kit or MeOH pres. Vial	Cool 4°C/ Freeze <-7°C	48 hours (4°C) to freeze, 14 days to analysis
Volatile Petroleum Hydrocarbons (VPH)	Aqueous	5030	WA TPH PM VPH	3 x 40 mL Vial	Cool 4°C, pH <2 HCl	7 days (unpreserved) , 14 days (preserved)
Volatile Petroleum Hydrocarbons (VPH)	Soil, Sediment	5035	WA TPH PM VPH	3 x 5035 kit or MeOH pres. Vial	Cool 4°C/ Freeze <-7°C	48 hours (4°C) to freeze, 14 days to analysis
Diesel Range Organics (DRO)	Aqueous	3510	8015, AK102, NWTPH-Dx	500 mL Amber Glass	Cool 4°C, pH <2 HCl	14 days to extraction, 40 days to analysis
Diesel Range Organics (DRO)	Soil, Sediment	3550	8015, AK102, NWTPH-Dx	4 oz Glass	Cool 4°C	14 days to extraction, 40 days to analysis
Residual Range Organics (RRO)	Aqueous	3510	8015, AK103, NWTPH-Dx	500 mL Amber Glass	Cool 4°C, pH <2 HCl	14 days to extraction, 40 days to analysis
Residual Range Organics (RRO)	Soil, Sediment	3550	8015, AK103, NWTPH-Dx	4 oz Glass	Cool 4°C	14 days to extraction, 40 days to analysis
Extractable Petroleum Hydrocarbons (EPH)	Aqueous	3510	WA TPH PM EPH	500 mL Amber Glass	Cool 4°C, pH <2 HCl	14 days to extraction, 40 days to analysis
Extractable Petroleum Hydrocarbons (EPH)	Soil, Sediment	3550	WA TPH PM EPH	4 oz Glass	Cool 4°C	14 days to extraction, 40 days to analysis
Volatile Organic Compounds (VOCs)	Aqueous	5030	8260C	3 x 40 mL Vial	Cool 4°C, pH <2 HCl	7 days (unpreserved) , 14 days (preserved)
Volatile Organic Compounds (VOCs)	Soil, Sediment	5035	8260C	3 x 5035 kit, MeOH pres. vial	Cool 4°C, Freeze <-7°C	48 hours (4°C) to freeze, 14 days to analysis
Ethylene Dibromide (EDB)	Aqueous	5030	8011	3 x 40 mL Vial	Cool 4°C, pH <2 HCl	7 days (unpreserved) , 14 days (preserved)
Priority Pollutant VOCs	Aqueous	NA	624	3 x 40 mL Vial	Cool 4°C, pH <2 HCl	14 days
Volatile Organic Compounds (VOCs)	Vapor	NA	8260C	Tedlar Bag	None	3 days

Volatile Organic Compounds (VOCs)	Vapor	NA	TO-15	Summa Canister	None	30 days
Semivolatile Organic Compounds (SVOCs)	Aqueous	3510	8270D	1 L Amber Glass	Cool 4°C	7 days to extraction, 40 days to analysis
Semivolatile Organic Compounds (SVOCs)	Soil, Sediment	3550	8270D	4 oz Glass	Cool 4°C	14 days to extractions, 40 days to analysis
Priority Pollutant SVOCs	Aqueous	NA	625	1 L Amber Glass	Cool 4°C	7 days to extraction, 40 days to analysis
Polynuclear Aromatic Hydrocarbons (PAHs)	Aqueous	3510	8270D SIM	500 mL Amber Glass	Cool 4°C	7 days to extraction, 40 days to analysis
Polynuclear Aromatic Hydrocarbons (PAHs)	Soil, Sediment	3550	8270D SIM	4 oz Glass	Cool 4°C	14 days to extractions, 40 days to analysis
Organochlorine Pesticides	Aqueous	3510	8081	1 L Amber Glass	Cool 4°C	7 days to extraction, 40 days to analysis
Organochlorine Pesticides	Soil, Sediment	3550	8081	4 oz Glass	Cool 4°C	14 days to extractions, 40 days to analysis
Polychlorinated Biphenyls (PCBs) as Aroclors	Aqueous	3510	8082	1 L Amber Glass	Cool 4°C	1 year
Polychlorinated Biphenyls (PCBs) as Aroclors	Soil, Sediment	3550	8082	4 oz Glass	Cool 4°C	1 year
Organochlorine Herbicides	Aqueous	3500	8151	1 L Amber Glass	Cool 4°C	7 days to extraction, 40 days to analysis
Organochlorine Herbicides	Soil, Sediment	3550	8151	4 oz Glass	Cool 4°C	14 days to extractions, 40 days to analysis
Organophosphorus Pesticides	Aqueous	3510	8081	1 L Amber Glass	Cool 4°C	7 days to extraction, 40 days to analysis
Organophosphorus Pesticides	Soil, Sediment	3550	8081	4 oz Glass	Cool 4°C	14 days to extractions, 40 days to analysis
Explosives	Aqueous	NA	8330	1 L Amber Glass	Cool 4°C	7 days to extraction, 40 days to analysis
Explosives	Soil, Sediment	NA	8330	4 oz Glass	Cool 4°C	14 days to extractions, 40 days to analysis
Dioxins/Furans	Aqueous	NA	8280, 8290, 1613	1 L Amber Glass	Cool 4°C	28 days to extract, 45 days to analysis
Dioxins/Furans	Soil, Sediment	NA	8280, 8290, 1613	4 oz Glass	Cool 4°C, Freeze <-7°C	28 days to extract, 1 year if frozen

PCB Congeners	Aqueous	NA	1668	1 L Amber Glass	Cool 4°C, pH <2 HCl	1 year
PCB Congeners	Soil, Sediment	NA	1668	4 oz Glass	Cool 4°C	1 year
1,4 Dioxane	Aqueous	5030	8260C	3 x 40 mL Vial	Cool 4°C	7 days to extraction, 40 days to analysis
1,4 Dioxane	Soil, Sediment	5035	8260C	4 oz Glass	Cool 4°C	14 days to extractions, 40 days to analysis
Perchlorate	Aqueous	NA	314.1	500 mL HDPE	Cool 4°C	28 days
Perchlorate	Soil, Sediment	NA	314.1	4 oz Glass	Cool 4°C	28 days
Alcohols	Aqueous	NA	8015	3 x 40 mL Vial	Cool 4°C	30 days
Alcohols	Soil, Sediment	NA	8015	4 oz Glass	Cool 4°C	30 days
Glycols	Aqueous	NA	8015	3 x 40 mL Vial	Cool 4°C	14 days
Glycols	Soil, Sediment	NA	8015	4 oz Glass	Cool 4°C	14 days
Metals (except Mercury)	Aqueous	3005	6010, 6020, 200.8	500 mL HDPE	Cool 4°C, pH <2 HNO_3	6 months
Metals (except Mercury)	Soil, Sediment	3050	6010, 6020, 200.8	4 oz Glass	Cool 4°C	6 months
Mercury	Aqueous	3005	1631, 7470	500 mL HDPE	Cool 4°C, pH <2 HNO_3	28 days
Mercury	Soil, Sediment	3050	1631, 7471	4 oz Glass	Cool 4°C	28 days
Hexavalent Chromium	Aqueous	NA	SM3500-CR-D	500 mL HDPE	Cool 4°C	28 days
Hexavalent Chromium	Soil, Sediment	NA	SM3500-CR-D	4 oz Glass	Cool 4°C	30 days to extraction, 7 days to analysis
Waste Characterization Parameters						
TCLP Metals	Solid	1311, 3005	6010, 6020, 200.8	4 oz Glass	Sample - Cool 4°C TCLP	

TCLP Mercury	Solid	1311, 3005	1631, 7470	4 oz Glass	Sample - Cool 4°C TCLP	28 days to extraction, 28 days to analysis
TCLP VOCs	Solid	1311, 5030	8260C	4 oz Glass	Sample - Cool 4°C TCLP	
TCLP SVOCs	Solid	1311, 3510	8270D	4 oz Glass	Sample -Cool 4°C, TCLP	
TCLP Pesticides	Solid	1311, 3510	8081, 8082	4 oz Glass	Cool 4°C	
Ignitability (Flashpoint)	Liquid	NA	1010	40 mL Vial	Cool 4°C	
Ignitability (Flashpoint)	Solid	NA	1030	4 oz Glass	Cool 4°C	
Corrosivity (pH)	Liquid	NA	9040	40 mL Vial	Cool 4°C	
Corrosivity (pH)	Solid	NA	9045	4 oz Glass	Cool 4°C	
BTU	NAPL	NA	NA	40 mL Vial	None	
BTU	Solid	NA	NA	4 oz Glass	None	
General Chemistry Parameters						
SPLP Extraction	Soil	1312	NA	4 oz Glass	Cool 4°C	Per analytical method
Dissolved Gasses	Aqueous	NA	RSK 175	3 x 40 mL Vial	Cool 4°C	14 days
Volatile Fatty Acids	Aqueous	NA	SM5560C	500 mL HDPE	Cool 4°C	Analyze ASAP
Acidity	Aqueous	NA	305.1, SM2310B	500 mL HDPE	Cool 4°C	14 days
Alkalinity	Aqueous	NA	310.1, SM2320B	500 mL HDPE	Cool 4°C	14 days
Ammonia	Aqueous	NA	SM4500-NH3H	500 mL HDPE	Cool 4°C, pH <2 H2SO4	28 days
Biological Oxygen Demand (BOD)	Aqueous	NA	405.1, SM5210B	1 L HDPE	Cool 4°C	48 hours

Chemical Oxygen Demand (COD)	Aqueous	NA	410.4, SM5220C	500 mL HDPE	Cool 4°C, pH <2 H2SO4	28 days
Bromide	Aqueous	NA	300.0, 9056	500 mL HDPE	Cool 4°C	28 days
Chloride	Aqueous	NA	325.1, SM4500-Cl-E	500 mL HDPE	Cool 4°C	28 days
Chlorine, Total residual	Aqueous	NA	SM4500-Cl-B	500 mL HDPE	Cool 4°C	Analyze ASAP
Color	Aqueous	NA	110.2, SM2120B	500 mL HDPE	Cool 4°C	48 Hours
Total Cyanide	Aqueous	NA	335.2, 9010, SM4500-F-C	500 mL HDPE	Cool 4°C	14 days
Total Cyanide	Soil, Sediment	NA	SM4500	4 oz Glass	Cool 4°C/NaOH	14 days
Amenable Cyanide	Aqueous	NA	335.1, 9010, SM4500-CN-G	500 mL HDPE	Cool 4°C/NaOH	14 days
Ferrous Iron	Aqueous	NA	SM3500-FE-D	500 mL HDPE	Cool 4°C	Analyze ASAP
Fluoride	Aqueous	NA	340.2, 9214, SM4500-F-C	500 mL HDPE	Cool 4°C	28 days
Hardness	Aqueous	NA	SM2340B	500 mL HDPE	1 mL 1:1 HNO3	6 months
Hexane Extractable Materials	Aqueous	NA	1664	1 L Amber Glass	4 mL 1:1 H2S04	28 days
Hexane Extractable Materials	Soil, Sediment	NA	9071	4 oz Glass	Cool 4°C	28 days
Moisture Content	Soil, Sediment	NA	160.3	4 oz Glass	Cool 4°C	NA
Total Kjeldahl Nitrogen (TKN)	Aqueous	NA	351.2	500 mL HDPE	1 mL 1:1 H2SO4	28 days
Nitrate - Nitrogen	Aqueous	NA	353.2, SM4500-NO3F	500 mL HDPE	Cool 4°C	2 days
Nitrate + Nitrite - Nitrogen	Aqueous	NA	353.2, SM4500-NO3E	500 mL HDPE	Cool 4°C	28 days
Orthophosphate	Aqueous	NA	365.2, SM4500-P-E	500 mL HDPE	Cool 4°C, pH <2 H2SO4	28 days

Total Phenolics	Aqueous	NA	SM5530	500 mL Amber Glass	0.5 mL 1:1 H2SO4	28 days
Phosphate	Aqueous	NA	365.2, 300, 9056	500 mL HDPE	Cool 4°C, pH <2 H2SO4	28 days
pH	Aqueous	NA	9040	500 mL HDPE	Cool 4°C	24 hours
pH	Soil, Sediment	NA	9045	500 mL HDPE	Cool 4°C	28 days
Phosphorus	Aqueous	NA	SM4500-P	500 mL HDPE	0.5 mL 1:1 H2SO4	28 days
Settleable Solids	Aqueous	NA	SM2540F	500 mL HDPE	Cool 4°C	48 hours
Total Dissolved Solids (TDS)	Aqueous	NA	SM2540C	500 mL HDPE	Cool 4°C	7 days
Total Suspended Solids (TSS)	Aqueous	NA	SM2540D	500 mL HDPE	Cool 4°C	7 days
Volatile Solids	Aqueous	NA	SM2540E	500 mL HDPE	Cool 4°C	7 days
Specific Conductance	Aqueous	NA	SM2510B	500 mL HDPE	Cool 4°C	28 days
Sulfate	Aqueous	NA	SM4500	500 mL HDPE	Cool 4°C	7 days
Sulfide	Aqueous	NA	SM4500-S2-E	500 mL HDPE	Zinc Acetate + NaOH	Analyze ASAP
Sulfite	Aqueous	NA	SM4500-SO3-B	500 mL HDPE	Cool 4°C	48 hours
Temperature	Aqueous	NA	SM2550B	500 mL HDPE	NA	Analyze ASAP
Total Organic Halogens (TOX)	Aqueous	NA	9076, S5320B	500 mL HDPE	Cool 4°C, 2 mL 1:1 H2SO4	28 days
Total Organic Halogens (TOX)	Soil, Sediment	NA	9076	4 oz Glass	Cool 4°C	28 days
Turbidity	Aqueous	NA	180.1, SM2130B	500 mL HDPE	Cool 4°C	48 hours
Total Organic Carbon (TOC)	Aqueous	NA	415.1, 9060, SM5310B	500 mL HDPE	Cool 4°C, pH <2 HCl	28 days

Total Organic Carbon (TOC)	Soil, Sediment	NA	Plumb 1981	4 oz Glass	Cool 4°C	28 days
Microbiological						
Bacteria Plate Count	Aqueous	NA	9215	250 mL Sterile Nalgene	0.2 mL 10% Na2S2O3	6 hours
Chlorophyll	Aqueous	NA	0200H	250 mL Sterile Nalgene	0.2 mL 10% Na2S2O3	30 hours
Coliform, Fecal and Total	Aqueous	NA	9221, 9222, 9223	250 mL Sterile Nalgene	0.2 mL 10% Na2S2O3	6 hours

ATTACHMENT V

Contaminated Media Management Plan

Contaminated Media Management Plan

WSDOT SR 509 STAGE 2
24TH AVENUE SOUTH TO SOUTH 188TH STREET – NEW EXPRESSWAY PROJECT
CONTRACT NO. 9905
KING COUNTY, WASHINGTON

PREPARED FOR: ATKINSON CONSTRUCTION
PREPARED BY: PBS-NASRIN BASTAMI/TOM MERGY

PBS Project Number 40757.028
Revision Date: February 28, 2025

1. Purpose

This Contaminated Media Management Plan (CMMP) is a follow-up to the project sampling and analysis plan (SAP) dated October 31, 2024, and is an addendum to the project Soil and Groundwater Management Plan (SGMP). Sampling at the project site has encountered elevated concentrations of arsenic and/or lead in soils at four (4) locations (see attached figures) that will require remediation. Those locations are each being considered separate Decision Units (DU2 through DU5) for the purposes of contaminated soil characterization and management. Additional soil samples will be collected at each of these DUs to guide remediation. Soils will be remediated by a method selected by joint agreement between the Contractor and WSDOT at the locations and depths in DU2 through DU5 with elevated concentrations of lead and/or arsenic. Confirmation soil samples will be collected following remediation as a performance monitoring measure. PBS notes that the overall Project Area is considered a single decision unit (DU1).

2. Background

The project builds the remaining two miles of new SR 509 Expressway from Burien to Kent, reconfiguring SR 509 interchanges at South 188th and South 160th Streets, adding a southbound auxiliary lane on I-5 between SR 516 and South 272nd Street, and improving service between industrial districts by allowing general purpose traffic and trucks to bypass I-5, SR 99 and local streets. When finished, SR 509 will be a key component of the Seattle and south King County transportation network.

According to the Washington State Department of Ecology (Ecology), the Asarco Company operated a copper smelter in the Point Defiance area of Tacoma for almost 100 years. Air pollution from the smelter settled on the surface soils over more than 1,000 square miles of the Puget Sound basin. Arsenic, lead, and other heavy metals are still in the soil because of this pollution. Concentrations of arsenic are known to exist within the aerial plume, which includes the project site, above the Model Toxics Control Act (MTCA) Method A cleanup level of 20 milligrams per kilogram (mg/kg) in soil at depths of 0 to 12 inches below ground surface[1]

This document amends the WSDOT SR509 Stage 2 Project Soil and Groundwater Management Plan (February 2024) for soil management procedures to be consistent with the applicable Washington State

[1] https://apps.ecology.wa.gov/dirtalert/

Department of Ecology Tacoma Smelter Plume Model Remedies Guidance, Publication Number 19-09-101, July 2019.

3. Soil Sampling and Testing

3.1 Sample Locations

Supplemental samples will be obtained from each planned sampling location laid out in the attached figures (see Figures 1 through 5). Supplemental sampling will be carried out using hand tools. At locations with vegetation/turf, hardscape (asphalt, concrete, etc.), or fill soils (gravel road base and built-up structural fill soils associated with roads), samples should be obtained at a depth of 3 to 6 inches below the depth at which native soils are first encountered. For example, supplemental samples should be collected at DU2-1, DU2-2, and DU2-3. In addition, at 25% of all other sample locations, an additional soil sample should be obtained at a depth of 6 to 12 inches below ground surface (i.e., 6 inches below the first soil sample).

At the initial proposed location of Bridge 1 (B1H8, DU4), additional soil samples could not be collected beyond a depth of 12 to 18 inches due to excessive groundwater encountered in the borehole. PBS notes that as part of future development modifications, the location of Bridge 1 was relocated further north of the initial remedial action area (DU4) to a region where confirmation soil samples did not detect arsenic or lead concentrations exceeding MTCA Method A cleanup standards. Furthermore, the proposed remediation activities at DU4 is limited to vegetation clearing followed by replanting at the site.

Additionally, the initial remedial investigation and confirmation soil sampling at MISC-4 (DU2) could not be extended further to the east and west due to proximity of the freeway and challenging terrain, respectively. At C1H2 (DU3), sampling was constrained by the steep slope to the south, and at Bridge 4 (DU5), it was limited by dense vegetation and wetlands to the east and southeast.

3.2 Sampling Personnel

Trained environmental personnel or Atkinson's Environmental Consultant (PBS) will perform soil sampling.

3.3 Sample Collection

The following sections describe the procedures for soil sampling. Soil samples will be collected by filling laboratory-provided containers for specific analysis. For the purposes of total arsenic and lead analysis, soil will be collected in a single 4-oz jar.

Sample personnel will wear new disposable nitrile gloves for collection of each sample to protect against cross-contamination between samples. All non-disposable components of the sampling equipment (e.g., split spoon, hand augers, shovels, spoons, or other equipment) used to collect samples that contact the soil will be decontaminated prior to, and in between, collection of individual samples as follows:

- Scrub with potable water containing Alconox/Liquinox detergent
- Potable water rinse/deionized (DI) water rinse

Each soil sample will be labeled using a Unique Sample ID:

- *Location (Sample boring #)_Depth_Time_Date*

Soil samples intended for metals analysis will be packed with care to avoid breakage in containers (typically coolers) under chain-of-custody documentation for transport to the analytical laboratory. Chain-of-custody documents will be provided by the Environmental Consultant, and relevant field information such as sample collection times will be filled in by the sampling personnel. Additionally, the sampling personnel will sign and date the chain-of-custody document when it is transferred to a parcel carrier or the project laboratory and send a copy to the Environmental Consultant.

3.4 Sampling Analysis Procedures

Samples will be analyzed for the following:

- Total Metals (arsenic and lead) by EPA Method 6020A

4. Soil Remediation

The Guidance presents several model remedies that could be employed. Selection of the appropriate model remedy will be dependent upon the results of soil sampling as described in Section 3. It is possible that different model remedies will be selected for different DUs based on sample results, field conditions, and other project considerations. It is expected that one or more of the following model remedies will be applied at the Site:

- **Excavate & Remove:** Excavate areas with elevated concentrations of contaminants to an appropriate depth (6" minimum, varies depending on sample results). Contaminated soil handling and disposal should be managed in accordance with the project SGMP. Requires confirmation samples after remediation effort as performance monitoring. This option may be more expensive than other remediation alternatives, but is most likely to achieve permanent compliance efficiently. This model remedy can be applied to soils of any concentration and is considered permanent and does not require ongoing monitoring.

- **Mix in Place:** Mix contaminated soils in place with deeper, clean soils or imported clean soils (from offsite or elsewhere on the project site) to achieve average concentrations below relevant cleanup levels. Requires confirmation samples after remediation effort as performance monitoring. May entail multiple rounds of mixing and sampling to achieve compliance. This model remedy may be applied to soils with average arsenic concentrations less than 40 parts per million (ppm) and average lead concentrations less than 500 ppm. It is also considered permanent and does not require ongoing monitoring.

- **Cap in Place:** May also consolidate and cap. This model remedy can be applied to soils with any concentrations of lead and arsenic but is considered non-permanent, and requires ongoing institutional control (recorded environmental covenant) and provision for long term monitoring and maintenance.

- At areas where proposed removal action is limited to clearing and grubbing vegetation for replanting purposes, the overgrown vegetation and trees should be considered as organic material for disposal purposes. However, the forest duff and soil associated with in-ground roots should be further assessed to determine appropriate disposal requirements.

5. Confirmation Sampling

The proposed remediation alternatives will require confirmation sampling. Following completion of the selected model remedy, samples will be acquired by the method described in Section 3 of this document in DU2 through DU5 as depicted in Figures 1 through 9 and Figures 2A, 2B, 7A, and 8A. If sample results indicate that those decision units remain "elevated" per the Guidance, additional remediation efforts may need to be applied in some locations, which would then need to be re-sampled.

6. Schedule and Reporting

The analytical results from samples collected will be reviewed by the Environmental Consultant and compared to action levels provided in the Guidance and MTCA regulations (Washington Administrative Code 173-340). The laboratory analyses results will be available within about 7 days after sample collection. PBS will await those results, compiling all data in a memo summarizing results and including the laboratory report chain of custody documentation, sample location plan(s), and conclusions. The results will be used to support regulatory reporting, decision unit characterization, and waste profiling for disposal.

Please feel free to contact me at 206.233.9639 or Nasrin.Bastami@PBSUSA.com with any questions.

Prepared by: Nasrin Bastami – Environmental Practice Lead (PBS)

_____

Reviewed by: Melanie Young, PE – Senior Environmental Engineer (PBS)
Kevin Hood - Senior Project Manager (PBS)

Attachments

Figure 1: SR 509 Stage II - Map Index (Area 1 through 4)
Figure 2 through 4: SR 509 State II – Lead Area 1 through Lead Area 4
Figure 5 through 9: SR 509 State II – Arsenic Area 1 through Arsenic Area 4
Figure 2A: Decision Unit 2 Remediation Plan (MISCH4)
Figure 2B: Decision Unit 3 Remediation Plan (C1-H2)
Figure 7A: Decision Unit 4 Remediation Plan (B1H8)
Figure 8A: Decision Unit 5 Remediation Plan (B4H6)

Table 1 - Soil Analytical Results - Arsenic & Lead

Map Index

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 1

Project Area

1 INCH = 3,500 FEET

N

0 3,500 7,000 Feet

PBS

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Lead - Area 1

SR 509

Date: January 2025 | Project: 40757.028

Figure: 2

Lead (Pb) Concentration (mg/kg)

- < 250
- 250 - 500
- > 500

Project Area

Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

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Lead - Area 2

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 3

Lead (Pb) Concentration (mg/kg)

- < 250
- 250 - 500
- > 500
- Project Area
- Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

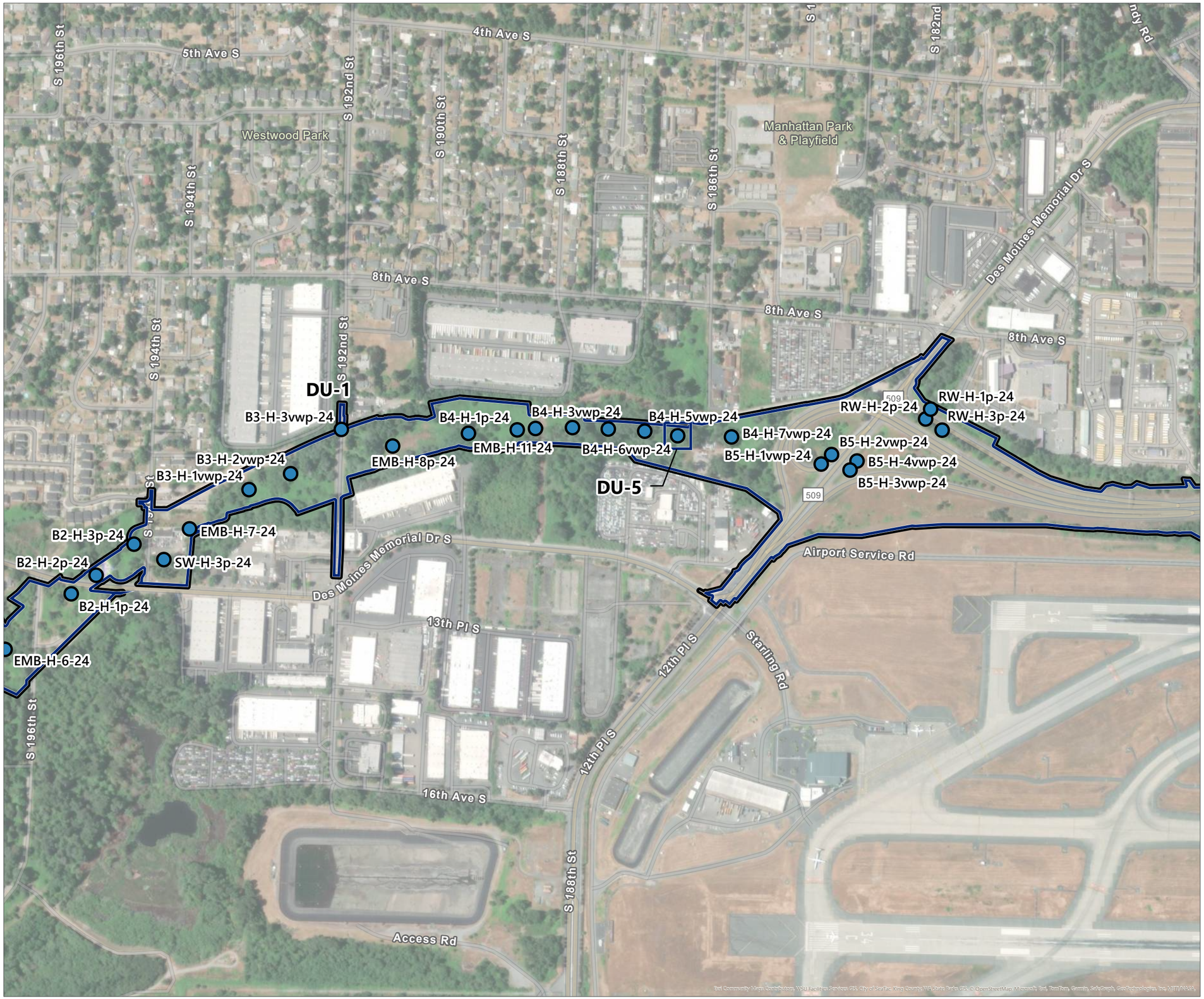
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Lead - Area 3

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 4



Lead (Pb) Concentration (mg/kg)

- < 250
- 250 - 500
- > 500
- Project Area
- Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

PBS

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NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet | \\apexcos.local\PBS_L\Projects\40500\40757 Guy Atkinson Construction\40757.028 SR 509 24th Ave - Stage 2\SAP Pb & AS - Stage 2 - 2024\GIS\40757.028_SR509_Stg2\40757.028_SR509_Stg2.aprx | 1/15/2025 4:35 PM

Lead - Area 4

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 5

Lead (Pb) Concentration (mg/kg)

- < 250
- 250 - 500
- > 500
- Project Area
- Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

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Arsenic - Area 1

SR 509

Date: January 2025 | Project: 40757.028

Figure: 6

Arsenic (mg/kg)

- < 20
- 20 - 40
- > 40
- Project Area
- Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

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Arsenic - Area 2

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 7

Arsenic (mg/kg)

- < 20
- 20 - 40
- > 40

Project Area

Decision Unit

DU = Decision Unit

---

1 INCH = 500 FEET

N

0 500 1,000 Feet

PBS

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Arsenic - Area 3

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 8

Arsenic (mg/kg)

- < 20
- 20 - 40
- > 40
- Project Area
- Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

PBS

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NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet | \\apexcos.local\PBS_L\Projects\40500\40757 Guy Atkinson Construction\40757.028 SR 509 24th Ave - Stage 2\SAP Pb & AS - Stage 2 - 2024\GIS\40757.028_SR509_Stg2\40757.028_SR509_Stg2.aprx | 1/15/2025 4:35 PM

Arsenic - Area 4

SR 509 - Stage II

Date: January 2025 | Project: 40757.028

Figure: 9

Arsenic (mg/kg)

- < 20
- 20 - 40
- > 40
- Project Area
- Decision Unit

DU = Decision Unit

1 INCH = 500 FEET

0 500 1,000 Feet

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

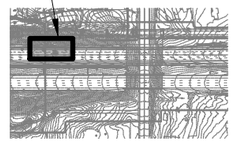
GENERAL NOTES

1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

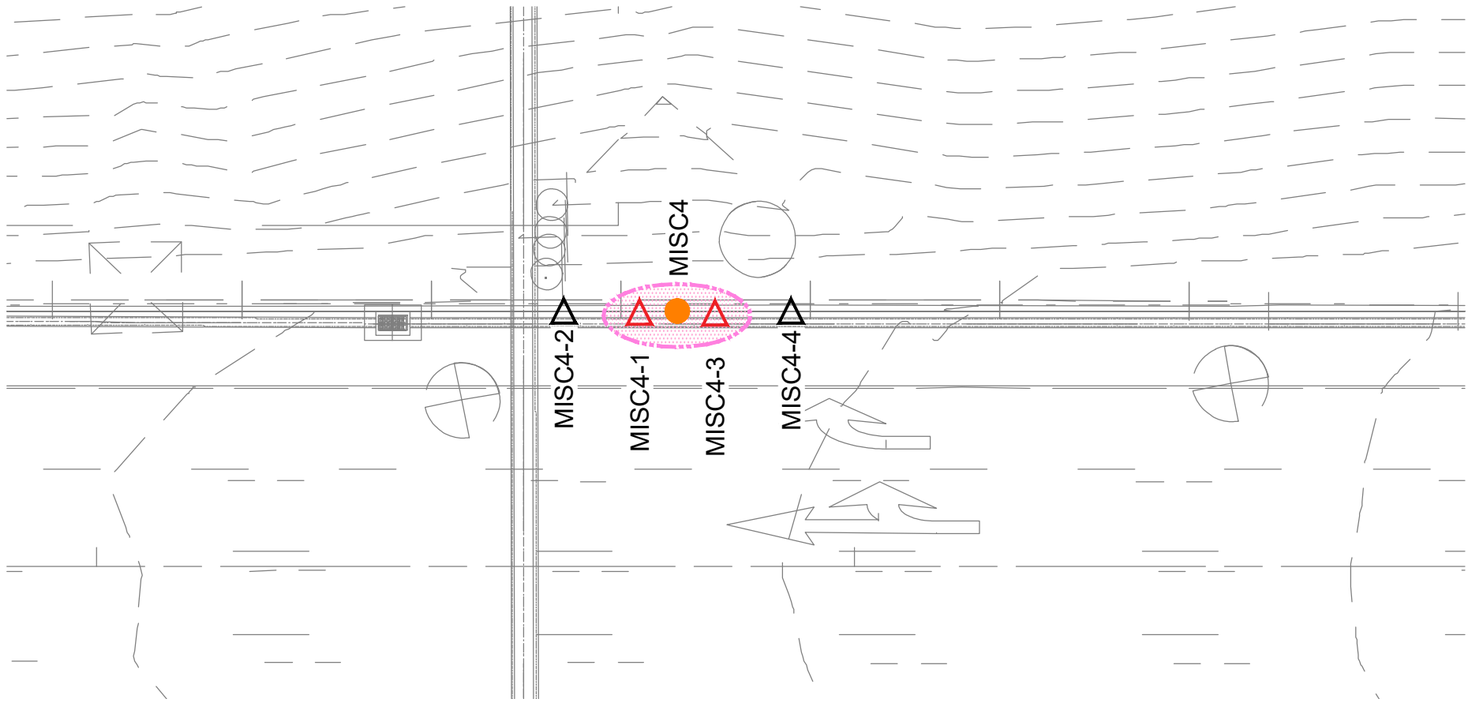
LEGEND

● MISC4	GEO-TECHNICAL SOIL BORING/SAMPLE LOCATION
△ MISC4-#	As/Pb IMPACTED SOIL/DELINEATION SOIL SAMPLE
△ MISC4-#	NOT IMPACTED SOIL/DELINEATION SOIL SAMPLE LOCATION
▭	APPROXIMATE LOCATION OF THE As/Pb IMPACTED SOIL PLUME (PROPOSED REMEDIATION AREA)

SCOPE OF WORK



KEY PLAN



DECISION UNIT 2 - MISC4

SCALE: 1" = 20'

0 10' 20' 40'

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Seattle, WA 98102
206.233.9639
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PBS AN APEX COMPANY

SR 509 STAGE II - MISC4

DECISION UNIT 2

SR509/24TH AVEUNE SOUTH TO SOUTH 188TH STREET

PROJECT
40757.028
DATE
JANUARY 2025
FIGURE:
2A

FULL SIZE SHEET FORMAT IS 11X17; IF PRINTED SIZE IS NOT 11X17, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

GENERAL NOTES

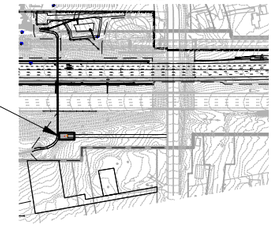
1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

LEGEND

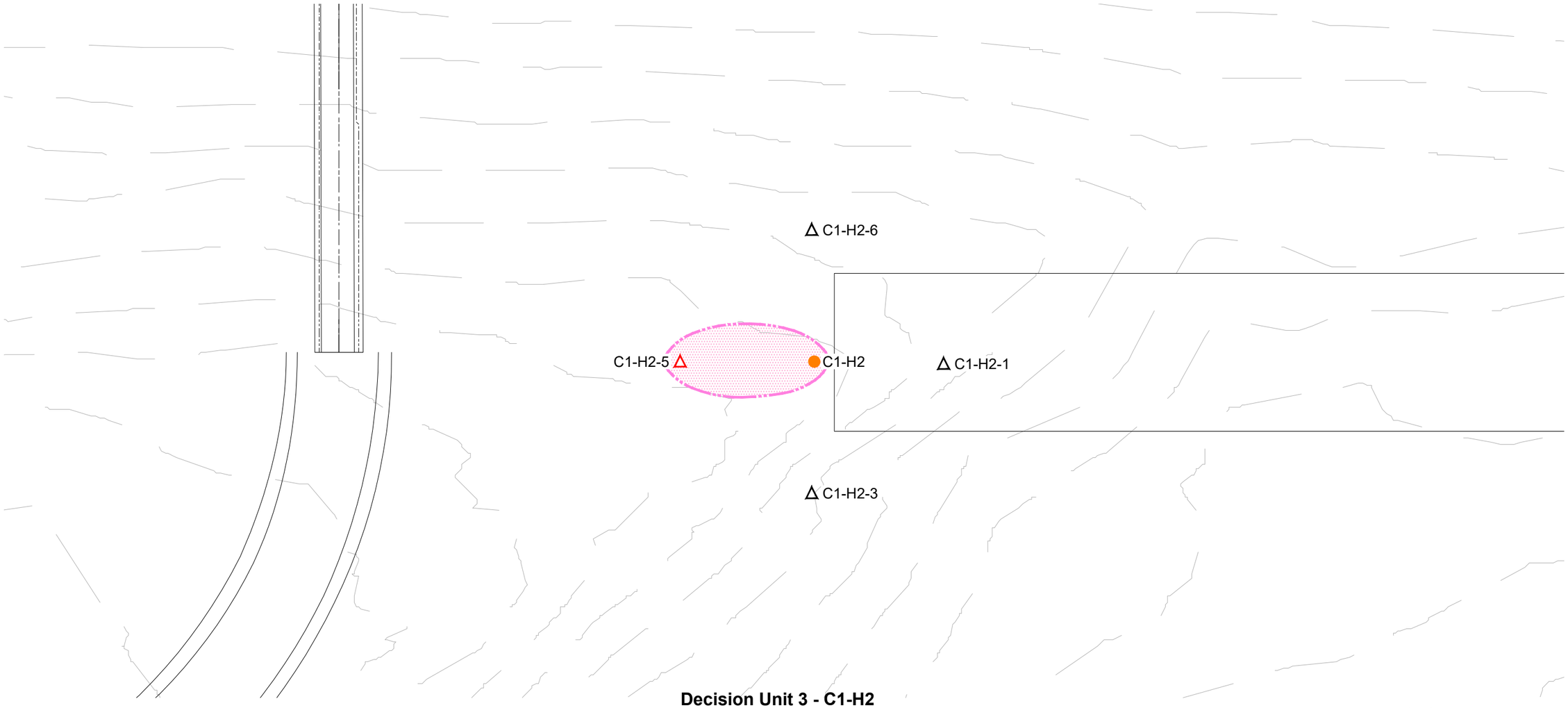
● C1-H2	GEO-TECHNICAL SOIL BORING/SAMPLE LOCATION
△ C1-H2-#	As/Pb IMPACTED SOIL SAMPLE
△ C1-H2-#	NOT IMPACTED CONFIRMATION SOIL SAMPLE
	APPROXIMATE LOCATION OF As/Pb IMPACTED SOIL PLUME (PROPOSED REMEDIATION AREA)

T.22N. R.4E. W.M.

SCOPE OF WORK



KEY PLAN



Decision Unit 3 - C1-H2

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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SR 509 STAGE II - C1-H2

DECISION UNIT 3

SR509/24TH AVEUNE SOUTH TO 188TH STREET

PROJECT
40757.028
DATE
JANUARY 2025
FIGURE:
2B

FULL SIZE SHEET FORMAT IS 11X17; IF PRINTED SIZE IS NOT 11X17, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

Filename: L:\Projects\40500\40757 Guy Atkinson Construction\40757.028 SR 509 24th Ave - Stage 2\SAP Pb & AS - Stage 2 - 2024\C1H2_DWG\40757.028_0002_FIG-1.dwg Layout Tab: 11X17 DRAWINGS User: James Blanco CAD Plot Date/Time: 1/15/2025 1:21:22 PM

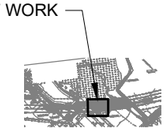
GENERAL NOTES

1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

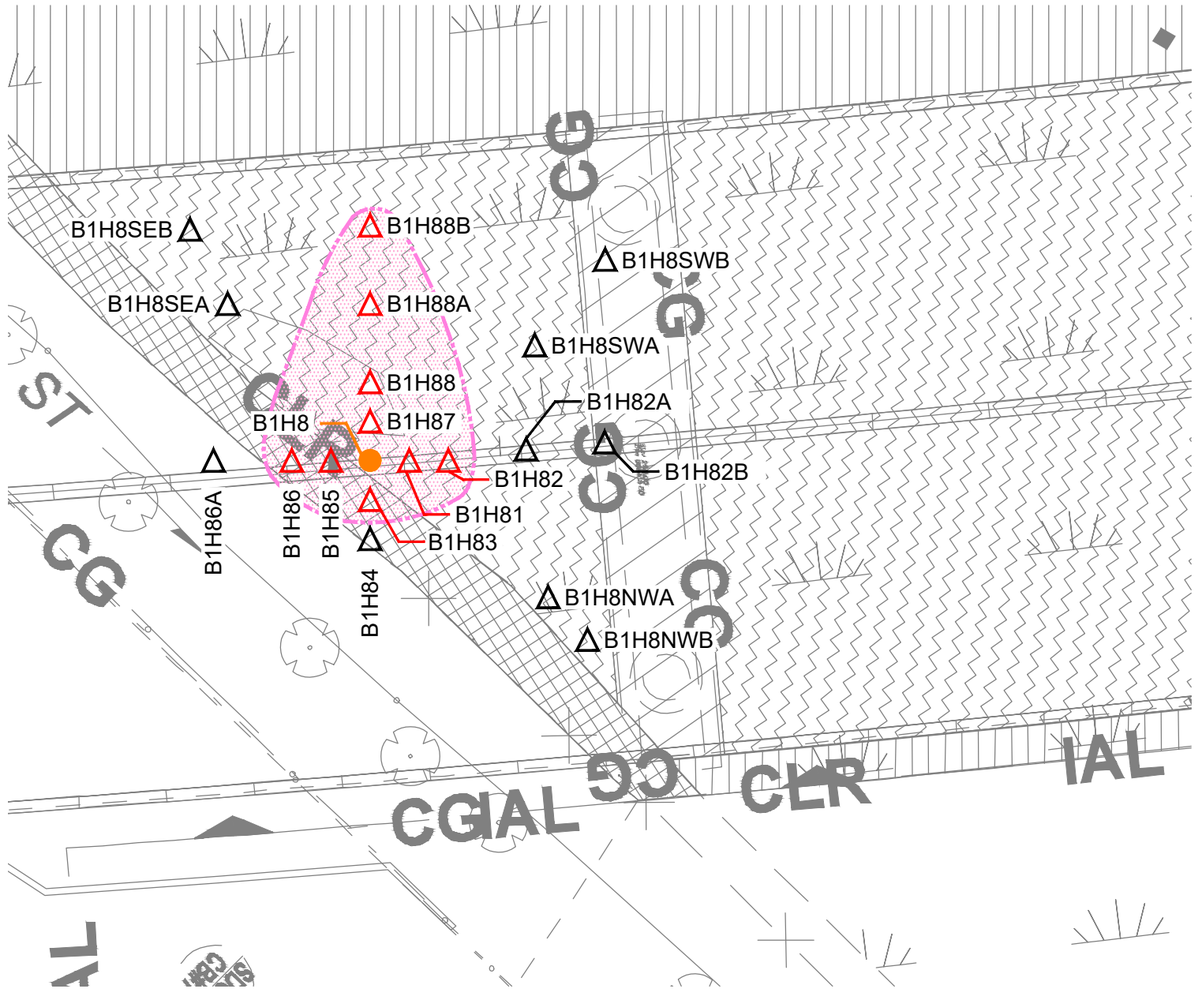
LEGEND

- B1H8 — GEO-TECHNICAL SOIL BORING/SAMPLE LOCATION (Arsenic [As]/Lead
- B1H8# — [Pb]) As/Pb IMPACTED SOIL SAMPLE
- B1H8# — NOT IMPACTED CONFIRMATION SOIL SAMPLE
- APPROXIMATE LOCATION OF As/Pb IMPACTED SOIL PLUME (PROPOSED REMEDIATION AREA)

SCOPE OF WORK



KEY PLAN



DECISION UNIT 4 - BRIDGE ONE

SCALE: 1" = 30'

0 15' 30' 60'

FULL SIZE SHEET FORMAT IS 11X17; IF PRINTED SIZE IS NOT 11X17, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

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SR509 STAGE II - BRIDGE 1

DECISION UNIT 4

SR509/24TH AVEUNE SOUTH TO SOUTH 18TH STREET

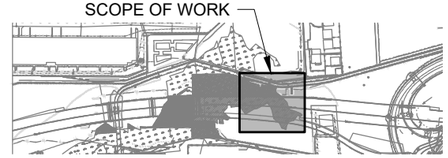
PROJECT
40757.028
DATE
DECEMBER 2024
FIGURE:
7A

GENERAL NOTES

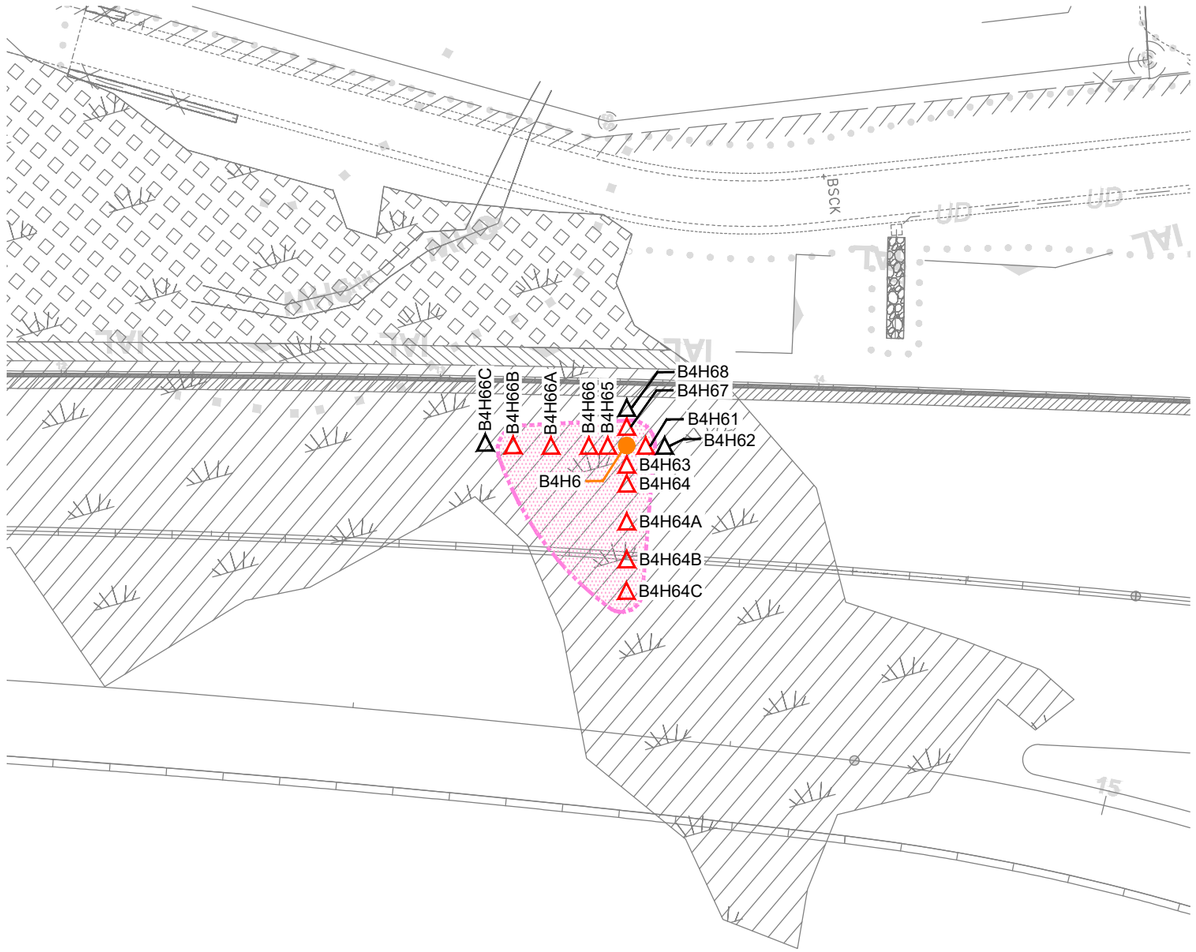
1. THIS DRAWING IS DIAGRAMMATIC. IT IS FOR GENERAL INFORMATION AND SAMPLE LOCATIONS.

LEGEND

B4H6	GEO-TECHNICAL SOIL BORING/SAMPLE LOCATION (AS/pb)
B4H6#	As/Pb IMPACTED SOIL SAMPLE
B4H6#	NOT IMPACTED CONFIRMATION SOIL SAMPLE
	APPROXIMATE LOCATION OF AS/PB IMPACTED SOIL PLUME (PROPOSED REMEDIATION AREA)



KEY PLAN



DECISION UNIT 5 - BRIDGE 4

SCALE: 1" = 40'

0 20' 40' 80'

FULL SIZE SHEET FORMAT IS 11X17; IF PRINTED SIZE IS NOT 11X17, THEN THIS SHEET FORMAT HAS BEEN MODIFIED & INDICATED DRAWING SCALE IS NOT ACCURATE.

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SR509 STAGE II - BRIDGE 4

DECISION UNIT 5

SR509/24TH AVEUNE SOUTH TO SOUTH 188TH STREET

PROJECT
40757.028
DATE
FEBRUARY 2025
FIGURE:
8A

Table 1 - Soil Analytical Results - Arsenic & Lead

State Route 509 - Stage II
Kent, Washington
PBS Project No. 40757.028

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				**20**	**250**
B1H1	B1H1-06	5/24/2024	6	4.2	6.6
	B1H1-12	5/24/2024	12	--	--
B1H2	B1H2-06	5/24/2024	6	3.4	5.5
	B1H2-12	5/24/2024	12	3.4	5.6
B1H3	B1H3-6	8/8/2024	6	1.4	2.1
	B1H3-12	8/8/2024	12	--	--
B1H4	B1H4-06	5/24/2024	6	11	23
	B1H4-12	5/24/2024	12	--	--
B1H5	B1H5-06	5/24/2024	6	4.4	4.1
	B1H5-12	5/24/2024	12	5.8	5.6
B1H6	B1H6-06	5/24/2024	6	2.9	5.7
	B1H6-12	5/24/2024	12	--	--
B1H7	B1H7-06	5/24/2024	6	5.1	19
	B1H7-12	5/24/2024	12	--	--
B1H8	B1H8-06	5/24/2024	6	**26**	**290**
	B1H8-12	5/24/2024	12	**22**	210
	B1H8-18	Deeper samples could not be collected due to excess water in the borehole			
	B1H8-24				
	B1H81-6	8/8/2024	6	**45**	**360**
	B1H81-12	8/8/2024	12	**31**	**360**
	B1H81-18	8/8/2024	18	**69**	220
	B1H81-24	9/19/2024	24	5.6	52
	B1H82-6	8/8/2024	6	**26**	**310**
	B1H82-12	8/8/2024	12	**49**	**430**
	B1H82-18	8/8/2024	18	**54**	**250**
	B1H82-24	9/19/2024	24	10	6.4
	B1H82A-6	9/19/2024	6	18	140
	B1H82A-12	9/19/2024	12	18	41
	B1H82A-18	9/19/2024	18	**--**	**--**
	B1H82A-24	9/19/2024	24	**--**	**--**
	B1H82B-6	9/19/2024	6	19	150
	B1H82B-12	9/19/2024	12	**--**	**--**
	B1H82B-18	9/19/2024	18	**--**	**--**
	B1H82B-24	9/19/2024	24	**--**	**--**

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				**20**	**250**
B1H8	B1H83-6	8/8/2024	6	**35**	**270**
	B1H83-12	8/8/2024	12	**31**	240
	B1H83-18	8/8/2024	18	**50**	**300**
	B1H83-24	Deeper samples could not be collected due to excess water in the borehole			
	B1H83-30				
	B1H84-6	8/8/2024	6	17	100
	B1H84-12	8/8/2024	12	4.7	39
	B1H84-18	8/8/2024	18	9.1	65
	B1H85-6	8/8/2024	6	**35**	**300**
	B1H85-12	8/8/2024	12	**35**	**390**
	B1H85-18	8/8/2024	18	**25**	220
	B1H85-24	9/19/2024	24	8.4	45
	B1H86-6	8/8/2024	6	**31**	**330**
	B1H86-12	8/8/2024	12	1.0	60
	B1H86-18	8/8/2024	18	10	35
	B1H86A-6	10/7/2024	6	5.1	9.3
	B1H87-6	8/8/2024	6	**39**	**550**
	B1H87-12	8/8/2024	12	**48**	**510**
	B1H87-18	8/8/2024	18	**95**	**320**
	B1H87-24	Deeper samples could not be collected due to excess water in the borehole			
	B1H87-30				
	B1H88-6	8/8/2024	6	**31**	**280**
	B1H88-12	8/8/2024	12	**58**	**320**
	B1H88-18	8/8/2024	18	**50**	**580**
	B1H88-24	9/19/2024	24	9.6	8.4
	B1H88A-6	10/7/2024	6	**39**	**320**
	B1H88A-12	10/7/2024	12	**42**	**280**
	B1H88A-18	Deeper samples could not be collected due to excess water in the borehole			
	B1H88A-24				
	B1H88B-6	10/7/2024	6	20	**260**
	B1H88B-12	10/7/2024	12	**31**	250
	B1H88B-18	Deeper samples could not be collected due to excess water in the borehole			
	B1H88B-24				
	B1H8SEA-6	10/7/2024	6	5.6	110
	B1H8SEA-12	10/7/2024	12	--	--
	B1H8SEB-6	10/7/2024	6	3.7	110
	B1H8SEB-12	10/7/2024	12	--	--
	B1H8NWA-6	10/7/2024	6	20	210
	B1H8NWB-6	10/7/2024	6	19	160

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				20	250
B1H8	B1H8SWA-6	10/14/2024	6	18	210
	B1H8SWB-6	10/14/2024	6	18	210
	B1H8SWB-12	10/14/2024	12	12	150
B1H9	B1H9-06	5/24/2024	6	11	110
	B1H9-12	5/24/2024	12	--	--
B1H10	B1H10-06	8/2/2024	6	6.8	7.6
	B1H10-12	8/2/2024	12	--	--
B1H11	B1H11-06	8/2/2024	6	13	22
	B1H11-12	8/2/2024	12	--	--
B1H12	B1H12-06	8/2/2024	6	16	38
	B1H12-12	8/2/2024	12	--	--
B1H13	B1H13-06	8/2/2024	6	3.7	94
	B1H13-12	8/2/2024	12	--	--
B1H14	B1H14-06	5/24/2024	6	3.8	8
	B1H14-12	5/24/2024	12	--	--
B1H15	B1H15-06	8/2/2024	6	3	4.6
	B1H15-12	8/2/2024	12	--	--
B2H1	B2H1-06	5/24/2024	6	17	55
	B2H1-12	5/24/2024	12	--	--
B2H2	B2H2-06	5/24/2024	6	3.8	7.1
	B2H2-12	5/24/2024	12	--	--
B2H3	B2H3-06	8/2/2024	6	6.6	17
	B2H3-12	8/2/2024	12	--	--
B3H1	B3H1-06	8/2/2024	6	4.4	5.3
	B3H1-12	8/2/2024	12	--	--
B3H2	B3H2-06	8/2/2024	6	2.6	3.6
	B3H2-12	8/2/2024	12	--	--
B3H3	B3H3-6	8/7/2024	6	2.2	4
	B3H3-12	8/7/2024	12	--	--
B4H1	B4H1-06	5/24/2024	6	9.8	19
	B4H1-12	5/24/2024	12	--	**--**
B4H2	B4H2-06	5/24/2024	6	8.2	16
	B4H2-12	5/24/2024	12	1.2	1.5
B4H3	B4H3-06	5/24/2024	6	8.1	18
	B4H3-12	5/24/2024	12	--	--
B4H4	B4H4-06	5/24/2024	6	11	30
	B4H4-12	5/24/2024	12	--	--
B4H5	B4H5-06	5/24/2024	6	12	33
	B4H5-12	5/24/2024	12	--	--

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				**20**	**250**
B4H6	B4H6-06	5/24/2024	6	**31**	110
	B4H6-12	5/24/2024	12	9.7	21
	B4H61-6	8/9/2024	6	**31**	52
	B4H61-12	8/9/2024	12	**33**	27
	B4H61-18	10/14/2024	18	**47**	3.5
	B4H61-24	10/14/2024	24	9.3	2.3
	B4H61-24*	10/31/2024	24	11	1.7
	B4H62-6	8/9/2024	6	13	42
	B4H62-12	8/9/2024	12	15	26
	B4H63-6	8/9/2024	6	**23**	36
	B4H63-12	8/9/2024	12	**30**	70
	B4H63-18	10/14/2024	18	4.6	2.9
	B4H64-6	8/9/2024	6	**28**	65
	B4H64-12	8/9/2024	12	20	25
	B4H64A-6	10/14/2024	6	**23**	44
	B4H64A-12	10/14/2024	12	6.9	13
	B4H64A-18	10/31/2024	18	3.5	3.7
	B4H64B-6	10/31/2024	6	**28**	26
	B4H64B-12	10/31/2024	12	**31**	4.5
	B4H64B-18	10/31/2024	18	**56**	3.6
	B4H64C-6	11/17/2024	6	**23**	26
	B4H64C-12	11/18/2024	12	17	52
	B4H65-6	8/9/2024	6	**30**	48
	B4H65-12	8/9/2024	12	14	19
	B4H66-6	8/9/2024	6	**30**	67
	B4H66-12	8/9/2024	12	18	31
	B4H66A-6	10/14/2024	6	**21**	28
	B4H66A-12	10/14/2024	12	9.1	13
	B4H64A-18	10/31/2024	18	3.5	3.7
	B4H66B-6	10/31/2024	6	**31**	56
	B4H66B-12	10/31/2024	12	12	13
	B4H66B-18	10/31/2024	18	--	--
	B4H66C-6	11/17/2024	6	18	33
	B4H67-6	8/9/2024	6	**32**	67
	B4H67-12	8/9/2024	12	**66**	100
	B4H67-18	10/14/2024	18	12	5.3
	B4H68-6	8/9/2024	6	<1	<1
	B4H68-12	8/9/2024	12	--	--

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				**20**	**250**
B4H7	B4H7-06	5/24/2024	6	8.4	15
	B4H7-12	5/24/2024	12	--	--
B5H1	B5H1-06	5/24/2024	6	12	32
	B5H1-12	5/24/2024	12	--	--
B5H2	B5H2-06	5/24/2024	6	4.9	17
	B5H2-12	5/24/2024	12	9.9	32
B5H3	B5H3-06	5/24/2024	6	2.0	3.9
	B5H3-12	5/24/2024	12	--	--
B5H4	B5H4-06	5/24/2024	6	3.2	6.5
	B5H4-12	5/24/2024	12	--	--
EMB-H-1	EMB-H-1-06	8/2/2024	6	8.2	17
	EMB-H-1-12	8/2/2024	12	--	--
C1-H1	C1-H1-6	11/7/2024	6	2.8	9.7
C1-H2	C1-H2-6	11/7/2024	6	**26**	73
	C1-H2-12	11/7/2024	12	3.8	8.7
	C1-H2-1-6	12/12/2024	6	3.8	8.2
	C1-H2-3-6	12/12/2024	6	13	44
	C1-H2-5-6	12/12/2024	6	**33**	140
	C1-H2-6-6	12/12/2024	6	11	40
EMB-H-2	EMB-H-2-06	8/6/2024	6	20	16
	EMB-H-2-12	8/6/2024	12	6.1	--
EMB-H-3	EMB-H-3-06	8/6/2024	6	11	18
	EMB-H-3-12	8/6/2024	12	--	--
EMB-H-4	EMB-H-4-6	8/8/2024	6	4.6	9
	EMB-H-4-12	8/8/2024	12	--	--
EMB-H-5	EMB-H-5-06	8/6/2024	6	7.7	12
	EMB-H-5-12	8/6/2024	12	--	--
EMB-H-6	EMB-H-6-06	8/6/2024	6	12	36
	EMB-H-6-12	8/6/2024	12	--	--
EMB-H-7	EMB-H-7-06	8/2/2024	6	3.6	5.1
	EMB-H-7-12	8/2/2024	12	--	--
EMB-H-8	EMB-H-8-06	5/24/2024	6	6.9	19
	EMB-H-8-12	5/24/2024	12	4.8	15
EMB-11	EMB-11-11-24-06	5/24/2024	6	8.4	19
	EMB-11-11-24-12	5/24/2024	12	16	31
MISCH2	MISCH-2-6	9/20/2024	6	2.4	24
MISCH3	MISCH-3-6	9/20/2024	6	4.8	50
	MISCH-4-6	9/20/2024	6	**24**	170
	MISCH-4-12	9/20/2024	12	6.5	**460**
	MISCH-4-18	10/14/2024	18	8.4	**490**
	MISCH-4-24	10/14/2024	24	2.8	58

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				20	250
MISCH4	MISCH4-1-6	10/31/2024	6	9.2	**390**
	MISCH4-1-12	10/31/2024	12	8.1	**490**
	MISC4-1-18	12/20/2024	18	4.0	61
	MISCH4-2-6	10/31/2024	6	5.8	22
	MISCH4-2-12	10/31/2024	12	--	--
	MISCH4-3-6	10/31/2024	6	9.5	**880**
	MISCH4-3-12	10/31/2024	12	7.6	**440**
	MISC4-3-18	12/20/2024	18	3.9	12
	MISCH4-4-6	10/31/2024	6	7.5	67
	MISCH4-4-12	10/31/2024	12	--	--
MISCH5	MISCH-5-6	9/20/2024	6	3.6	27
MISCH6	MISCH-6-6	9/20/2024	6	4.8	26
MISC7	MISC7-6	11/7/2024	6	2.4	11
MISCH11	MISCH11-6	8/9/2024	6	3.2	14
	MISCH11-12	8/9/2024	12	--	--
MISCH13	MISCH13-6	8/9/2024	6	2.5	11
	MISCH13-12	8/9/2024	12	--	--
MISCH17	MISCH17-6	8/9/2024	6	2.6	4.1
	MISCH17-12	8/9/2024	12	--	--
MISC18	MISC18-6	11/7/2024	6	6	90
MISC19	MISC19-6	11/7/2024	6	2.7	19
NW3-H1	NW3-H1-6	11/7/2024	6	9.1	51
NW9H1P	NW9H19-6	8/7/2024	6	6.2	110
	NW9H19-12	8/7/2024	12	--	--
NW9H2P	NW9H2P-6	8/7/2024	6	1.9	5.7
	NW9H2P-7	8/7/2024	12	--	--
NW9H3P	NW9H3P-6	8/7/2024	6	2.6	47
	NW9H3P-12	8/7/2024	12	--	--
NW10H1	NW10H1-6	8/7/2024	6	2.5	24
	NW10H1-12	8/7/2024	12	--	--
NW10H2	NW10H2-6	8/7/2024	6	3.0	17
	NW10H2-12	8/7/2024	12	--	--
NW10H3	NW10H3-6	8/7/2024	6	7.3	44
	NW10H3-712	8/7/2024	12	--	--
NW10H4P	NW10H4P-6	8/7/2024	6	13	79
	NW10H4P-12	8/7/2024	12	--	--
RWH1	RWH1-6	8/7/2024	6	4.8	14
	RWH1-12	8/7/2024	12	--	--

Result (mg/kg)					
Location Name	Sample Name	Date	Depth (inches bgs)	Metals[a]	
				Arsenic	Lead
MTCA Method A Cleanup Levels - Unrestricted Land Use				20	250
RWH2	RWH2-6	8/7/2024	6	1.9	5.7
	RWH2-12	8/7/2024	12	--	--
RWH3	RWH3-6	8/7/2024	6	1.6	3.5
	RWH3-12	8/7/2024	12	--	--
RWHSP	RWHSP-6	8/8/2024	6	3.7	6.2
	RWHSP-12	8/8/2024	12	--	--
SW-H-1P	SW-H-1P-06	8/8/2024	6	3.6	42
	SW-H-1P-12	8/8/2024	12	--	--
SW-H-3P	SW-H-3P-06	8/2/2024	6	5.4	11
	SW-H-3P-12	8/2/2024	12	--	--

Notes:

bold indicates detected concentration exceeds adopted criteria

Abbreviations & Acronyms:

mg/kg - milligrams per kilogram

in bgs - inches below native ground surface

-- - Sample not analyzed

* Sample collected twice

A - Sample collected 20 feet step back from the initial sample location

B - Sample collected 30 feet step back from the initial sample location

C - Sample collected 40 feet step back from the initial sample location

Footnotes:

[a] Analyzed by Environmental Protection Agency Method 6020B

[b] Washington State Department of Ecology Model Toxics Control Act Method A Cleanup Level for Unrestricted Land Use as established in WAC 173-340-900

Appendix E
Certifications

Student Affiliation
PBS Engineering and Environmental
241010133722

Compliance Solutions
"Today's Training...Tomorrow's Solution"

3980 Quebec St., 2nd Floor, Denver CO 80207-1633 800-711-2706

Certificate of Completion

Michael Andrews

has successfully completed training and passed all testing requirements for

8-Hour HAZWOPER Annual Refresher

as per 29 CFR 1910.120(e) & Title 8CCR 5192(e)(3)(A)

Presented This

October 14, 2024

Compliance Solutions Occupational Trainers, Inc.

Certificate Number: REG41829

Jeffrey Kline
President/CEO

Dane Wilcox
Instructor

THIS IS TO CERTIFY THAT

KEVIN HOOD

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE

for

HAZWOPER INITIAL TRAINING

Course Date: 2/26/2024 - 3/1/2024

Course Location: Portland, OR

Certificate: HAZ-24-2186C

PBS

Expiration Date: 03/01/2025

For verification of the authenticity of this certificate contact:

PBS Engineering and Environmental Inc.
4412 S Corbett Avenue
Portland, OR 97239
503.248.1939

Bruce Cassem, Instructor

THIS IS TO CERTIFY THAT

JOSH TRIERWEILER

HAS SUCCESSFULLY COMPLETED THE 8-HOUR TRAINING COURSE

for

HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE REFRESHER

In Compliance with OSHA 29 CFR 1910.120

Course Date: 01/08/2025

Course Location: Online,

Certificate: HAZR-25-4597C

Expiration Date: 01/08/2026

For verification of the authenticity of this certificate contact:

PBS Engineering and Environmental Inc.
4412 S Corbett Avenue
Portland, OR 97239
503.248.1939

Bruce Cassem, Instructor

THIS IS TO CERTIFY THAT

NASRIN BASTAMI

HAS SUCCESSFULLY COMPLETED THE 8-HOUR TRAINING COURSE

for

HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE REFRESHER

In Compliance with OSHA 29 CFR 1910.120

Course Date: 01/08/2025

Course Location: Online,

Certificate: HAZR-25-2236C

Expiration Date: 01/08/2026

For verification of the authenticity of this certificate contact:

PBS Engineering and Environmental Inc.
4412 S Corbett Avenue
Portland, OR 97239
503.248.1939

Bruce Cassem, Instructor

Appendix B

Site Photographs

Photographs of Remedial Action Implementation at the Site



Photo 1. View of the Site looking northwest from the southeast corner.



Photo 2. Representative view of soil removal activities within the identified remedial action area (Area SS69), showing excavation to the targeted depth.



Photo 3. Representative view of soil removal activities within the identified remedial action area (Area SS9), showing excavation to the targeted depth.



Photo 4. View of direct loading of excavated soil into a truck for off-site disposal during remedial activities (Area SS87).

Appendix C
Disposal Documentation

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01 | TICKET # 1032726 | CELL
WEIGHTMASTER Leslie U.
DATE/TIME IN 5/12/25 2:14 pm | DATE/TIME OUT 5/12/25 2:14 pm
VEHICLE 182 KLB | CONTAINER
REFERENCE JACOB
BILL OF LADING

SCALE IN	GROSS WEIGHT	44,300	NET TONS	9.34	INBOUND
TARE OUT	TARE WEIGHT	25,620	NET WEIGHT	18,680	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
9.34	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 4 8

269.11 TN
A-1 Towing

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Leslie Ulness

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (04/19)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01 | TICKET # 1032726 | CELL
WEIGHTMASTER Leslie U.
DATE/TIME IN 5/12/25 2:14 pm | DATE/TIME OUT 5/12/25 2:14 pm
VEHICLE 182 KLB | CONTAINER
REFERENCE JACOB
BILL OF LADING

SCALE IN	GROSS WEIGHT	44,300	NET TONS	9.34	INBOUND
TARE OUT	TARE WEIGHT	25,620	NET WEIGHT	18,680	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
9.34	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Leslie Ulness

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

01 1032710

WEIGHMASTER IN - Leslie U. OUT - Dale H.

DATE/TIME IN 5/12/25 11:55 am

DATE/TIME OUT 5/12/25 12:03 pm

VEHICLE 182 KLB

CONTAINER

REFERENCE JACOB

BILL OF LADING

SCALE IN GROSS WEIGHT 56,220 NET TONS 15.30 INBOUND
SCALE OUT TARE WEIGHT 25,620 NET WEIGHT 30,600 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
15.30	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 48

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Dale Haijuano

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NET AMOUNT
TENDERED
CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

SITE REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01 TICKET # 1032710 CELL

WEIGHMASTER IN - Leslie U. OUT - Dale H.

DATE/TIME IN 5/12/25 11:55 am DATE/TIME OUT 5/12/25 12:03 pm

VEHICLE 182 KLB CONTAINER

REFERENCE JACOB

BILL OF LADING

SCALE IN GROSS WEIGHT 56,220 NET TONS 15.30 INBOUND
SCALE OUT TARE WEIGHT 25,620 NET WEIGHT 30,600 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
15.30	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE	TICKET #	CELL
01	1032711	VOID1032691

WEIGHMASTER: Leslie U.
DATE/TIME IN: 5/12/25 12:02 pm
DATE/TIME OUT: 5/12/25 12:02 pm
VEHICLE: 182 KLB
CONTAINER:
REFERENCE: JACOB
BILL OF LADING:

MANUAL IN GROSS WEIGHT 53,240 NET TONS 13.81
MANUAL OUT TARE WEIGHT 25,620 NET WEIGHT 27,620

INBOUND
INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
13.81	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 48

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INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Leslie Ulness

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NET AMOUNT
TENDERED
CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01 TICKET # 1032711 CELL VOID1032691
WEIGHMASTER Leslie U.
DATE/TIME IN 5/12/25 12:02 pm DATE/TIME OUT 5/12/25 12:02 pm
VEHICLE 182 KLB CONTAINER
REFERENCE JACOB
BILL OF LADING

MANUAL IN GROSS WEIGHT 53,240 NET TONS 13.81
MANUAL OUT TARE WEIGHT 25,620 NET WEIGHT 27,620

INBOUND
INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
13.81	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

01	1032721
WEIGHMASTER	Leslie U.
DATE/TIME IN	5/12/25 1:10 pm
DATE/TIME OUT	5/12/25 1:10 pm
VEHICLE	182 KLB
CONTAINER	
REFERENCE	JACOB
BILL OF LADING	

SCALE IN GROSS WEIGHT 58,460 NET TONS 16.42 INBOUND
MANUAL OUT TARE WEIGHT 25,620 NET WEIGHT 32,840 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
16.42	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 48

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INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Leslie Ulness

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (04/19) SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE	01	TICKET # 1032721	CELL
WEIGHMASTER	Leslie U.		
DATE/TIME IN	5/12/25 1:10 pm	DATE/TIME OUT	5/12/25 1:10 pm
VEHICLE	182 KLB	CONTAINER	
REFERENCE	JACOB		
BILL OF LADING			

SCALE IN GROSS WEIGHT 58,460 NET TONS 16.42 INBOUND
MANUAL OUT TARE WEIGHT 25,620 NET WEIGHT 32,840 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
16.42	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Leslie Ulness

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (04/19) SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

01	1032712	VOID1032702
WEIGHTMASTER	Leslie U.	
DATE/TIME IN	5/12/25 12:04 pm	DATE/TIME OUT 5/12/25 12:04 pm
VEHICLE	182 KLB	CONTAINER
REFERENCE	JACOB	
BILL OF LADING		

MANUAL IN GROSS WEIGHT 55,500 NET TONS 14.94 INBOUND
MANUAL OUT TARE WEIGHT 25,620 NET WEIGHT 29,880 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
14.94	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 48

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INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Leslie Ulness

NET AMOUNT
TENDERED
CHANGE
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RS-F042UPR (04/19)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01	TICKET # 1032712	CELL	VOID1032702
WEIGHTMASTER	Leslie U.		
DATE/TIME IN	5/12/25 12:04 pm	DATE/TIME OUT	5/12/25 12:04 pm
VEHICLE	182 KLB	CONTAINER	
REFERENCE	JACOB		
BILL OF LADING			

MANUAL IN GROSS WEIGHT 55,500 NET TONS 14.94 INBOUND
MANUAL OUT TARE WEIGHT 25,620 NET WEIGHT 29,880 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
14.94	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

01	1032724
WEIGHMASTER	Leslie U.
DATE/TIME IN	5/12/25 1:59 pm
DATE/TIME OUT	5/12/25 1:59 pm
VEHICLE	194 KLB
CONTAINER	
REFERENCE	CARAMIE
BILL OF LADING	

SCALE IN GROSS WEIGHT 47,700 NET TONS 10.33 INBOUND
TARE OUT TARE WEIGHT 27,040 NET WEIGHT 20,660 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
10.33	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 4 8

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INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
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NET AMOUNT
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CHANGE
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RS-F042UPR (04/19)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01	TICKET # 1032724
CELL	
WEIGHMASTER	Leslie U.
DATE/TIME IN	5/12/25 1:59 pm
DATE/TIME OUT	5/12/25 1:59 pm
VEHICLE	194 KLB
CONTAINER	
REFERENCE	CARAMIE
BILL OF LADING	

SCALE IN GROSS WEIGHT 47,700 NET TONS 10.33 INBOUND
TARE OUT TARE WEIGHT 27,040 NET WEIGHT 20,660 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
10.33	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

01	1032717
WEIGHMASTER	Leslie U.
DATE/TIME IN	5/12/25 1:04 pm
DATE/TIME OUT	5/12/25 1:04 pm
VEHICLE	194 KLB
CONTAINER	
REFERENCE	CARAMIE
BILL OF LADING	

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SCALE IN	GROSS WEIGHT	62,260	NET TONS 17.61	INBOUND
TARE OUT	TARE WEIGHT	27,040	NET WEIGHT 35,220	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
17.61	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 4 8

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NET AMOUNT
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SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

SITE 01	TICKET # 1032717
CELL	
WEIGHMASTER	Leslie U.
DATE/TIME IN	5/12/25 1:04 pm
DATE/TIME OUT	5/12/25 1:04 pm
VEHICLE	194 KLB
CONTAINER	
REFERENCE	CARAMIE
BILL OF LADING	

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SCALE IN	GROSS WEIGHT	62,260	NET TONS 17.61	INBOUND
TARE OUT	TARE WEIGHT	27,040	NET WEIGHT 35,220	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
17.61	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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CHANGE
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RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

01	1032708
WEIGHMASTER	Leslie U.
DATE/TIME IN	5/12/25 11:52 am
DATE/TIME OUT	5/12/25 11:52 am
VEHICLE	194 KLB
CONTAINER	
REFERENCE	CARAMIE
BILL OF LADING	

SCALE IN GROSS WEIGHT 70,060 NET TONS 21.51 INBOUND
TARE OUT TARE WEIGHT 27,040 NET WEIGHT 43,020 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
21.51	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 48

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INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Leslie Ulness

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NET AMOUNT
TENDERED
CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE	01	TICKET #	1032708
CELL			
WEIGHMASTER	Leslie U.		
DATE/TIME IN	5/12/25 11:52 am	DATE/TIME OUT	5/12/25 11:52 am
VEHICLE	194 KLB	CONTAINER	
REFERENCE	CARAMIE		
BILL OF LADING			

SCALE IN GROSS WEIGHT 70,060 NET TONS 21.51 INBOUND
TARE OUT TARE WEIGHT 27,040 NET WEIGHT 43,020 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
21.51	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Leslie Ulness

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NET AMOUNT
TENDERED
CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE	TICKET #	CELL
01	1032701	

WEIGHMASTER: Dale H.

DATE/TIME IN	DATE/TIME OUT
5/12/25 10:38 am	5/12/25 10:38 am

VEHICLE: 194 KLB
CONTAINER:
REFERENCE: CARAMIE
BILL OF LADING:

SCALE IN	GROSS WEIGHT	60,780	NET TONS 16.87	INBOUND
TARE OUT	TARE WEIGHT	27,040	NET WEIGHT 33,740	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
16.87	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 4 8

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INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006

Dale Haijuano

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (04/19)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01 TICKET # 1032701 CELL
WEIGHMASTER Dale H.
DATE/TIME IN 5/12/25 10:38 am DATE/TIME OUT 5/12/25 10:38 am
VEHICLE 194 KLB CONTAINER
REFERENCE CARAMIE
BILL OF LADING

SCALE IN GROSS WEIGHT 60,780 NET TONS 16.87 INBOUND
TARE OUT TARE WEIGHT 27,040 NET WEIGHT 33,740 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
16.87	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006

Dale Haijuano

NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

01	1032690
WEIGHMASTER	IN - Dale H. OUT - Stephanie A.
DATE/TIME IN	5/12/25 9:26 am
DATE/TIME OUT	5/12/25 9:35 am
VEHICLE	194 KLB
CONTAINER	
REFERENCE	CARAMIE
BILL OF LADING	

SCALE IN GROSS WEIGHT 57,740 NET TONS 15.35 INBOUND
SCALE OUT TARE WEIGHT 27,040 NET WEIGHT 30,700 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
15.35	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 48

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Stephanie Anderson

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

RS-F042UPR (04/19)

SIGNATURE _____

NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01 TICKET # 1032690 CELL
WEIGHMASTER IN - Dale H. OUT - Stephanie A.
DATE/TIME IN 5/12/25 9:26 am DATE/TIME OUT 5/12/25 9:35 am
VEHICLE 194 KLB CONTAINER
REFERENCE CARAMIE
BILL OF LADING

SCALE IN GROSS WEIGHT 57,740 NET TONS 15.35 INBOUND
SCALE OUT TARE WEIGHT 27,040 NET WEIGHT 30,700 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
15.35	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by chapter 15.80 RCW administered by the Washington State Department of Agriculture.
INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Stephanie Anderson

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RS-F042UPR (04/19)

SIGNATURE _____

NET AMOUNT
TENDERED
CHANGE
CHECK#

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

01	1032689
WEIGHMASTER	IN - Dale H. OUT - Stephanie A.
DATE/TIME IN	5/12/25 9:23 am
DATE/TIME OUT	5/12/25 9:30 am
VEHICLE	200 KLB
CONTAINER	
REFERENCE	BRIAN
BILL OF LADING	

SCALE IN GROSS WEIGHT 52,920 NET TONS 12.93 INBOUND
SCALE OUT TARE WEIGHT 27,060 NET WEIGHT 25,860 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
12.93	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 48

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INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Stephanie Anderson

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NET AMOUNT
TENDERED
CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01	TICKET # 1032689		CELL
WEIGHMASTER	IN - Dale H. OUT - Stephanie A.		
DATE/TIME IN	5/12/25 9:23 am	DATE/TIME OUT	5/12/25 9:30 am
VEHICLE	200 KLB	CONTAINER	
REFERENCE	BRIAN		
BILL OF LADING			

SCALE IN GROSS WEIGHT 52,920 NET TONS 12.93 INBOUND
SCALE OUT TARE WEIGHT 27,060 NET WEIGHT 25,860 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
12.93	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

01	1032725
WEIGHMASTER	Leslie U.
DATE/TIME IN	5/12/25 2:01 pm
DATE/TIME OUT	5/12/25 2:01 pm
VEHICLE	200 KLB
CONTAINER	
REFERENCE	BRIAN
BILL OF LADING	

SCALE IN GROSS WEIGHT 55,640 NET TONS 14.29 INBOUND
TARE OUT TARE WEIGHT 27,060 NET WEIGHT 28,580 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
14.29	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 48

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OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Leslie Ulness

NET AMOUNT
TENDERED
CHANGE
CHECK#

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SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01	TICKET # 1032725
CELL	
WEIGHMASTER	Leslie U.
DATE/TIME IN	5/12/25 2:01 pm
DATE/TIME OUT	5/12/25 2:01 pm
VEHICLE	200 KLB
CONTAINER	
REFERENCE	BRIAN
BILL OF LADING	

SCALE IN GROSS WEIGHT 55,640 NET TONS 14.29 INBOUND
TARE OUT TARE WEIGHT 27,060 NET WEIGHT 28,580 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
14.29	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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CHANGE
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RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

01	1032716		
WEIGHMASTER	Leslie U.		
DATE/TIME IN	5/12/25 12:53 pm	DATE/TIME OUT	5/12/25 12:53 pm
VEHICLE	200 KLB	CONTAINER	
REFERENCE	BRIAN		
BILL OF LADING			

SCALE IN	GROSS WEIGHT	70,920	NET TONS	21.93	INBOUND
TARE OUT	TARE WEIGHT	27,060	NET WEIGHT	43,860	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
21.93	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 4 8

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NET AMOUNT
TENDERED
CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01	TICKET # 1032716	CELL	
WEIGHMASTER	Leslie U.		
DATE/TIME IN	5/12/25 12:53 pm	DATE/TIME OUT	5/12/25 12:53 pm
VEHICLE	200 KLB	CONTAINER	
REFERENCE	BRIAN		
BILL OF LADING			

SCALE IN	GROSS WEIGHT	70,920	NET TONS	21.93	INBOUND
TARE OUT	TARE WEIGHT	27,060	NET WEIGHT	43,860	INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
21.93	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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TENDERED
CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE	01
TICKET #	1032707
CELL	
WEIGHMASTER	Dale H.
DATE/TIME IN	5/12/25 11:43 am
DATE/TIME OUT	5/12/25 11:43 am
VEHICLE	200 KLB
CONTAINER	
REFERENCE	BRIAN
BILL OF LADING	

SCALE IN GROSS WEIGHT 64,920 NET TONS 18.93 INBOUND
TARE OUT TARE WEIGHT 27,060 NET WEIGHT 37,860 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
18.93	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 48

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INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Dale Haijuano

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RS-F042UPR (04/19)

SIGNATURE _____

NET AMOUNT
TENDERED
CHANGE
CHECK#

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE	01
TICKET #	1032707
CELL	
WEIGHMASTER	Dale H.
DATE/TIME IN	5/12/25 11:43 am
DATE/TIME OUT	5/12/25 11:43 am
VEHICLE	200 KLB
CONTAINER	
REFERENCE	BRIAN
BILL OF LADING	

SCALE IN GROSS WEIGHT 64,920 NET TONS 18.93 INBOUND
TARE OUT TARE WEIGHT 27,060 NET WEIGHT 37,860 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
18.93	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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CHANGE
CHECK#

REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE	TICKET #	CELL
01	1032699	

WEIGHMASTER: Dale H.
DATE/TIME IN: 5/12/25 10:34 am
DATE/TIME OUT: 5/12/25 10:34 am
VEHICLE: 200 KLB
CONTAINER:
REFERENCE: BRIAN
BILL OF LADING:

SCALE IN GROSS WEIGHT 64,420 NET TONS 18.68
TARE OUT TARE WEIGHT 27,060 NET WEIGHT 37,360

INBOUND
INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
18.68	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

№ 4 8

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Dale Haijuano

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NET AMOUNT
TENDERED
CHANGE
CHECK#

RS-F042UPR (04/19)

SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01 | TICKET # 1032699 | CELL
WEIGHMASTER Dale H.
DATE/TIME IN 5/12/25 10:34 am | DATE/TIME OUT 5/12/25 10:34 am
VEHICLE 200 KLB | CONTAINER
REFERENCE BRIAN
BILL OF LADING

SCALE IN GROSS WEIGHT 64,420 NET TONS 18.68
TARE OUT TARE WEIGHT 27,060 NET WEIGHT 37,360

INBOUND
INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
18.68	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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Dale Haijuano

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CHANGE
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SIGNATURE _____

SITE
REGIONAL DISPOSAL INTERMODAL 425-977-4127
3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE	TICKET #	CELL
01	1032735	
WEIGHMASTER	Leslie U.	
DATE/TIME IN	5/12/25 4:14 pm	DATE/TIME OUT 5/12/25 4:14 pm
VEHICLE	194 KLB	CONTAINER
REFERENCE	CARAMIE	
BILL OF LADING		

SCALE IN GROSS WEIGHT 58,980 NET TONS 15.97
TARE OUT TARE WEIGHT 27,040 NET WEIGHT 31,940

INBOUND
INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
15.97	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

#48
Copy

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INBOUND - SCALE INDICATOR 96135341 = E-Seal 2000
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CHANGE
CHECK#

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3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01 TICKET # 1032735 CELL
WEIGHMASTER Leslie U.
DATE/TIME IN 5/12/25 4:14 pm DATE/TIME OUT 5/12/25 4:14 pm
VEHICLE 194 KLB CONTAINER
REFERENCE CARAMIE
BILL OF LADING

SCALE IN GROSS WEIGHT 58,980 NET TONS 15.97
TARE OUT TARE WEIGHT 27,040 NET WEIGHT 31,940

INBOUND
INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
15.97	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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CHECK#

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3rd and lander Seattle, WA

CUSTOMER
012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE	TICKET #	CELL
01	1032734	
WEIGHMASTER	Valerie M.	
DATE/TIME IN	5/12/25 3:23 pm	DATE/TIME OUT 5/12/25 3:23 pm
VEHICLE	182 KLB	CONTAINER
REFERENCE	JACOB	
BILL OF LADING		

SCALE IN GROSS WEIGHT 55,420 NET TONS 14.90 INBOUND
TARE OUT TARE WEIGHT 25,620 NET WEIGHT 29,800 INVOICE

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
14.90	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

#48
Copy

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OUTBOUND – SCALE INDICATOR 1955300033 = E-Seal 2006 Valerie Morales

NET AMOUNT
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CHANGE
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3rd and lander -Seattle, WA

CUSTOMER 012976
KLB Construction Inc
PO Box 158
Mukilteo, WA 98275-0158
Contract:TB-6607 PO:224145

SITE 01 TICKET # 1032734 CELL
WEIGHMASTER Valerie M.
DATE/TIME IN 5/12/25 3:23 pm DATE/TIME OUT 5/12/25 3:23 pm
VEHICLE 182 KLB CONTAINER
REFERENCE JACOB
BILL OF LADING

SCALE IN GROSS WEIGHT 55,420 NET TONS 14.90 INBOUND
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QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
0.00	YD	Tracking QTY				
14.90	tn	SW-CONT SOIL Origin:SEA-TAC/KING 100%				

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NET AMOUNT
TENDERED
CHANGE
CHECK#

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RS-F042UPR (04/19) SIGNATURE

Scanned with CamScanner

Special Waste Profile

REPUBLIC SERVICES

Disposal Facility: 4178 Roosevelt Regional MSW Landfill WA

Waste Profile # 4178 25 6607

Sales Rep #: 251

I. Generator Information

Generator Name: WSDOT

Generator Site Address: 18451 Des Moines Memorial DR Suite

City: SeaTac County: King State: Washington ZIP: 98148

State ID/Reg. No: N/A State Approval/Waste Code: N/A NAICS #: N/A

Generator Mailing Address ☑ (if different 15700 Dayton Avenue North

City: Shoreline County: King State: Washington ZIP: 98133-5910

Generator Contact Name: Ward Anderson Email: ward.anderson@wsdot.wa.gov

Phone Number: 206-735-9055 Ext: Fax Number:

II. Billing Information

Bill to: KLB Construction Contact Name: Kevin Corbin

Billing Address: PO Box 158 Email: kevin.corbin@klbconstruction.com

City: Mukilteo State: Washington ZIP: 98275 Phone: 4253557335

III. Waste Stream Information

Name of Waste: Contaminated soil

Process Generating Waste: Historical Tacoma Smelter Plume pollution and former towing shop-leaks and spills.

Type of Waste: Pollution Control Waste Physical State: Solid Method of Shipment: Bulk

Estimated Volume: 2,600 Volume Type: Cubic Yards

Frequency: One-time Event (single projec Disposal Consideration: Landfill

IV. Representative Sample Certification

☐ **No Sample Taken**

☑ **Sample Taken** **Type of Sample** Grab Sample

Is the representative sample collected to prepare this profile and laboratory analysis collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent? ☑ **Yes** ☐ **No**

Sample Date: 7/29/2024, 7/30/2024, 7/31/2024, 8/1/2024, 9/11/2024, and 4/9/2025 4/29/2025

Sample ID Numbers or SDS: SS1 through SS115 and SS113-TCLP and SS36-9-TCLP

Note that SS98-18 and SS112-18 are not included as they are not representative. WA 5/01/2025

Initial here WA

Remember to attach Laboratory Analytical Report (and/or Material Safety Data Sheet) including Chain of Custody and required parameters provided for this profile.

Appendix D

Laboratory Reports

Analytical Results and Chain-of-Custody Documentation for Sampling During Remedial Action

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

September 17, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Trierweiler :

Included are the additional results from the testing of material submitted on August 2, 2024 from the A1 Towing 40757.028, F&BI 408036 project. There are 9 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0917R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 2, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 408036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
408036 -01	SS37-9
408036 -02	SS38-9
408036 -03	SS39-9
408036 -04	SS40-9
408036 -05	SS26-9
408036 -06	SS27-9
408036 -07	SS48-9
408036 -08	SS49-9
408036 -09	SS56-9
408036 -10	SS57-9
408036 -11	SS26-18
408036 -12	SS27-18
408036 -13	SS37-18
408036 -14	SS28-18
408036 -15	SS39-18
408036 -16	SS40-18
408036 -17	SS48-18
408036 -18	SS49-18
408036 -19	SS56-18
408036 -20	SS57-18
408036 -21	SS58-9
408036 -22	SS65-9
408036 -23	SS87-9
408036 -24	SS94-9
408036 -25	SS93-9
408036 -26	SS92-9
408036 -27	SS91-9
408036 -28	SS98-9
408036 -29	SS103-9
408036 -30	SS104-9
408036 -31	SS58-18
408036 -32	SS65-18
408036 -33	SS87-18
408036 -34	SS94-18
408036 -35	SS93-18
408036 -36	SS92-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
408036 -37	SS91-18
408036 -38	SS98-18
408036 -39	SS103-18
408036 -40	SS104-18
408036 -41	SS105-9
408036 -42	SS106-9
408036 -43	SS107-9
408036 -44	SS108-9
408036 -45	SS109-9
408036 -46	SS110-9
408036 -47	SS111-9
408036 -48	SS112-9
408036 -49	SS113-9
408036 -50	SS114-9
408036 -51	SS105-18
408036 -52	SS106-18
408036 -53	SS107-18
408036 -54	SS108-18
408036 -55	SS109-18
408036 -56	SS110-18
408036 -57	SS111-18
408036 -58	SS112-18
408036 -59	SS113-18
408036 -60	SS114-18
408036 -61	SS115-9
408036 -62	SS115-18

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS49-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-18
Date Analyzed:	09/11/24	Data File:	408036-18.080
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.4
Lead	7.4

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS57-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-20
Date Analyzed:	09/11/24	Data File:	408036-20.088
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.4
Lead	6.7

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-33 x5
Date Analyzed:	09/12/24	Data File:	408036-33 x5.146
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	14
Lead	94

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS94-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	408036-34
Date Analyzed:	09/11/24	Data File:	408036-34.090
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.3
Lead	4.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	Not Applicable	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/11/24	Lab ID:	I4-740 mb2
Date Analyzed:	09/11/24	Data File:	I4-740 mb2.078
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 09/17/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 409096-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	5.56	137 b	117 b	75-125	16 b
Lead	mg/kg (ppm)	50	39.8	118 b	75 b	75-125	45 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	98	80-120
Lead	mg/kg (ppm)	50	95	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/USB5

Page # 1 of 8

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address PBS

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 4057.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb			Notes
						ANALYSES REQUESTED											
5537-9	01A-C	8/1/24	1020	5	3	X								X			per NB 9/10/24 ME
5538-9	02		1030			X								X			
5539-9	03		1045			X								X			
5540-9	04		1055			X								X			
5526-9	05		1255			X	X						X				
5527-9	06		1310			X	X						X				
5548-9	07		1320			X	X						X				
5549-9	08		1335			X								X			Sample labeled 5544-9 EMB 8/2
5556-9	09		1120			X								X			
5557-9	10		1130			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 2 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@globusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 407577.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS26-18	11A-C	8/1/24	~~1020~~ 1300	S	3	X	X						X				HOLD
SS27-18	12		1315			X	X						X	⊗			
SS37-18	13		1020			X								X			
SS38-18	14		1035			X								X			
SS39-18	15		1050			X								X			
SS40-18	16		1100			X								X			
SS48-18	17		1325			X	X						X				
SS49-18	18		1335			X								●			
SS56-18	19		1125			X								X			
SS57-18	20		1140			X								●			

ANALYSES REQUESTED

⊗ MS-Pb, NWTPH-Dx/Gx

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 3 of 8 M4/USBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Metals	Pb			Notes
SS58-9	21A-C	8/1/24	1110	S	3	X								X			
SS65-9	22		1350			X								X			
SS87-9	23		1405			X	X						X				
SS94-9	24		1410			X	X						X				
SS93-9	25		1420			X	X						X				
SS92-9	26		1430			X	X						X				
SS91-9	27		1435			X								X			
SS98-9	28		1455			X								X			
SS103-9	29		1550			X	X						X				
SS104-9	30		1605			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

MH/VSBS

Page # 4 of 8

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@ppsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB/AS			Notes
SS58-18	31A-C	8/1/24	1115	S	3	X								X			HOLD
SS65-18	32		1355			X								X			
SS87-18	33		1405			X	X						X	●			
SS94-18	34		1415			X	X						X	●			
SS93-18	35		1435			X	X						X				
SS92-18	36		1430			X	X						X				
SS91-18	37		1440			X								X			
SS98-18	38		1455			X								X			
SS103-18	39		1555			X	X						X				
SS104-18	40		1610			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 5 of 8 (44/1585)

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757.028
REMARKS: Project specific RLs? - Yes / No
INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	8 PP/AS			Notes
SS105-9	41A-C	8/1/24	1625	S	3	X								X			
SS106-9	42		1625			X								X			
SS107-9	43		1635			X								X			
SS108-9	44		1700			X								X			
SS109-9	45		1645			X								X			
SS110-9	46		1540			X								X			
SS111-9	47		1750			X	X						X				
SS112-9	48		1740			X								X			
SS113-9	49		1730			X	X						X				
SS114-9	50		1720			X								X			

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5500 4th Ave S.
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office@friedmanandbruya.com

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	~~PBS~~	8/2/24	1020
Received by:	Anh Phan	F&T	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

MH/NSBS

Page # 6 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7609 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
SS105-18	51A-C	8/1/24	1615	S	3	X								X			HOLD
SS106-18	52		1630			X								X			
SS107-18	53		1635			X								X			
SS108-18	54		1700			X								X			
SS109-18	55		1650			X								X			
SS110-18	56		~~1545~~ 1545			X								X			
SS111-18	57		1750			X	X						X				
SS112-18	58		1740			X								X			
SS113-18	59		1735			X	X						X				
SS114-18	60		1725			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 7 of 8

M4/US85

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 6				Notes
SS115-9	61A-C	8/1/24	1710	S	3	X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
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408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 8 of 8 MH/USBS

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA-8				Notes
SS115-18	62A-C	8/1/24	1715	S	3	X	X										HOLD

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FDI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 408036 CLIENT PBS INITIALS/ DATE: AP 08/02/24

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 0 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☑ YES ☐ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/ Date: EMB 8/2
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 1 days

Are the samples clearly identified? (explain "no" answer below) ☐ YES ☑ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☑ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label? (explain "no" answer below)

Sample ID's	☐ Yes ☑ No	-08 Sample labelled SS44-9 - used time to ID	☐ Not on COC/label
Date Sampled	☑ Yes ☐ No		☐ Not on COC/label
Time Sampled	☑ Yes ☐ No		☐ Not on COC/label
# of Containers	☑ Yes ☐ No		
Relinquished	☑ Yes ☐ No		
Requested analysis	☑ Yes ☐ On Hold		

Other comments (use a separate page if needed)
-08

Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ Number of unused TO17 tubes _____
**Fill out Green manifolds billing sheet

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
5500 4th Ave S
Seattle, WA 98108

RE: 408036,
Work Order Number: 2408262

August 21, 2024

Attention Michael Erdahl:

Fremont Analytical, Inc, an Alliance Technical Group company, received 1 sample(s) on 8/15/2024 for the analyses presented in the following report.

Hexavalent Chromium by EPA 7196A
Sample Moisture (Percent Moisture)

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Please note, while the appearance of our logo and branding will update, our commitment to accuracy, speed, and customer service remain values celebrated and shared by Alliance Technical Group. Thank you for the opportunity to serve you.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *08/21/2024*

CLIENT: Friedman & Bruya
Project: 408036
Work Order: 2408262

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2408262-001	SS113-9	08/01/2024 5:30 PM	08/15/2024 1:39 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2408262**

Date: **8/21/2024**

CLIENT: Friedman & Bruya

Project: 408036

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2408262**
Date Reported: **8/21/2024**

CLIENT: Friedman & Bruya
Project: 408036

Lab ID: 2408262-001 **Collection Date:** 8/1/2024 5:30:00 PM
Client Sample ID: **SS113-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93745		Analyst: EC
Percent Moisture	7.36	0.500		wt%	1	8/20/2024 8:35:27 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44892		Analyst: NR
Chromium, Hexavalent	ND	0.524		mg/Kg-dry	1	8/19/2024 4:40:00 PM

Work Order: 2408262
CLIENT: Friedman & Bruya
Project: 408036

QC SUMMARY REPORT

Hexavalent Chromium by EPA 7196A

Sample ID: **MB-44892**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **MBLKS**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957574**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-44892**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **LCSS**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957575**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.8	0.500	12.87	0	83.5	65.3	105.3				

Sample ID: **2408218-013ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957577**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.677						0		30	

Sample ID: **2408218-013AMS1**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957578**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	13.3	0.666	17.14	0	77.8	32	106				

Sample ID: **2408218-013AMS2**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957579**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	12.3	0.679	17.48	0	70.6	32	106				

Sample Log-In Check List

Client Name:	FB	Work Order Number:	2408262
Logged by:	Lyann Rivera	Date Received:	8/15/2024 1:39:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	6.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2408262

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 5500 4th Ave S

City, State, ZIP Seattle, WA 98108

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER
Alliance Technical Group

PROJECT NAME/NO.	PO #
408036	E-344

REMARKS

EIM and EQuIS 4

TURNAROUND TIME
☒ Standard TAT
☐ RUSH____
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Return samples
Will call with instructions

						ANALYSES REQUESTED										
Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	EPH	VPH	Cr VI								Notes
SS113-9		8/1/2024	1730	soil	1			x								

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	8/15/24	09:12
Received by:		Briana Ballard	ATG	8/15	1:39 PM
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

October 3, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Trierweiler:

Included are the additional results from the testing of material submitted on August 2, 2024 from the A1 Towing 40757.028, F&BI 408036 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS1003R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 2, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 408036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
408036 -01	SS37-9
408036 -02	SS38-9
408036 -03	SS39-9
408036 -04	SS40-9
408036 -05	SS26-9
408036 -06	SS27-9
408036 -07	SS48-9
408036 -08	SS49-9
408036 -09	SS56-9
408036 -10	SS57-9
408036 -11	SS26-18
408036 -12	SS27-18
408036 -13	SS37-18
408036 -14	SS28-18
408036 -15	SS39-18
408036 -16	SS40-18
408036 -17	SS48-18
408036 -18	SS49-18
408036 -19	SS56-18
408036 -20	SS57-18
408036 -21	SS58-9
408036 -22	SS65-9
408036 -23	SS87-9
408036 -24	SS94-9
408036 -25	SS93-9
408036 -26	SS92-9
408036 -27	SS91-9
408036 -28	SS98-9
408036 -29	SS103-9
408036 -30	SS104-9
408036 -31	SS58-18
408036 -32	SS65-18
408036 -33	SS87-18
408036 -34	SS94-18
408036 -35	SS93-18
408036 -36	SS92-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
408036 -37	SS91-18
408036 -38	SS98-18
408036 -39	SS103-18
408036 -40	SS104-18
408036 -41	SS105-9
408036 -42	SS106-9
408036 -43	SS107-9
408036 -44	SS108-9
408036 -45	SS109-9
408036 -46	SS110-9
408036 -47	SS111-9
408036 -48	SS112-9
408036 -49	SS113-9
408036 -50	SS114-9
408036 -51	SS105-18
408036 -52	SS106-18
408036 -53	SS107-18
408036 -54	SS108-18
408036 -55	SS109-18
408036 -56	SS110-18
408036 -57	SS111-18
408036 -58	SS112-18
408036 -59	SS113-18
408036 -60	SS114-18
408036 -61	SS115-9
408036 -62	SS115-18

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS113-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/13/24	Lab ID:	408036-59
Date Analyzed:	08/13/24	Data File:	408036-59.167
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	28

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	Not Applicable	Project:	A1 Towing 40757.028
Date Extracted:	08/14/24	Lab ID:	I4-668 mb
Date Analyzed:	08/13/24	Data File:	I4-668 mb.137
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1

Date of Report: 10/03/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408199-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	3.00	102 b	100 b	75-125	2 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	99	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/VSBS

Page # 1 of 8

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address PBS

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 4057.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
5537-9	01A-C	8/1/24	1020	5	3	X								X			
5538-9	02		1030			X								X			
5539-9	03		1045			X								X			
5540-9	04		1055			X								X			
5526-9	05		1255			X	X						X				
5527-9	06		1310			X	X						X				
5548-9	07		1320			X	X						X				
5549-9	08		1335			X								X			Sample labeled 5544-9 EMB 8/2
5556-9	09		1120			X								X			
5557-9	10		1130			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at Ø °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 2 of 8

14/15BS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS26-18	11A-C	8/1/24	~~1020~~ 1300	S	3	X	X						X				HOLD
SS27-18	12		1315			X	X						X				
SS37-18	13		1020			X								X			
SS38-18	14		1035			X								X			
SS39-18	15		1050			X								X			
SS40-18	16		1100			X								X			
SS48-18	17		1325			X	X						X				
SS49-18	18		1335			X								X			
SS56-18	19		1125			X								X			
SS57-18	20		1140			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
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office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 3 of 8 — 114/USBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
AI Towing	40757.028
REMARKS Project specific RLs? - Yes / No	INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Metals	Pb			Notes
SS58-9	21A-C	8/1/24	1110	S	3	X								X			
SS65-9	22		1350			X								X			
SS87-9	23		1405			X	X						X				
SS94-9	24		1410			X	X						X				
SS93-9	25		1420			X	X						X				
SS92-9	26		1430			X	X						X				
SS91-9	27		1435			X								X			
SS98-9	28		1455			X								X			
SS103-9	29		1550			X	X						X				
SS104-9	30		1605			X								X			

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Josh Trierweiler	PBS	8/2/24	1020
Received by:		Anh Phan	FBI	08/02/24	10:20
Relinquished by:			Samples received at 0 °C		
Received by:					

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 4 of 8

MW/VSBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@upsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☑ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB/AS	cadmium		● - per NB 08/16/24 Notes STD TAT
5558-18	31A-C	8/1/24	1115	5	3	X								X			HOLD
5565-18	32		1355			X								X			
5587-18	33		1405			X	X						X		●		
5594-18	34		1415			X	X						X				
5593-18	35		1425			X	X						X				
5592-18	36		1430			X	X						X				
5591-18	37		1440			X								X			
5598-18	38		1455			X	●							X			
55103-18	39		1555			X	X						X				
55104-18	40		1610			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 5 of 8

44/1585

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.726.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / AS	Cr VI		Notes
SS105-9	41 A-C	8/1/24	1615	S	3	X								X			A-Cr VI per
SS106-9	42		1625			X								X			NB 08/14/24 ME
SS107-9	43		1635			X								X			
SS108-9	44		1700			X								X			
SS109-9	45		1645			X								X			
SS110-9	46		1540			X								X			
SS111-9	47		1750			X	X						X				
SS112-9	48		1740			X								X			
SS113-9	49		1730			X	X						X		A		
SS114-9	50		1720			X								X			

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	F&T	08/02/24	10:20
Relinquished by:		Samples received at 8 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 6 of 8

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7609 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing
PO #: 40757028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS105-18	51A-C	8/1/24	1615	S	3	X								X*			HOLD
SS106-18	52		1630			X								X			
SS107-18	53		1635			X								X			
SS108-18	54		1700			X								X			
SS109-18	55		1650			X								(X)			- analyze per NB
SS110-18	5C		~~1540~~ 1545			X								X			8/15/24 at
SS111-18	57		1750			X	X						X				
SS112-18	58		1740			X		●						X			
SS113-18	59		1735			X	X						X	✓			
SS114-18	60		1725			X								X			

ANALYSES REQUESTED

✓ - Lead per NB

Notes: 8/12 5 DD TAT; 8/16

• - per NB 8/12/24

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FDI	08/02/24	10:20
Relinquished by:		Samples received at ∅ °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/04/24
02

Page # 7 of 14/1985

Report To Josh Trierweiler
Company PBS
Address 214 E Baker St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8				Notes
55115-9	61A-C	8/1/24	1710	S	3	X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
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Seattle WA 98108
(206) 285-8282
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408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 8 of 8 M4/VS85

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA-8	1S/PB			⊗M6 8/16 Notes
SS115-18	62A-C	8/1/24	1715	S	3	X	X							⊗			HOLD

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FDI	08/02/24	10:20
Relinquished by:		Samples received at Ø °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

September 6, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Mr Trierweiler :

Included are the additional results from the testing of material submitted on August 2, 2024 from the A1 Towing 40757.028, F&BI 408036 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0906R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 2, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 408036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
408036 -01	SS37-9
408036 -02	SS38-9
408036 -03	SS39-9
408036 -04	SS40-9
408036 -05	SS26-9
408036 -06	SS27-9
408036 -07	SS48-9
408036 -08	SS49-9
408036 -09	SS56-9
408036 -10	SS57-9
408036 -11	SS26-18
408036 -12	SS27-18
408036 -13	SS37-18
408036 -14	SS38-18
408036 -15	SS39-18
408036 -16	SS40-18
408036 -17	SS48-18
408036 -18	SS49-18
408036 -19	SS56-18
408036 -20	SS57-18
408036 -21	SS58-9
408036 -22	SS65-9
408036 -23	SS87-9
408036 -24	SS94-9
408036 -25	SS93-9
408036 -26	SS92-9
408036 -27	SS91-9
408036 -28	SS98-9
408036 -29	SS103-9
408036 -30	SS104-9
408036 -31	SS58-18
408036 -32	SS65-18
408036 -33	SS87-18
408036 -34	SS94-18
408036 -35	SS93-18
408036 -36	SS92-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
408036 -37	SS91-18
408036 -38	SS98-18
408036 -39	SS103-18
408036 -40	SS104-18
408036 -41	SS105-9
408036 -42	SS106-9
408036 -43	SS107-9
408036 -44	SS108-9
408036 -45	SS109-9
408036 -46	SS110-9
408036 -47	SS111-9
408036 -48	SS112-9
408036 -49	SS113-9
408036 -50	SS114-9
408036 -51	SS105-18
408036 -52	SS106-18
408036 -53	SS107-18
408036 -54	SS108-18
408036 -55	SS109-18
408036 -56	SS110-18
408036 -57	SS111-18
408036 -58	SS112-18
408036 -59	SS113-18
408036 -60	SS114-18
408036 -61	SS115-9
408036 -62	SS115-18

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS27-18	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/04/24	Lab ID:	408036-12
Date Analyzed:	09/04/24	Data File:	408036-12.054
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.3
Lead	7.4

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	Not Applicable	Project:	A1 Towing 40757.028, F&BI 408036
Date Extracted:	09/04/24	Lab ID:	I4-723 mb2
Date Analyzed:	09/04/24	Data File:	I4-723 mb2.097
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Lead	<1

Date of Report: 09/06/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408559-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.69	92	88	75-125	4
Lead	mg/kg (ppm)	50	5.14	96	92	75-125	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	97	80-120
Lead	mg/kg (ppm)	50	97	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

MH/VSBS

Page # 1 of 8

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address PBS

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40357.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS37-9	01A-C	8/1/24	1020	S	3	X								X			
SS38-9	02		1030			X								X			
SS39-9	03		1045			X								X			
SS40-9	04		1055			X								X			
SS26-9	05		1255			X	X						X				
SS27-9	06		1310			X	X						X				
SS48-9	07		1320			X	X						X				
SS49-9	08		1335			X								X			Sample labeled SS44-9 EMB 8/2
SS56-9	09		1120			X								X			
SS57-9	10		1130			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at Ø °C		
Received by:				

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5500 4th Ave S.
Seattle WA 98108
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office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 2 of 8 — 14/15SB5

Report To Josh Trierweiler

Company FBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@fbsusa.com

SAMPLERS (*signature*) AT

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS26-18	11A-C	8/1/24	~~1020~~ 1300	S	3	X	X						X				HOLD
SS27-18	12		1315			X	X						X	⊗			
SS37-18	13		1020			X								X			
SS38-18	14		1035			X								X			
SS39-18	15		1050			X								X			
SS40-18	16		1100			X								X			
SS48-18	17		1325			X	X						X				
SS49-18	18		1335			X								X			
SS56-18	19		1125			X								X			
SS57-18	20		1140			X								X			

ANALYSES REQUESTED

⊗ MS/MSD 8/1/24

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: AT	Josh Trierweiler	FBS	8/2/24	1020
Received by: [illegible]	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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office@friedmanandbruya.com

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SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 3 of 8 M4/USBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Metals	Pb			Notes
SS58-9	21A-C	8/1/24	1110	S	3	X								X			
SS65-9	22		1350			X								X			
SS87-9	23		1405			X	X						X				
SS94-9	24		1410			X	X						X				
SS93-9	25		1420			X	X						X				
SS92-9	26		1430			X	X						X				
SS91-9	27		1435			X								X			
SS98-9	28		1455			X								X			
SS103-9	29		1550			X	X						X				
SS104-9	30		1605			X								X			

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5500 4th Ave S.
Seattle WA 98108
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office@friedmanandbruya.com

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

MH/VSBS

Page # 4 of 8

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206-766-7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PD/AS			Notes
SS58-18	31A-C	8/1/24	1115	S	3	X								X			HOLD
SS65-18	32		1355			X								X			
SS87-18	33		1405			X	X						X				
SS94-18	34		1415			X	X						X				
SS93-18	35		1425			X	X						X				
SS92-18	36		1430			X	X						X				
SS91-18	37		1440			X								X			
SS98-18	38		1455			X								X			
SS103-18	39		1555			X	X						X				
SS104-18	40		1610			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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5500 4th Ave S.
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SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 5 of 8

MH/VSBS

Report To Josh Trierweiler
Company PBS
Address 214 E Galer St, Ste 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing
PO #: 40757.028

REMARKS
Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/AS			Notes
SS105-9	41 A-C	8/1/24	1615	S	3	X								X			
SS106-9	42		1625			X								X			
SS107-9	43		1635			X								X			
SS108-9	44		1700			X								X			
SS109-9	45		1645			X								X			
SS110-9	46		1540			X								X			
SS111-9	47		1750			X	X						X				
SS112-9	48		1740			X								X			
SS113-9	49		1730			X	X						X				
SS114-9	50		1720			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	F&T	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
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(206) 285-8282
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SAMPLE CHAIN OF CUSTODY

08/02/24

M4/NSBS

Page # 6 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7609 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
A1 Towing	407570.028
REMARKS Project specific RLs? - Yes / No	INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
SS105-18	51A-C	8/1/24	1615	S	3	X								X			HOLD
SS106-18	52		1630			X								X			
SS107-18	53		1635			X								X			
SS108-18	54		1700			X								X			
SS109-18	55		1650			X								X			
SS110-18	56		~~1545~~ 1545			X								X			
SS111-18	57		1750			X	X						X				
SS112-18	58		1740			X								X			
SS113-18	59		1735			X	X						X				
SS114-18	60		1725			X								X			

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Seattle WA 98108
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office@friedmanandbruya.com

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Josh Trierweiler	PBS	8/2/24	1020
Received by:		Anh Phan	FBI	08/02/24	10:20
Relinquished by:			Samples received at 0 °C		
Received by:					

408036

SAMPLE CHAIN OF CUSTODY

08/04/24 02

Page # 7 of 8 M4/US85

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 6				Notes
SS115-9	6	8/1/24	1710	S	3	X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 8 of M4/VSB5

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA-8				Notes
SS115-18	62A-C	8/1/24	1715	S	3	X	X										HOLD

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FDI	08/02/24	10:20
Relinquished by:		Samples received at Ø °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 408036 CLIENT PBS INITIALS/ DATE: AP 08/02/24

If custody seals are present on cooler, are they intact? ☒ NA ☐ YES ☐ NO

Cooler/Sample temperature Ø °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☒ YES ☐ NO

How did samples arrive?
☒ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☒ YES ☐ NO Initials/ Date: CMB 8/2
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 1 days

Are the samples clearly identified? (explain "no" answer below) ☐ YES ☒ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☒ YES ☐ NO

Were appropriate sample containers used? ☒ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☒ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☒ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label? (explain "no" answer below)

Sample ID's	☐ Yes ☒ No	-08 Sample labelled 5544-9 - used time to ID	☐ Not on COC/label
Date Sampled	☒ Yes ☐ No		☐ Not on COC/label
Time Sampled	☒ Yes ☐ No		☐ Not on COC/label
# of Containers	☒ Yes ☐ No		
Relinquished	☒ Yes ☐ No		
Requested analysis	☒ Yes ☐ On Hold		

Other comments (use a separate page if needed)
-08

Air Samples: Were any additional canisters/tubes received? ☒ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ Number of unused TO17 tubes _____
**Fill out Green manifolds billing sheet

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
5500 4th Ave S
Seattle, WA 98108

RE: 408036,
Work Order Number: 2408262

August 21, 2024

Attention Michael Erdahl:

Fremont Analytical, Inc, an Alliance Technical Group company, received 1 sample(s) on 8/15/2024 for the analyses presented in the following report.

Hexavalent Chromium by EPA 7196A
Sample Moisture (Percent Moisture)

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Please note, while the appearance of our logo and branding will update, our commitment to accuracy, speed, and customer service remain values celebrated and shared by Alliance Technical Group. Thank you for the opportunity to serve you.

Sincerely,

Brianna Barnes
Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.4 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Original

Date: *08/21/2024*

CLIENT: Friedman & Bruya
Project: 408036
Work Order: 2408262

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2408262-001	SS113-9	08/01/2024 5:30 PM	08/15/2024 1:39 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2408262**

Date: **8/21/2024**

CLIENT: Friedman & Bruya

Project: 408036

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2408262**
Date Reported: **8/21/2024**

CLIENT: Friedman & Bruya
Project: 408036

Lab ID: 2408262-001 **Collection Date:** 8/1/2024 5:30:00 PM
Client Sample ID: **SS113-9** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R93745		Analyst: EC
Percent Moisture	7.36	0.500		wt%	1	8/20/2024 8:35:27 AM
Hexavalent Chromium by EPA 7196A				Batch ID: 44892		Analyst: NR
Chromium, Hexavalent	ND	0.524		mg/Kg-dry	1	8/19/2024 4:40:00 PM

Work Order: 2408262
CLIENT: Friedman & Bruya
Project: 408036

QC SUMMARY REPORT

Hexavalent Chromium by EPA 7196A

Sample ID: **MB-44892**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **MBLKS**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957574**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-44892**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **LCSS**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957575**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	10.8	0.500	12.87	0	83.5	65.3	105.3				

Sample ID: **2408218-013ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957577**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.677						0		30	

Sample ID: **2408218-013AMS1**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957578**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	13.3	0.666	17.14	0	77.8	32	106				

Sample ID: **2408218-013AMS2**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/16/2024**		RunNo: **93732**		
Client ID: **BATCH**	Batch ID: **44892**					Analysis Date: **8/19/2024**		SeqNo: **1957579**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	12.3	0.679	17.48	0	70.6	32	106				

Sample Log-In Check List

Client Name:	FB	Work Order Number:	2408262
Logged by:	Lyann Rivera	Date Received:	8/15/2024 1:39:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	6.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2408262

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 5500 4th Ave S

City, State, ZIP Seattle, WA 98108

Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER
Alliance Technical Group

PROJECT NAME/NO.	PO #
408036	E-344

REMARKS

EIM and EQuIS 4

TURNAROUND TIME
☒ Standard TAT
☐ RUSH____
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Return samples
Will call with instructions

						ANALYSES REQUESTED										
Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	EPH	VPH	Cr VI								Notes
SS113-9		8/1/2024	1730	soil	1			x								

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	8/15/24	09:12
Received by:		Briana Ballard	ATG	8/15	1:39 PM
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

August 12, 2024

Josh Trierweiler, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

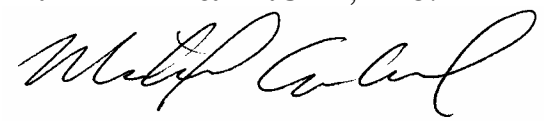
Dear Mr Trierweiler :

Included are the results from the testing of material submitted on August 2, 2024 from the A1 Towing 40757.028, F&BI 408036 project. There are 53 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Nasrin Bastami
PBS0812R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 2, 2024 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 408036 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
408036 -01	SS37-9
408036 -02	SS38-9
408036 -03	SS39-9
408036 -04	SS40-9
408036 -05	SS26-9
408036 -06	SS27-9
408036 -07	SS48-9
408036 -08	SS49-9
408036 -09	SS56-9
408036 -10	SS57-9
408036 -11	SS26-18
408036 -12	SS27-18
408036 -13	SS37-18
408036 -14	SS38-18
408036 -15	SS39-18
408036 -16	SS40-18
408036 -17	SS48-18
408036 -18	SS49-18
408036 -19	SS56-18
408036 -20	SS57-18
408036 -21	SS58-9
408036 -22	SS65-9
408036 -23	SS87-9
408036 -24	SS94-9
408036 -25	SS93-9
408036 -26	SS92-9
408036 -27	SS91-9
408036 -28	SS98-9
408036 -29	SS103-9
408036 -30	SS104-9
408036 -31	SS58-18
408036 -32	SS65-18
408036 -33	SS87-18
408036 -34	SS94-18
408036 -35	SS93-18
408036 -36	SS92-18
408036 -37	SS91-18

CASE NARRATIVE (continued)

Laboratory ID	PBS Engineering and Environmental
408036 -38	SS98-18
408036 -39	SS103-18
408036 -40	SS104-18
408036 -41	SS105-9
408036 -42	SS106-9
408036 -43	SS107-9
408036 -44	SS108-9
408036 -45	SS109-9
408036 -46	SS110-9
408036 -47	SS111-9
408036 -48	SS112-9
408036 -49	SS113-9
408036 -50	SS114-9
408036 -51	SS105-18
408036 -52	SS106-18
408036 -53	SS107-18
408036 -54	SS108-18
408036 -55	SS109-18
408036 -56	SS110-18
408036 -57	SS111-18
408036 -58	SS112-18
408036 -59	SS113-18
408036 -60	SS114-18
408036 -61	SS115-9
408036 -62	SS115-18

Chromium in the 6020B matrix spike duplicate did not meet the acceptance criteria. The laboratory control sample passed the acceptance criteria, therefore the results were due to matrix effect.

All other quality control requirements were acceptable.

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/07/24
Date Analyzed: 08/07/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS26-9 408036-05	<5	82
SS27-9 408036-06	<5	93
SS48-9 408036-07	<5	85
SS87-9 408036-23	<5	82
SS94-9 408036-24	<5	85
SS93-9 408036-25	<5	86
SS92-9 408036-26	<5	93
SS103-9 408036-29	<5	89
SS111-9 408036-47	<5	86
SS113-9 408036-49	<5	95

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/07/24
Date Analyzed: 08/07/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS115-9 408036-61	<5	79
Method Blank 04-1740 MB	<5	95

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/05/24
Date Analyzed: 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS37-9 408036-01	<50	<250	112
SS38-9 408036-02	<50	1,100	110
SS39-9 408036-03	<50	<250	109
SS40-9 408036-04	<50	<250	106
SS26-9 408036-05	<50	<250	110
SS27-9 408036-06	<50	<250	107
SS48-9 408036-07	<50	<250	103
SS49-9 408036-08	<50	<250	109
SS56-9 408036-09	<50	<250	110
SS57-9 408036-10	<50	<250	108
SS58-9 408036-21	140 x	740	112
SS65-9 408036-22	<50	<250	108

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/05/24
Date Analyzed: 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS87-9 408036-23	<50	<250	110
SS94-9 408036-24	<50	<250	111
SS93-9 408036-25	<50	<250	106
SS92-9 408036-26	<50	<250	111
SS91-9 408036-27	<50	<250	109
SS98-9 408036-28	<50	<250	108
SS103-9 408036-29	<50	<250	111
SS104-9 408036-30	<50	<250	113
SS105-9 408036-41	<50	<250	111
SS106-9 408036-42	<50	<250	116
SS107-9 408036-43	<50	<250	113
SS108-9 408036-44	<50	<250	113

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036
Date Extracted: 08/05/24
Date Analyzed: 08/05/24

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS109-9 408036-45	<50	<250	121
SS110-9 408036-46	<50	<250	120
SS111-9 408036-47	<50	<250	114
SS112-9 408036-48	<50	<250	115
SS113-9 408036-49	180 x	1,100	115
SS114-9 408036-50	<50	<250	114
SS115-9 408036-61	<50	<250	114
Method Blank 04-1869 MB	<50	<250	115
Method Blank 04-1870 MB	<50	<250	111

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS37-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-01
Date Analyzed:	08/08/24	Data File:	408036-01.240
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.2
Lead	23

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS38-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-02
Date Analyzed:	08/08/24	Data File:	408036-02.241
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.9
Lead	36

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS39-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-03
Date Analyzed:	08/08/24	Data File:	408036-03.242
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.1
Lead	18

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS40-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-04
Date Analyzed:	08/08/24	Data File:	408036-04.243
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.4
Lead	1.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS26-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-05
Date Analyzed:	08/08/24	Data File:	408036-05.244
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.1
Barium	71
Cadmium	<1
Lead	12
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS26-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-05 x5
Date Analyzed:	08/09/24	Data File:	408036-05 x5.077
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	29

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS27-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-06
Date Analyzed:	08/08/24	Data File:	408036-06.245
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.5
Barium	80
Cadmium	<1
Lead	11
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS27-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-06 x5
Date Analyzed:	08/09/24	Data File:	408036-06 x5.080
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	28

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS48-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-07
Date Analyzed:	08/08/24	Data File:	408036-07.246
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.8
Barium	79
Cadmium	<1
Lead	7.6
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS48-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-07 x5
Date Analyzed:	08/09/24	Data File:	408036-07 x5.081
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	31

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS49-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-08
Date Analyzed:	08/08/24	Data File:	408036-08.281
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.0
Lead	8.5

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS56-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-09
Date Analyzed:	08/08/24	Data File:	408036-09.282
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.5
Lead	16

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS57-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-10
Date Analyzed:	08/08/24	Data File:	408036-10.283
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.7
Lead	9.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS58-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-21
Date Analyzed:	08/08/24	Data File:	408036-21.286
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.9
Lead	18

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS65-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-22
Date Analyzed:	08/08/24	Data File:	408036-22.287
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	13
Lead	18

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-23
Date Analyzed:	08/08/24	Data File:	408036-23.288
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	14
Barium	76
Cadmium	2.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS87-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-23 x5
Date Analyzed:	08/09/24	Data File:	408036-23 x5.085
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	36
Lead	120

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS94-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-24
Date Analyzed:	08/08/24	Data File:	408036-24.289
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.8
Barium	63
Cadmium	<1
Lead	9.5
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS94-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-24 x5
Date Analyzed:	08/09/24	Data File:	408036-24 x5.086
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	24

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS93-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-25
Date Analyzed:	08/08/24	Data File:	408036-25.290
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.0
Barium	62
Cadmium	<1
Chromium	16
Lead	14
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS92-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-26
Date Analyzed:	08/08/24	Data File:	408036-26.293
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.0
Barium	64
Cadmium	<1
Chromium	10
Lead	6.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS91-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-27
Date Analyzed:	08/08/24	Data File:	408036-27.294
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.5
Lead	5.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS98-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-28
Date Analyzed:	08/08/24	Data File:	408036-28.295
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Lead	5.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS103-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-29
Date Analyzed:	08/08/24	Data File:	408036-29.296
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.5
Barium	63
Cadmium	<1
Lead	6.6
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS103-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-29 x5
Date Analyzed:	08/09/24	Data File:	408036-29 x5.088
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	28

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS104-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-30
Date Analyzed:	08/08/24	Data File:	408036-30.297
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.3
Lead	3.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS105-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-41
Date Analyzed:	08/08/24	Data File:	408036-41.298
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.0
Lead	7.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS106-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-42
Date Analyzed:	08/08/24	Data File:	408036-42.299
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.0
Lead	13

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS107-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-43
Date Analyzed:	08/08/24	Data File:	408036-43.300
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.3
Lead	5.6

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS108-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-44
Date Analyzed:	08/08/24	Data File:	408036-44.301
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.6
Lead	3.1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS109-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-45
Date Analyzed:	08/08/24	Data File:	408036-45.302
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.8
Lead	9.7

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS110-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-46
Date Analyzed:	08/09/24	Data File:	408036-46.094
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.1
Lead	3.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS111-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-47
Date Analyzed:	08/09/24	Data File:	408036-47.095
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.8
Barium	48
Cadmium	<1
Chromium	14
Lead	24
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS112-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-48
Date Analyzed:	08/09/24	Data File:	408036-48.096
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	10
Lead	40

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS113-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-49
Date Analyzed:	08/09/24	Data File:	408036-49.097
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	13
Barium	62
Cadmium	2.0
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS113-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-49 x5
Date Analyzed:	08/09/24	Data File:	408036-49 x5.101
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	63
Lead	280

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS114-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-50
Date Analyzed:	08/09/24	Data File:	408036-50.098
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	7.4
Barium	51
Cadmium	<1
Chromium	14
Lead	39
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	SS115-9	Client:	PBS Engineering and Environmental
Date Received:	08/02/24	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	408036-61
Date Analyzed:	08/09/24	Data File:	408036-61.099
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.5
Barium	87
Cadmium	<1
Chromium	18
Lead	9.8
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/02/24	Lab ID:	I4-635 mb
Date Analyzed:	08/05/24	Data File:	I4-635 mb.121
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028
Date Extracted:	08/05/24	Lab ID:	I4-636 mb
Date Analyzed:	08/05/24	Data File:	I4-636 mb.125
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 408019-42 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	40	95	70-130

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 408036-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	54	115	115	64-136	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	126	78-121

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 408036-41 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	124	124	64-136	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	116	78-121

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408036-41 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	4.43	95 b	99 b	75-125	4 b
Barium	mg/kg (ppm)	50	61.2	104 b	102 b	75-125	2 b
Cadmium	mg/kg (ppm)	10	<1	95	94	75-125	1
Chromium	mg/kg (ppm)	50	8.03	75	73 vo	75-125	3
Lead	mg/kg (ppm)	50	6.69	84	84	75-125	0
Mercury	mg/kg (ppm	5	<1	91	88	75-125	3
Selenium	mg/kg (ppm)	5	<1	94	93	75-125	1
Silver	mg/kg (ppm)	10	<1	95	95	75-125	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	95	80-120
Barium	mg/kg (ppm)	50	96	80-120
Cadmium	mg/kg (ppm)	10	99	80-120
Chromium	mg/kg (ppm)	50	104	80-120
Lead	mg/kg (ppm)	50	94	80-120
Mercury	mg/kg (ppm)	5	89	80-120
Selenium	mg/kg (ppm)	5	97	80-120
Silver	mg/kg (ppm)	10	97	80-120

Date of Report: 08/12/24
Date Received: 08/02/24
Project: A1 Towing 40757.028, F&BI 408036

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 408036-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	6.73	82 b	87 b	75-125	6 b
Barium	mg/kg (ppm)	50	68.9	58 b	61 b	75-125	5 b
Cadmium	mg/kg (ppm)	10	<1	96	93	75-125	3
Chromium	mg/kg (ppm)	50	14.3	69 b	80 b	75-125	15 b
Lead	mg/kg (ppm)	50	23.3	70 b	72 b	75-125	3 b
Mercury	mg/kg (ppm	5	<1	92	92	75-125	0
Selenium	mg/kg (ppm)	5	<1	95	89	75-125	7
Silver	mg/kg (ppm)	10	<1	98	95	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Barium	mg/kg (ppm)	50	99	80-120
Cadmium	mg/kg (ppm)	10	103	80-120
Chromium	mg/kg (ppm)	50	111	80-120
Lead	mg/kg (ppm)	50	99	80-120
Mercury	mg/kg (ppm)	5	96	80-120
Selenium	mg/kg (ppm)	5	100	80-120
Silver	mg/kg (ppm)	10	102	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/VSB5

Page # 1 of 8

Report To Josh Trierweiler

Company 214 E Galer St, Ste 300

Address PBS

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 4057.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb			Notes
SS37-9	01A-C	8/1/24	1020	5	3	X								X			
SS38-9	02		1030			X								X			
SS39-9	03		1045			X								X			
SS40-9	04		1055			X								X			
SS26-9	05		1255			X	X						X				
SS27-9	06		1310			X	X						X				
SS48-9	07		1320			X	X						X				
SS49-9	08		1335			X								X			Sample labelled SS44-9 EMB 8/2
SS56-9	09		1120			X								X			
SS57-9	10		1130			X								X			

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/KSBS

Page # 2 of 8

Report To Josh Trierweiler

Company GBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206-766-7604 Email josh.trierweiler@gbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS26-18	11A-C	8/1/24	~~1020~~ 1300	5	3	X	X						X				HOLD
SS27-18	12		1315			X	X						X				
SS37-18	13		1020			X								X			
SS38-18	14		1035			X								X			
SS39-18	15		1050			X								X			
SS40-18	16		1100			X								X			
SS48-18	17		1325			X	X						X				
SS49-18	18		1335			X								X			
SS56-18	19		1125			X								X			
SS57-18	20		1140			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	GBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

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Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 3 of 8

MA/USBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8 Metals	Pb			Notes
SS58-9	21A-C	8/1/24	1110	S	3	X								X			
SS65-9	22		1350			X								X			
SS87-9	23		1405			X	X						X				
SS94-9	24		1410			X	X						X				
SS93-9	25		1420			X	X						X				
SS92-9	26		1430			X	X						X				
SS91-9	27		1435			X								X			
SS98-9	28		1455			X								X			
SS103-9	29		1550			X	X						X				
SS104-9	30		1605			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

MH/VSBS

Page # 4 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☒ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	PB/AS			Notes
						ANALYSES REQUESTED											
SS58-18	31A-C	8/1/24	1115	S	3	X								X			HOLD
SS65-18	32		1355			X								X			
SS87-18	33		1405			X	X						X				
SS94-18	34		1415			X	X						X				
SS93-18	35		1425			X	X						X				
SS92-18	36		1430			X	X						X				
SS91-18	37		1440			X								X			
SS98-18	38		1455			X								X			
SS103-18	39		1555			X	X						X				
SS104-18	40		1610			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 5 of 8

M4/VSBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 40757.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME

☒ Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb / As			Notes
SS105-9	41 A-C	8/1/24	1625	S	3	X								X			
SS106-9	42		1625			X								X			
SS107-9	43		1635			X								X			
SS108-9	44		1700			X								X			
SS109-9	45		1645			X								X			
SS110-9	46		1540			X								X			
SS111-9	47		1750			X	X						X				
SS112-9	48		1740			X								X			
SS113-9	49		1730			X	X						X				
SS114-9	50		1720			X								X			

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5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	F&I	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

M4/NSB5

Page # 6 of 8

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7609 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: AI Towing

PO #: 407570.028

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 8	Pb/As			Notes
SS105-18	51A-C	8/1/24	1615	S	3	X								X			HOLD
SS106-18	52		1630			X								X			
SS107-18	53		1635			X								X			
SS108-18	54		1700			X								X			
SS109-18	55		1650			X								X			
SS110-18	5C		~~1545~~ 1545			X								X			
SS111-18	57		1750			X	X						X				
SS112-18	58		1740			X								X			
SS113-18	59		1735			X	X						X				
SS114-18	60		1725			X								X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
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408036

SAMPLE CHAIN OF CUSTODY

08/04/24 02

Page # 7 of 8 MH/VSBS

Report To Josh Trierweiler

Company PBS

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS: Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA 6				Notes
						ANALYSES REQUESTED											
SS115-9	6/A-C	8/1/24	1710	S	3	X	X						X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Phan	FBI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
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office@friedmanandbruya.com

408036

SAMPLE CHAIN OF CUSTODY

08/02/24

Page # 8 of 8 MH/USBS

Report To Josh Trierweiler

Company PBS

Address 214 E Baker St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7604 Email josh.trierweiler@pbesa.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
A1 Towing	40757.028
REMARKS Project specific RLs? - Yes / No	INVOICE TO

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	RCRA-8				Notes
SS115-18	62A<	8/1/24	1715	S	3	X	X										HOLD

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Josh Trierweiler	PBS	8/2/24	1020
Received by:	Anh Pham	FDI	08/02/24	10:20
Relinquished by:		Samples received at 0 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Ave S.
Seattle WA 98108
(206) 285-8282
office@friedmanandbruya.com

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 408036 CLIENT PBS INITIALS/ DATE: AP 08/02/24

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 0 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☑ YES ☐ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/ Date: EMB 8/2
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 1 days

Are the samples clearly identified? (explain "no" answer below) ☐ YES ☑ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☑ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label? (explain "no" answer below)

Sample ID's	☐ Yes	☑ No	-08 Sample labelled 5544-9 - used time to ID ☐ Not on COC/label
Date Sampled	☑ Yes	☐ No	☐ Not on COC/label
Time Sampled	☑ Yes	☐ No	☐ Not on COC/label
# of Containers	☑ Yes	☐ No	
Relinquished	☑ Yes	☐ No	
Requested analysis	☑ Yes	☐ On Hold	

Other comments (use a separate page if needed)
-08

Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ Number of unused TO17 tubes _____
**Fill out Green manifolds billing sheet

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Elizabeth Webber-Bruya
Ann Webber-Bruya
Michael Erdahl
Vineta Mills
Eric Young

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

April 30, 2025

Nasrin Bastami, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Ms Bastami:

Included are the results from the testing of material submitted on April 29, 2025 from the A1 Towing 40757.028, F&BI 504473 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Josh Trierweiler
PBS0430R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 29, 2025 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 504473 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
504473 -01	SS36-9-TCLP

All quality control requirements were acceptable.

Analysis for TCLP Metals By EPA Methods 6020B and 1311

Client Sample ID:	SS36-9-TCLP	Client:	PBS Engineering and Environmental
Date Received:	04/29/25	Project:	A1 Towing 40757.028
Date Extracted:	04/29/25	Lab ID:	504473-01
Date Analyzed:	04/30/25	Data File:	504473-01.157
Matrix:	Soil/Solid	Instrument:	ICPMS3
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Methods 6020B and 1311

Client Sample ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	Not Applicable	Project:	A1 Towing 40757.028
Date Extracted:	04/29/25	Lab ID:	I5-364 mb
Date Analyzed:	04/30/25	Data File:	I5-364 mb.149
Matrix:	Soil/Solid	Instrument:	ICPMS3
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Date of Report: 04/30/25
Date Received: 04/29/25
Project: A1 Towing 40757.028, F&BI 504473

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL/SOLID SAMPLES FOR TCLP METALS USING EPA METHODS 6020B AND 1311

Laboratory Code: 504473-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	<1	85	86	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	84	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported between the method detection limit and the lowest calibration point. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

504473

SAMPLE CHAIN OF CUSTODY

04/29/25 VSA1/MJ

Page # 1 of 1

Report To Nasrin Bastami

Company PBS Engr

Address 214 E Galer St, Ste 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7636 Email nasrin.bastami@pbsusa.com; josh.trierweiler@pbsusa.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project Specific RLs - Yes / No

INVOICE TO

TURNAROUND TIME

Standard Turnaround

X RUSH 24 hrs

Rush charges authorized by:

SAMPLE DISPOSAL

Dispose after 30 days

Archive Samples

Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	~~BTEX EPA 8021~~	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Lead TCLP					Notes
SS36-9-TCLP	01A-E	4/29	1235	S	5			X				X					
													Samples received at 4 °C.				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		PBS	4/29/25	1315
Received by:	Nhan Phan	FEBT	4/29/25	1325
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
5500 4th Avenue S
Seattle, WA 98108
Ph. (206) 285-8282

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 504473 CLIENT PBS INITIALS/ DATE: NB 4/29/25

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 4 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☑ YES ☐ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/ AP
*or other representative documents, letters, and/or shipping memos Date: 4/29/25

Number of days samples have been sitting prior to receipt at laboratory 0 days

Are the samples clearly identified? (explain "no" answer below) ☑ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☑ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☑ Yes ☐ No	☐ Not on COC/label
Date Sampled	☑ Yes ☐ No	☐ Not on COC/label
Time Sampled	☑ Yes ☐ No	☐ Not on COC/label
# of Containers	☑ Yes ☐ No	
Relinquished	☑ Yes ☐ No	
Requested analysis	☑ Yes ☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ **Number of unused TO17 tubes** _____
**Fill out Green manifolds billing sheet

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Elizabeth Webber-Bruya
Ann Webber-Bruya
Michael Erdahl
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May 20, 2025

Nasrin Bastami, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Ms Bastami:

Included are the results from the testing of material submitted on May 12, 2025 from the A1 Towing 40757.028, F&BI 505187 project. There are 36 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PBS0520R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 12, 2025 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental A1 Towing 40757.028, F&BI 505187 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
505187 -01	SS87C-B:15
505187 -02	SS87C-N:12
505187 -03	SS87C-E:12
505187 -04	SS87C-S:12
505187 -05	SS87C-W:12
505187 -06	SS69C-B:24
505187 -07	SS69C-N:20
505187 -08	SS69C-E:20
505187 -09	SS69C-S:20
505187 -10	SS69C-W:20
505187 -11	SS9C-B:32
505187 -12	SS9C-N:29
505187 -13	SS9C-E:29
505187 -14	SS9C-S:29
505187 -15	SS9C-W:29
505187 -16	SS113C-B:24
505187 -17	SS113C-N:20
505187 -18	SS113C-E:20
505187 -19	SS113C-S:20
505187 -20	SS113C-W:20
505187 -21	SS6C-B:32
505187 -22	SS6C-N:29
505187 -23	SS6C-E:29
505187 -24	SS6C-S:29
505187 -25	SS6C-W:29

All quality control requirements were acceptable.

Date of Report: 05/20/25
Date Received: 05/12/25
Project: A1 Towing 40757.028, F&BI 505187
Date Extracted: 05/13/25
Date Analyzed: 05/14/25

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SS87C-B:15 505187-01	<0.02	<0.02	<0.02	<0.06	<5	96
SS69C-B:24 505187-06	<0.02	<0.02	<0.02	<0.06	<5	98
SS9C-B:32 505187-11	<0.02	<0.02	<0.02	<0.06	<5	98
SS113C-B:24 505187-16	<0.02	<0.02	<0.02	<0.06	<5	96
SS6C-B:32 505187-21	<0.02	<0.02	<0.02	<0.06	<5	95
Method Blank 05-1135 MB	<0.02	<0.02	<0.02	<0.06	<5	106

Date of Report: 05/20/25
Date Received: 05/12/25
Project: A1 Towing 40757.028, F&BI 505187
Date Extracted: 05/13/25
Date Analyzed: 05/13/25

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS87C-B:15 505187-01	<50	<200	103
SS87C-N:12 505187-02	<50	<200	102
SS87C-E:12 505187-03	<50	<200	103
SS87C-S:12 505187-04	<50	<200	100
SS87C-W:12 505187-05	<50	<200	107
SS69C-B:24 505187-06	<50	<200	106
SS69C-S:20 505187-09	<50	380	105
SS9C-B:32 505187-11	<50	<200	105
SS9C-W:29 505187-15	<50	<200	104
SS113C-B:24 505187-16	<50	<200	104
SS113C-N:20 505187-17	<50	<200	103

Date of Report: 05/20/25
Date Received: 05/12/25
Project: A1 Towing 40757.028, F&BI 505187
Date Extracted: 05/13/25
Date Analyzed: 05/13/25

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SS113C-E:20 505187-18	<50	<200	103
SS113C-S:20 505187-19	<50	<200	103
SS113C-W:20 505187-20	<50	<200	105
SS6C-B:32 505187-21	<50	<200	100
Method Blank 05-1176 MB	<50	<200	102

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS87C-B:15	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-01
Date Analyzed:	05/13/25	Data File:	505187-01.189
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.9
Barium	66
Cadmium	<1
Chromium	23
Lead	2.9
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS87C-N:12	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-02
Date Analyzed:	05/13/25	Data File:	505187-02.190
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS87C-E:12	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-03
Date Analyzed:	05/13/25	Data File:	505187-03.191
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS87C-S:12	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-04
Date Analyzed:	05/13/25	Data File:	505187-04.192
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS87C-W:12	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-05
Date Analyzed:	05/13/25	Data File:	505187-05.193
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS69C-B:24	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-06
Date Analyzed:	05/13/25	Data File:	505187-06.194
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.0
Barium	51
Cadmium	<1
Chromium	14
Lead	2.2
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS69C-N:20	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-07
Date Analyzed:	05/13/25	Data File:	505187-07.195
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS69C-E:20	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-08
Date Analyzed:	05/13/25	Data File:	505187-08.200
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.5

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS69C-S:20	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-09
Date Analyzed:	05/13/25	Data File:	505187-09.201
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.7

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS69C-W:20	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-10
Date Analyzed:	05/13/25	Data File:	505187-10.202
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	4.2

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS9C-B:32	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-11
Date Analyzed:	05/13/25	Data File:	505187-11.203
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.6
Barium	50
Cadmium	<1
Chromium	17
Lead	5.7
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS9C-N:29	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-12
Date Analyzed:	05/13/25	Data File:	505187-12.204
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	6.3

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS9C-E:29	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-13
Date Analyzed:	05/13/25	Data File:	505187-13.211
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	8.4

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS9C-S:29	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-14
Date Analyzed:	05/13/25	Data File:	505187-14.214
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	16

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS9C-W:29	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-15
Date Analyzed:	05/13/25	Data File:	505187-15.215
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	13

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS113C-B:24	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-16
Date Analyzed:	05/13/25	Data File:	505187-16.216
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	14
Barium	60
Cadmium	<1
Chromium	23
Lead	7.1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS113C-N:20	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-17
Date Analyzed:	05/13/25	Data File:	505187-17.217
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	9.1
Lead	4.1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS113C-E:20	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-18
Date Analyzed:	05/13/25	Data File:	505187-18.218
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	5.7
Lead	9.8

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS113C-S:20	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-19
Date Analyzed:	05/13/25	Data File:	505187-19.219
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.0
Lead	2.4

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS113C-W:20	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-20
Date Analyzed:	05/13/25	Data File:	505187-20.220
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.1
Lead	8.5

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS6C-B:32	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-21
Date Analyzed:	05/13/25	Data File:	505187-21.224
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	28
Barium	59
Cadmium	<1
Chromium	22
Lead	2.5
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS6C-N:29	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-22
Date Analyzed:	05/13/25	Data File:	505187-22.225
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	13

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS6C-E:29	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-23
Date Analyzed:	05/13/25	Data File:	505187-23.226
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	16

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS6C-S:29	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-24
Date Analyzed:	05/13/25	Data File:	505187-24.227
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	12

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	SS6C-W:29	Client:	PBS Engineering and Environmental
Date Received:	05/12/25	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	505187-25
Date Analyzed:	05/13/25	Data File:	505187-25.228
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	10

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	I5-410 mb
Date Analyzed:	05/13/25	Data File:	I5-410 mb.091
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client Sample ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	A1 Towing 40757.028, F&BI 505187
Date Extracted:	05/13/25	Lab ID:	I5-411 mb
Date Analyzed:	05/13/25	Data File:	I5-411 mb.176
Matrix:	Soil	Instrument:	ICPMS3
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Date of Report: 05/20/25
Date Received: 05/12/25
Project: A1 Towing 40757.028, F&BI 505187

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-GX

Laboratory Code: 505156-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	0.092	0.057	47 a
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1.0	88	70-130
Toluene	mg/kg (ppm)	1.0	89	70-130
Ethylbenzene	mg/kg (ppm)	1.0	82	70-130
Xylenes	mg/kg (ppm)	3.0	83	70-130
Gasoline	mg/kg (ppm)	40	92	70-130

Date of Report: 05/20/25
Date Received: 05/12/25
Project: A1 Towing 40757.028, F&BI 505187

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 505187-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	100	104	64-136	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	78-121

Date of Report: 05/20/25
Date Received: 05/12/25
Project: A1 Towing 40757.028, F&BI 505187

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 505164-63 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<1	96	97	75-125	1
Barium	mg/kg (ppm)	50	11.9	95 b	98 b	75-125	3 b
Cadmium	mg/kg (ppm)	10	<1	99	102	75-125	3
Chromium	mg/kg (ppm)	50	5.54	88	87	75-125	1
Lead	mg/kg (ppm)	50	<1	95	96	75-125	1
Mercury	mg/kg (ppm	5	<1	98	101	75-125	3
Selenium	mg/kg (ppm)	5	<1	93	94	75-125	1
Silver	mg/kg (ppm)	10	<1	98	101	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	101	80-120
Barium	mg/kg (ppm)	50	102	80-120
Cadmium	mg/kg (ppm)	10	95	80-120
Chromium	mg/kg (ppm)	50	100	80-120
Lead	mg/kg (ppm)	50	95	80-120
Mercury	mg/kg (ppm)	5	100	80-120
Selenium	mg/kg (ppm)	5	100	80-120
Silver	mg/kg (ppm)	10	104	80-120

Date of Report: 05/20/25
Date Received: 05/12/25
Project: A1 Towing 40757.028, F&BI 505187

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 505187-13 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	6.28	91 b	85 b	75-125	7 b
Barium	mg/kg (ppm)	50	37.7	82 b	92 b	75-125	11 b
Cadmium	mg/kg (ppm)	10	<1	96	94	75-125	2
Chromium	mg/kg (ppm)	50	14.8	77 b	79 b	75-125	3 b
Lead	mg/kg (ppm)	50	16.4	89 b	86 b	75-125	3 b
Mercury	mg/kg (ppm	5	<1	95	91	75-125	4
Selenium	mg/kg (ppm)	5	<1	85	83	75-125	2
Silver	mg/kg (ppm)	10	<1	95	94	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	97	80-120
Barium	mg/kg (ppm)	50	102	80-120
Cadmium	mg/kg (ppm)	10	99	80-120
Chromium	mg/kg (ppm)	50	101	80-120
Lead	mg/kg (ppm)	50	97	80-120
Mercury	mg/kg (ppm)	5	94	80-120
Selenium	mg/kg (ppm)	5	98	80-120
Silver	mg/kg (ppm)	10	101	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported between the method detection limit and the lowest calibration point. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

505187

SAMPLE CHAIN OF CUSTODY

05/12/25 N4/M4

Page # 1 of 3

Report To Nasrin Bastami

Company PBS

Address 214 E Galer St, Suite 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7636 Email nasrin.bastami@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: A1 Towing

PO #: 40757.028

REMARKS

Project Specific RLs - Yes / No

INVOICE TO

TURNAROUND TIME
X Standard Turnaround
RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Archive Samples
Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	6x mod BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	As (Arsenic)	Pb (Lead)	RACA 8 metals (EPA 200.8/6020B)		Cadmium	Notes
SS87C-B:15	01 A-E	5/12/25	08:44	Soil	5	x		x						x		x	
SS87C-N:12	02		08:51			x										x	
SS87C-E:12	03		08:46			x										x	
SS87C-S:12	04		08:47			x										x	
SS87C-W:12	05		08:49			x										x	
SS69C-B:24	06		10:19			x		x						x			
SS69C-N:20	07		10:21			x						x					
SS69C-E:20	08		10:23			x						x					
SS69C-S:20	09		10:25			x						x					
SS69C-W:20	10		10:27			x						x					

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Andreas	PBS	5/12/25	17:41
Received by:	BISRAT TADESSE	FBI	5/12/25	17:41
Relinquished by:				
Received by:		Samples received at 2 °C		

Friedman & Bruya, Inc.
5500 4th Avenue S
Seattle, WA 98108
Ph. (206) 285-8282

505187

SAMPLE CHAIN OF CUSTODY

05/12/25 NM/MM

Page # 2 of 3

Report To Nasrin Bastami
Company PBS Engineering
Address 214 E. Galer St, Suite 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.7636 Email nasrin.bastami@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: Al Towing
PO #: 40757.029

REMARKS: Project Specific RLs - Yes / No
INVOICE TO

TURNAROUND TIME
X Standard Turnaround
RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Archive Samples
Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	Gx and BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	As (Arsenic)	Pb (Lead)	RARA 8 EPA 200.8 / 6020B			Notes
SS9C-B:32	11 A.E	5/12/25	11:12	Soil	5	X		X						X			
SS9C-N:29	12		11:14									X					
SS9C-E:29	13		11:16									X					
SS9C-S:29	14		11:18									X					
SS9C-W:29	15		11:21			X						X					
SS113C-B:24	16		12:35			X		X						X			
SS113C-N:20	17		12:34			X						X	X				
SS113C-E:20	18		12:36			X						X	X				
SS113C-S:20	19		12:39			X						X	X				
SS113C-W:20	20		12:41			X						X	X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Andrews	PBS	5/12/25	17:41
Received by:	BISRAT TADESSE	FBI	5/12/25	17:41
Relinquished by:				
Received by:		Samples received at 2 °C		

Friedman & Bruya, Inc.
5500 4th Avenue S
Seattle, WA 98108
Ph. (206) 285-8282

505187

SAMPLE CHAIN OF CUSTODY

05/12/25 N4/M4

Page # 3 of 3

Report To Nasrin Bastami

Company PBS Engineering

Address 214 E. Galer St, Suite 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7636 Email nasrin.bastami@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: Al Towing

PO # 40757.028

REMARKS

INVOICE TO

Project Specific RLs - Yes / No

TURNAROUND TIME
X Standard Turnaround
RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Archive Samples
Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	Grand BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	As (Arsenic)	Pb (Lead)	RCRA 8 (EPA 200.8/6020B)			Notes
SS6C-B:32	21 A-E	5/12/25	13:59	Soil	5	X		X						X			
SS6C-N:29	22		14:01									X					
SS6C-E:29	23		14:04									X					
SS6C-S:29	24		14:06									X					
SSC-W:29	25		14:09									X					
16																	
5/20/25																	

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Andrews	PBS	5/12/25	17:41
Received by:	BISRAT TAYESSE	FBI	5/12/25	17:41
Relinquished by:				
Received by:		Samples received at 2 °C		

Friedman & Bruya, Inc.
5500 4th Avenue S
Seattle, WA 98108
Ph. (206) 285-8282

FORMS\COC\COC.DOC

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 505187 CLIENT PBS INITIALS/ DATE: K 5/12/25

If custody seals are present on cooler, are they intact? ☒ NA ☐ YES ☐ NO

Cooler/Sample temperature 2 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☒ YES ☐ NO

How did samples arrive?
☒ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☒ YES ☐ NO Initials/ NP 5/13
*or other representative documents, letters, and/or shipping memos Date: _____

Number of days samples have been sitting prior to receipt at laboratory 0 days

Are the samples clearly identified? (explain "no" answer below) ☒ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☒ YES ☐ NO

Were appropriate sample containers used? ☒ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☒ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☒ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☒ Yes	☐ No	☐ Not on COC/label
Date Sampled	☒ Yes	☐ No	☐ Not on COC/label
Time Sampled	☒ Yes	☐ No	☐ Not on COC/label
# of Containers	☒ Yes	☐ No	
Relinquished	☒ Yes	☐ No	
Requested analysis	☒ Yes	☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☒ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ **Number of unused TO17 tubes** _____
**Fill out Green manifolds billing sheet

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Elizabeth Webber-Bruya
Ann Webber-Bruya
Michael Erdahl
Vineta Mills
Eric Young

5500 4th Ave South
Seattle, WA 98108-2419
(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

April 15, 2025

Nasrin Bastami, Project Manager
PBS Engineering and Environmental, Inc.
214 E. Galer St, Suite 300
Seattle, WA 98102

Dear Ms Bastami:

Included are the results from the testing of material submitted on April 9, 2025 from the SR 509 Stage 2B A1 Towing 40757.028, F&BI 504143 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Michael Andrews
PBS0415R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 9, 2025 by Friedman & Bruya, Inc. from the PBS Engineering and Environmental SR 509 Stage 2B A1 Towing 40757.028, F&BI 504143 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	PBS Engineering and Environmental
504143 -01	SS113-TCLP

All quality control requirements were acceptable.

Date of Report: 04/15/25
Date Received: 04/09/25
Project: SR 509 Stage 2B A1 Towing 40757.028, F&BI 504143
Date Extracted: 04/10/25
Date Analyzed: 04/10/25

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES11
USING EPA METHOD 8021B**

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Surrogate (% Recovery) (Limit 50-150)
SS113-TCLP 504143-01	<0.02	<0.02	<0.02	<0.06	76
Method Blank 05-679 MB	<0.02	<0.02	<0.02	<0.06	79

Analysis for TCLP Metals By EPA Methods 6020B and 1311

Client Sample ID:	SS113-TCLP	Client:	PBS Engineering and Environmental
Date Received:	04/09/25	Project:	40757.028, F&BI 504143
Date Extracted:	04/09/25	Lab ID:	504143-01
Date Analyzed:	04/10/25	Data File:	504143-01.189
Matrix:	Soil/Solid	Instrument:	ICPMS3
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Methods 6020B and 1311

Client Sample ID:	Method Blank	Client:	PBS Engineering and Environmental
Date Received:	NA	Project:	40757.028, F&BI 504143
Date Extracted:	04/09/25	Lab ID:	I5-303 mb
Date Analyzed:	04/10/25	Data File:	I5-303 mb.184
Matrix:	Soil/Solid	Instrument:	ICPMS3
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Date of Report: 04/15/25
Date Received: 04/09/25
Project: SR 509 Stage 2B A1 Towing 40757.028, F&BI 504143

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES USING EPA METHOD 8021B

Laboratory Code: 504121-16 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	1.0	77	70-130
Toluene	mg/kg (ppm)	1.0	83	70-130
Ethylbenzene	mg/kg (ppm)	1.0	89	70-130
Xylenes	mg/kg (ppm)	3.0	97	70-130

Date of Report: 04/15/25
Date Received: 04/09/25
Project: SR 509 Stage 2B A1 Towing 40757.028, F&BI 504143

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL/SOLID SAMPLES FOR TCLP METALS USING EPA METHODS 6020B AND 1311

Laboratory Code: 504042-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	<1	93	92	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	95	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased low; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported between the method detection limit and the lowest calibration point. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

504143

SAMPLE CHAIN OF CUSTODY

04/09/25 VSA1/M1

Page # 1 of 1

Report To Nasrin Bastami

Company PBS Engineering & Environmental

Address 214 E Galer St, Suite 300

City, State, ZIP Seattle, WA 98102

Phone 206.766.7636 Email nasrin.bastami@pbsusa.com

SAMPLERS (signature)

PROJECT NAME: SR 509 Stage 2B - AI Towing

PO # 40757.028

REMARKS

Project Specific RLs - Yes / No

INVOICE TO

TURNAROUND TIME
Standard Turnaround
x RUSH 3 - Day
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Archive Samples
Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Lead TCLP	RCRA 8 metals				Notes
SS113 - TCLP	01A-F	4/9/2025	13:41	Soil	6			~~Hold~~				X	Hold				~~ALL~~ MS 4/10
								Samples received at 2 °C									

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Andrews	PBS	4/9/25	14:15
Received by:	John Phan	FBI	4/9/25	14:15
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
5500 4th Avenue S
Seattle, WA 98108
Ph. (206) 285-8282

FORMS\COC\COC.DOC

SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 504143 CLIENT PBS INITIALS/ AP DATE: 4/9/25

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 2 °C
Thermometer ID: Fluke 96312917

Were samples received on ice/cold packs? ☑ YES ☐ NO

How did samples arrive?
☑ Over the Counter ☐ Picked up by F&BI ☐ FedEx/UPS/GSO

Is there a Chain-of-Custody* (COC)? ☑ YES ☐ NO Initials/ AP Date: 4/9/25
*or other representative documents, letters, and/or shipping memos

Number of days samples have been sitting prior to receipt at laboratory 0 days

Are the samples clearly identified? (explain "no" answer below) ☑ YES ☐ NO

Were all sample containers received intact (i.e. not broken, leaking etc.)? (explain "no" answer below) ☑ YES ☐ NO

Were appropriate sample containers used? ☑ YES ☐ NO ☐ Unknown

If custody seals are present on samples, are they intact? ☑ NA ☐ YES ☐ NO

Are samples requiring no headspace, headspace free? ☑ NA ☐ YES ☐ NO

Is the following information provided on the COC, and does it match the sample label?
(explain "no" answer below)

Sample ID's	☑ Yes ☐ No	☐ Not on COC/label
Date Sampled	☑ Yes ☐ No	☐ Not on COC/label
Time Sampled	☑ Yes ☐ No	☐ Not on COC/label
# of Containers	☑ Yes ☐ No	
Relinquished	☑ Yes ☐ No	
Requested analysis	☑ Yes ☐ On Hold	

Other comments (use a separate page if needed)

Air Samples: Were any additional canisters/tubes received? ☑ NA ☐ YES ☐ NO

Number of unused TO15 canisters** _____ **Number of unused TO17 tubes** _____
**Fill out Green manifolds billing sheet

3600 Fremont Ave N
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Apex Companies, LLC
Kevin Hood
214 E Galer St, Suite 300
Seattle, WA 98102

RE: A1 Towing, 40757.028
Work Order Number: 2505497

May 23, 2025

Attention Kevin Hood:

Alliance Technical Group, LLC - Seattle received 1 sample(s) on 5/22/2025 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Total Metals by EPA 6020B

All analyses were performed according to our accredited Quality Assurance program. Please contact the laboratory if you should have any questions about the results.

Alliance Technical Group is committed to accuracy, speed, and customer service. Thank you for choosing Alliance Technical Group's Seattle laboratory team for your analytical needs. We appreciate this opportunity to serve you!

Sincerely,

Brianna Barnes
Project Manager

CC:
Nasrin Bastami

Date: *05/23/2025*

CLIENT: Apex Companies, LLC
Project: A1 Towing
Work Order: 2505497

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2505497-001	SS6C-B:38	05/22/2025 8:35 AM	05/22/2025 10:10 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2505497**

Date: **5/23/2025**

CLIENT: Apex Companies, LLC
Project: A1 Towing

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2505497**
Date Reported: **5/23/2025**

Client: Apex Companies, LLC
Collection Date: 5/22/2025 8:35:00 AM
Project: A1 Towing
Lab ID: 2505497-001
Matrix: Soil
Client Sample ID: **SS6C-B:38**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA 6020B				Batch ID: 47823		Analyst: SLL
Arsenic	12.9	0.246		mg/Kg-dry	1	5/22/2025 7:58:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R99979		Analyst: EC
Percent Moisture	15.2	0.500		wt%	1	5/23/2025 8:47:19 AM

Work Order: 2505497
CLIENT: Apex Companies, LLC
Project: A1 Towing

QC SUMMARY REPORT

Total Metals by EPA 6020B

Sample ID: **MB-47823**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **5/22/2025**	RunNo: **99983**
Client ID: **MBLKS**	Batch ID: **47823**		Analysis Date: **5/22/2025**	SeqNo: **2082508**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.200									

Sample ID: **LCS-47823**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **5/22/2025**	RunNo: **99983**
Client ID: **LCSS**	Batch ID: **47823**		Analysis Date: **5/22/2025**	SeqNo: **2082509**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	42.3	0.200	40.00	0	106	80	120				

Sample ID: **2505497-001AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **5/22/2025**	RunNo: **99983**
Client ID: **SS6C-B:38**	Batch ID: **47823**		Analysis Date: **5/22/2025**	SeqNo: **2082511**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	59.7	0.232	46.41	12.89	101	75	125				

Sample ID: **2505497-001AMSD**	SampType: **MSD**	Units: **mg/Kg-dry**	Prep Date: **5/22/2025**	RunNo: **99983**
Client ID: **SS6C-B:38**	Batch ID: **47823**		Analysis Date: **5/22/2025**	SeqNo: **2082513**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	56.0	0.236	47.15	12.89	91.5	75	125	59.68	6.27	20	

Sample Log-In Check List

Client Name:	PBS	Work Order Number:	2505497
Logged by:	Clare Griggs	Date Received:	5/22/2025 10:10:00 AM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
4.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
6.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
7.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8.	Are samples properly preserved?	Yes ☑	No ☐	
9.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
11.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
12.	Does paperwork match bottle labels?	Yes ☑	No ☐	
13.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14.	Is it clear what analyses were requested?	Yes ☑	No ☐	
15.	Were all hold times (except field parameters, pH e.g.) able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

17. Additional remarks:

Item Information

Item #	Temp °C
Sample	4.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

2505497

SAMPLE CHAIN OF CUSTODY

Report To Nasrin Bastami, Kevin Hood
Company Apex (PBS Engineering)
Address 214 E Galer Street, Suite 300
City, State, ZIP Seattle, WA 98102
Phone 206.766.3636 Email nasrin.bastami@apexcos.com, kevin.hood@apexcos.com

SAMPLERS (*signature*)

PROJECT NAME: A1 Towing
PO #: 40757.028

REMARKS
Project Specific RLs - Yes / No

INVOICE TO

TURNAROUND TIME
Standard Turnaround
X RUSH 1-Day
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Archive Samples
Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	As (Arsenic)					Notes
SS6C-B:3		5/22/25	08:35	Soil	2							X					

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Andrews	Apex	5/22/25	08:45
Received by:	Wallis Cole	Apex	5/22/25	08:45
Relinquished by:	Wallis Cole	Apex	5/22/25	10:09
Received by:	Nathan Keller	ATC	5/22/25	1010

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