# SPILL RESPONSE: REMEDIAL ACTION REPORT

Nissen Property
16006 75th Place West
Edmonds, Washington 98026

*Prepared For:*

Rick Nissen

*By:*

PO Box 2546
Bellingham, WA 98227
(360) 714-9409

February 11, 2025

PO Box 2546, Bellingham, Washington 98227
Phone: (360) 714-9409

February 10, 2025

Rick Nissen
16006 75th Place West
Edmonds, Washington 98026

**Re: Spill Response - Remedial Action Report**
Nissen Property
16006 75th Place West
Edmonds, Washington 98026
United Financial Casualty Company Claim 24-375701102

Dear Rick:

We herein present the results of our environmental sampling investigation and cleanup activities at your residential property at 16006 75th Place West in Edmonds, Washington. This environmental report summarizes the sampling and remedial actions completed following a petroleum release due to the collision of a dump truck with the residential garage on September 4, 2024. The incident report indicates that an estimated 150-gallons of diesel fuel and/or hydraulic fluid was released.

Multiple spill response and cleanup actions have taken place since the release including the initial spill response by Republic Services to absorb the free product from the spill zone, vacuum removal of soil by GrayMar Environmental Services, and final cleanup and sampling work by Stratum Group.

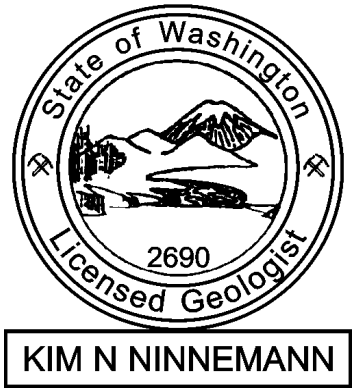
The cleanup included removal of approximately 40 tons of contaminated soil from the impact area near the foundation of the building and behind a retaining wall just west of the residence. Confirmation soil samples from the impact zone by GrayMar and Stratum Group indicate that all residual soil meets the state Model Toxic Control Act Method A for unrestricted land use for diesel- and oil-range petroleum.

Based upon our oversight of the final excavation work, field testing results, and confirmation sample results, contaminated soil associated with the dump truck release has been successfully removed from the site. Therefore, it is our opinion that no further investigation or remediation is necessary on this site.

Should you have any questions concerning the remedial actions completed, please do not hesitate to contact us at (360) 714-9409.

Sincerely,
Stratum Group

Kim Ninnemann, B.S.
Licensed Geologist



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# 1.0 EXECUTIVE SUMMARY

This remedial action was completed in response to a diesel fuel spill at the Nissen residential property at 16006 75th Place West in Edmonds, Washington (subject property).

A spill occurred at the subject property on September 4, 2024 due to an out-of-control dump truck which drove through a stop sign, through the Nissen yard and terraced landscape, and impacted the residential garage on the north end of the home. The truck was fully loaded with asphalt which dumped onto the adjacent paved walkway and neighboring property's landscaping. A rupture of the fuel tank and/or hydraulic lines during the incident released an estimated 150-gallons of diesel and/or oil-range petroleum to the site. Photographs, descriptions, and site observations indicate that the diesel was released along the foundation of the garage, entered the soils in the terraced areas along the residential home near the impact zone, and flowed down an adjacent asphalt pathway into a storm drain system.

The initial spill response was completed by Republic Services on the day of the release including absorption of free product from the spill zone. GrayMar Environmental Services covered the impact area with plastic and completed cleanup work from September through November 2024. The work included vacuum and hand excavation of approximately ten 55-gallon drums of contaminated soil (~5 tons). Numerous samples were collected throughout GrayMar's work onsite; however, significant concentrations of diesel fuel remained around the retaining wall based upon Stratum Group's assessment in December 2024.

Stratum Group oversaw the final excavation of contaminated soils in January 2025. A total of 35.68 tons of contaminated soils were removed from behind and beneath a retaining wall just west of the residence. The soil was delivered to Heidelberg Materials for treatment. Contaminated soil was removed from a zone approximately 60 feet long and three to four feet wide. An evaluation of drainage systems in the vicinity of the release indicated that no pathways were present for the diesel fuel to leave the terraced area, after the initial release. Confirmation soil samples were collected throughout the excavation zone and suspected release area. All soil samples met the state cleanup standards for unrestricted land use (Model Toxic Control Act (MTCA) Method A).

Our site observations indicate that some of the initial diesel fuel release likely migrated along the paved surface just west of the home and into stormwater catch basins which discharge to the adjacent Puget Sound. De minimis dark staining remains in a narrow zone of the asphalt paved surface just west of release area and down gradient of the spill; however, the stormwater system in this area had a consistent high flow rate throughout late 2024 and early 2025 and no indications of residual diesel fuel was present in association with the original release. No groundwater was encountered during the cleanup and no groundwater is suspected to have been impacted by the release.

The confirmation soil samples from the excavation areas found the residual soil met state

cleanup standards. Therefore, no further sampling or cleanup work is warranted. It is our opinion that no further action is required in association with the diesel release to the soils from the September 4, 2024 incident.

# 2.0 SITE DESCRIPTION

## 2.1 Site Location

The subject property is located in unincorporated Snohomish County in the Meadowdale neighborhood of Edmonds, Washington. The property is located southwest of the intersection of North Meadowdale Road and 75th Place West. The property utilizes the street address 16006 75th Place West.

The location of the subject property is presented in Figure 1 in Appendix I.

## 2.2 Site and Vicinity General Characteristics

The property is located within a residential neighborhood and is developed with a residential home and an attached three car garage. The site includes portions of a paved access pathway that extends along the north and west property boundaries. The paved access path is reportedly maintained by the City of Edmonds.

The site is located on moderately west sloping topography with multiple terraces along the north and west sides of the residence. The property is bound to the west by a steep slope and railroad tracks. Puget Sound is located just west of the railroad tracks. Sloped residential properties surround the subject property to the north, east, and south.

An overview of the property is provided in an annotated aerial photograph of the site and vicinity in Figure 2 in Appendix I.

## 2.3 Physical Characteristics of Site

The property ranges in elevation from 71 to 79 feet above mean sea level along its eastern boundary with 75th Place West roadway and ranges from 32 to 39 feet above mean sea level along its western boundary along the top of the historic shoreline bluff. The site has a moderate west sloping topography with an average of 25% slope (14 degrees).

### *2.3.1 Site Geology & Soils*

The following descriptions of the surficial deposits in the vicinity of the subject property were interpreted from the Geologic map of the Edmonds East and part of the Edmonds West quadrangles, Washington: U.S. Geological Survey Miscellaneous Field Studies Map MF-1541, 1

sheet, scale 1:24,000 (Minard, J. P., 1983). The site is mapped as being underlain by the Whidbey Formation (Qw). The Whidbey Formation is described as being located stratigraphically below the glacial sediments and consisting of oxidized medium to coarse grained sand.

Our observations of the soils on the site indicated a range of materials including fill soils behind the retaining wall (i.e. gravel) and dense sandy silt (native soil), suspected to be of glacial origin. Sand and sandy silt was observed in a few of the deeper excavation locations, which may correlate to Whidbey Formation deposits.

#### *2.3.2 Site Hydrology*

No surface water features were present on the subject property. Puget Sound is located just west of the subject property, below a former shoreline bluff and across the railroad tracks.

A stormwater system, managed by the City of Edmonds, extends through the subject property, which collects stormwater from the slopes above the subject property and vicinity. The stormwater collection system includes a manhole cover that is located within the terraced landscape of the subject property to the west of the main residence and catch basins are located within the paved asphalt pathway that extends along the north and western edges of the property.

No groundwater was encountered during this cleanup work.

## 3.0 ENVIRONMENTAL HISTORY

The subject property does not have a history of environmental concern. The property has been developed as a residential home since 2004.

## 4.0 CONTAMINANTS OF CONCERN

### 4.1 Media of Concern

Soil is the primary media of concern on the site, based upon visual impacts to surface soils.

Surface water may have been impacted by the initial release; however, our investigation found no continued pathways or persistent impacts to surface water.

### 4.2 Contaminants of Concern

Based upon the release of fluids from the dump truck during and following impact with the residence, the primary contaminants of concern were identified as:

- Diesel and oil-range petroleum

Diesel fuel and potentially hydraulic oil are the products suspected to have been released. Initial sampling of the soils by GrayMar included sampling of the site for diesel and oil-range petroleum, and a suite of metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc). Some metals were detected, but concentrations were well below state cleanup levels.

## 4.3 Cleanup Levels and Laboratory Methodology

Cleanup levels at a site are calculated to determine the concentrations at which the contamination no longer poses an unacceptable risk to human health or the environment. MTCA Method A provides cleanup levels for sites where limited numbers of contaminants are present and therefore detailed site studies and risk assessments are not warranted.

MTCA Method A provides the preferred cleanup standards for the Nissen Property site, as diesel-oil range petroleum are the only contaminants present above the screening levels and the impacted soil is accessible for cleanup activity (i.e. removal). For soil, the site cleanup levels must also be protective of terrestrial ecological receptors.

## 4.4 Terrestrial Ecological Evaluation

The MTCA cleanup regulations (Chapter 173-340 WAC) require that the potential impact of hazardous substances be evaluated for terrestrial ecological receptors when soil contamination is present (WAC 173-340-7490 through 173-340-7494). This is accomplished through the completion of a Terrestrial Ecological Evaluation (TEE), which helps determine if cleanup standards for a site are required to be protective of soil biota, plants, and/or wildlife, or by meeting the requirements for an exclusion from a TEE.

The site is zoned residential with potential terrestrial receptors of soil biota, plants, and wildlife.

A site is excluded from the TEE evaluation if:

1. All of the contamination at the site is located deep in the soil and will not reach the ecological receptors **(Exclusion 1)** OR;
2. All of the contamination at the site is covered by physical barriers **(Exclusion 2)** OR;
3. There is insufficient habitat surrounding the site (depending on the type of contaminant) to endanger ecological receptors **(Exclusion 3)** OR;
4. The contaminant levels at the site are lower than natural background levels **(Exclusion 4)**

Limited upland habitat surrounds the subject property based upon our aerial assessment of the vicinity, due to the prevalence of residences, driveways, and roads in the vicinity. Our evaluation found that less than 1.5 acres of contiguous undeveloped land is present on the site or within 500 feet

of any area located on the site. Considering the site contaminants of concern, the site therefore qualifies for Exclusion 3.

Therefore, the site does not need to take into consideration the risk to soil biota, plants and/or wildlife, and the TEE evaluation is ended.

### 4.5 Site-Specific Cleanup Standards

The MTCA Method A cleanup standard was used as the cleanup level for this site based upon protection of human health. Once compliance with Method A standards is met, the site is eligible for unrestricted land use. The cleanup standards for the Nissen Property are presented in Table 1.

**Table 1.** Cleanup Standards for the Nissen Property

| Contaminant of Concern | Laboratory Analysis Method | Soil Cleanup Level (mg/kg) |
|---|---|---|
| Diesel | NWTPH-DX | 2,000[a] |
| Oil | | |

a = cleanup standard is applicable to combined diesel and oil-range petroleum concentrations

### 4.6 Points of Compliance

The points of compliance are locations where cleanup levels will be met. The points of compliance for soil will be throughout the site. This is considered the standard point of compliance in the MTCA regulation.

## 5.0 RELEASE CHARACTERIZATION AND INTERIM CLEANUP ACTIONS

Site photographs of the initial spill were provided by the property owner, Rick Nissen. Copies of two of the spill release photographs are provided in Appendix II. The photographs show a dump truck tipped onto its side on a terrace adjacent to the northwest corner of the residence, as well as concentrated areas of petroleum migrating along the soils adjacent to the retaining wall and along the asphalt near the base of the retaining wall.

A document titled *Generic – Diesel Fuel #2 and Generic – Hydraulic Fluid Release – Initial Report* dated November 25, 2024 summarizes the initial responses to the spill release at the subject property.

The incident report indicates that a tractor-trailer operated by Great Western Transport was involved in a collision and as a result approximately 150 gallons of diesel fuel and hydraulic

fluid were released to the asphalt, grass, and foundation of the home on September 4, 2024 at approximately 8 am.

The following companies were involved with the response:

- Republic Services responded to assess the site on September 4, 2024 including placement of granular absorbents.
- Cura Emergency Services was hired by Progressive Commercial Claims to manage the environmental remediation on September 16, 2024.
- GrayMar Environmental Services was hired by Cura to conduct an assessment and cleanup of the site. GrayMar visited the site 12 times between September 15 and November 12, 2024 to collect samples, remove petroleum impacted soils, and spread MicroBlaze around the impacted soil zones.
- GrayMar was asked to cease work on the site as of November 19, 2024, based upon a request by the property owner.

Our review of the incident report indicates that a total of ten 55-gallon drums of soil were removed from the site by hand excavation and vacuum truck during GrayMar's work on the site. Initial samples collected from the site were analyzed by Friedman & Bruya Laboratory of Seattle, Washington for a wide range of metals and diesel and oil-range petroleum. Diesel and oil-range petroleum were the only substances to exceed screening levels, and all future samples were only analyzed for diesel and oil. Additional cleanup was deemed necessary by GrayMar following their November 12, 2024 visit. Copies of the soil disposal tickets for the ten 55-gallon drums of contaminated soil were not provided by Progressive Insurance or GrayMar. Please note that no documentation of sample results or sample locations by GrayMar was available for our review until January 15, 2024.

Additionally, it is our understanding that the dump truck had a load of asphalt at the time of the incident, which dumped onto the paved pathway adjacent to the home and into the neighbors landscaping. The asphalt was reportedly removed a few days after the release.

Stratum Group was hired by the property owner, Rick Nissen, to further assess the site. Stratum Group personnel visited the site on December 3, 2024. Diesel odors were immediately noticed upon approaching the spill and cleanup area. A few missing plants and a few plants with dead leaves indicated the area where the asphalt had been dumped and physically impacted the plants. However, no indications of environmental contamination were noted or suspected around the asphalt dump area. Plastic sheeting covered the area disturbed by the dump truck and most of the exposed soils. Rainwater collected on the plastic had a heavy petroleum sheen. The work completed to-date by GrayMar looked to have been focused on the initial release zone around the north and west side of the garage's foundation. Six soil samples were collected during the Stratum site visit to evaluate if additional cleanup was warranted. Three of these samples were analyzed by the laboratory. The samples were analyzed by Friedman & Bruya Laboratory and found to contain concentrations of diesel- and oil-range petroleum that ranged from 3,200 mg/kg to 28,000 mg/kg, which are well above the MTCA Method A cleanup levels of 2,000 mg/kg.

Based upon these results, additional cleanup was deemed warranted.
Documentation for the initial incident and responses including spill photographs, a copy of the incident report, laboratory data and sample map provided by GrayMar, and a sample map and laboratory data for the initial samples collected by Stratum Group are provided in Appendix II.

# 6.0 FINAL CLEANUP ACTION

Additional clean up work was completed on the site between January 7 and 9, 2025 under Stratum Group oversight. The cleanup work was completed by Ultra Northwest of Bellingham, Washington. Environmental sampling and documentation were completed by Kim Ninnemann of Stratum Group.

The locations of the soil excavation area, sample locations, and cleanup photographs are provided in Appendix I.

## 6.1 Cleanup Preparation

A public and private utility locate was completed onsite prior to the cleanup actions.

CNI Locates of Bonney Lake, Washington was onsite on Monday January 7, 2025 to conduct a private locate. No utilities were present in the vicinity of the proposed cleanup work based upon an electromagnetic evaluation. A footing drain was noted near the northwest corner of the building foundation, near the initial release. An assessment of the footing drain was completed to determine if it was a pathway for contamination into the environment.

The upper feet of exposed pipe was filled with soil, so a camera was placed in the adjacent roof drain that connects to the same footing drain further to the south along the home's western exterior wall. The camera confirmed that the footing drain is non-perforated. The cable connected to the camera can be tracked using the locate equipment to determine the drain's pathway. Due to bends in the drainage pipe, the camera was not able to follow the full route of the pipe; however, the pipe was found to follow the base of the retaining wall for the garage and house. To verify its discharge point, a hose was placed into one of roof drain entrances into the footing drain. The drain was found to ultimately discharge into a catch basin located within one of the terraces to the west of the main residence. No sign of petroleum was noted on the camera or cable when removed from the drain and no sign of petroleum was noted in the hose water discharged into the catch basin during the test. The footing drain was determined not to be a pathway for contamination from the initial release.

Ultra Northwest was onsite on January 7, 2025, prior to the clean up work, to remove approximately 60 linear feet of a stone retaining wall located northwest and west of the residential garage and home. The retaining wall had been approximately 4 feet high. Some petroleum was noted on the faces of the stone walls and were sprayed with Biosolve to enhance

bioremediation of the residual oil on the concrete blocks.

## 6.2 Soil Removal

Soil removal was completed on January 8 and 9, 2025.

Soil was removed with a small excavator and/or by hand by Ultra Northwest personnel and placed in a Kubota SVL 75-3 skid-steer for transport into dump trucks. Excavation took place around the northwest corner of the garage foundation and along the soil adjacent to and beneath the former retaining wall. The retaining wall excavation was relatively narrow (3 feet wide).

A perforated pipe was uncovered beneath the retaining wall during excavation. The perforated pipe ran the length of the retaining wall with an elbow at the lowest point of elevation and continued to the west. The perforated pipe was an obvious pathway for the diesel released during the spill; however further excavation around the elbow found that the pipe ended approximately one foot or so west of the elbow. The deepest portion of the excavation was beneath the retaining wall, which was one to 1.5 feet below the adjacent paved pathway elevation, and approximately 3 feet depth near where the perforated pipe ended. The diesel fuel is suspected to have backed up at the point where the piping ended to create a larger impacted area.

## 6.3 Soil Samples

A total of twenty-two confirmation samples were collected from the excavation by Stratum Group. The protocols for the soil sampling, including field testing, are detailed in a document titled Stratum Group Field Procedures in Appendix IV.

The samples were collected to confirm successful removal of the impacted soil and/or determine where additional excavation was warranted. Samples were collected between 35 feet north and 50 feet south of the NW corner of the residential garage. Samples were collected at depths that ranged from 4 feet above to 3 feet below the asphalt pathway adjacent to the excavation area. The samples were collected from beneath the asphalt pathway up to 5 feet east of the pathway.

Visual representation of sampling locations is difficult due to the sloping elevation of the site, elevation changes due to manmade terraces, and the narrow zone of soil removal; however, a confirmation soil sample map is provided in Appendix I. The sample locations are more easily represented in photographs of the site. Stratum sample locations were circled with white paint with the sample number painted next to the sample location (see site photographs in Appendix I).

### *6.3.1 Sample Results*

Samples were delivered to Friedman & Bruya Laboratory in Seattle, Washington for analysis. All the soil samples were analyzed by the laboratory for diesel and oil-range petroleum.

A summary of the soil samples collected during the January 8 and 9, 2024 cleanup work, including soil descriptions and their laboratory analysis results, is provided in Table 2. A map with the soil sample results is provided in Figure 3 in Appendix I. Due to our limited confidence in the GrayMar sample data based upon questions of the soil sample locations and whether the data represents residual soil quality, only GrayMar samples A1 and A2 were considered usable as confirmation samples to verify successful site remediation.

A complete copy of the analytical laboratory reports and chain-of-custodies for the January sampling events are provided in Appendix III.

**Table 2.** Confirmation Soil Sample Results

| Map ID | Sample ID | Sample Location^ | Soil Description | Sample Depth (ft)* | PID Reading (ppm) | Contaminant, Methodology & Results (mg/kg) | |
|---|---|---|---|---|---|---|---|
| | | | | | | Diesel | Oil |
| **Confirmation Samples** | | | | | | | |
| **1** | 010825-1 | Northern end of excavation along retaining wall (~13' N) | Grey crushed gravel with fines | +1.5 | 1.0 | U<50 | U<250 |
| **2** | 010825-2 | Base of excavation (~10' N) | Dense light grey-tan silty clay with orange mottling | -0.75 | 5.2 | U<50 | U<250 |
| **3** | 010825-3 | East sidewall near initial spill (~7.5' N) | Crushed gravel with fines, just above clay layer | +1 | 0.5 | U<50 | U<250 |
| **4** | 010825-4 | Mid-slope of main spill area (~6' N) | Brown moist sandy silt with minor clay & gravel | +2.75 | 1.0 | U<50 | U<250 |
| **5** | 010825-5 | Upper part of terrace near main spill (~1.5 N) | Brown moist sandy silt with clay and gravel | +4 | 1.8 | U<50 | U<250 |
| **6** | 010825-6 | Base of foundation (~1' N) | Brown moist sandy silt with clay & chunks of grey clay and roots | +1 | 0.5 | U<50 | U<250 |
| **7** | 010825-7 | Base of excavation (~2.5 N) | Moist red-brown sand | -1.5 | 0.4 | U<50 | U<250 |
| **8** | 010825-8 | North end of excavation, top of terrace (~15' N) | Brown moist sandy silt with clay & minor gravel and roots | +4 | 0.4 | **400** | U<250 |
| **9** | 010825-9 | Just below foundation, south of NW corner (~5' S) | Grey silty clay with minor gravel | -1 | 2.6 | U<50 | U<250 |
| **10** | 010825-10 | Base of excavation to west of NW corner (~4' S) | Moist brown-grey silt | -2 | 0.4 | U<50 | U<250 |
| **11** | 010925-11 | West side of excavation beneath asphalt (~4.5' S) | Moist grey silty clay | -1 | 1.3 | U<50 | U<250 |
| **12** | 010925-12 | Bottom of excavation (~ 21' S) | Brown sand | -2 | 33 | U<50 | U<250 |
| ***Site-specific Cleanup Level (mg/kg)*** | | | | | | ***2,000a*** | |

^ sample locations measured relative to the NW corner of the garage; * sample depths measured relative to the elevation of the asphalt pathway; U = not detected at reporting limit listed.

**Table 2.** Confirmation Soil Sample Results continued

| Map ID | Sample ID | Sample Location^ | Soil Description | Sample Depth (ft)* | PID Reading (ppm) | Contaminant, Methodology & Results (mg/kg) | |
|---|---|---|---|---|---|---|---|
| | | | | | | Diesel | Oil |
| **Confirmation Samples** | | | | | | | |
| **13** | 010925-13 | Under asphalt, west side of excavation (~16' S) | Grey silty clay with orange mottling | -1 | 6.9 | U<50 | U<250 |
| **14** | 010925-14 | East sidewall (~13' S) | Brown-grey silty clay with orange mottling | equal | 6.2 | U<50 | U<250 |
| **15** | 010925-15 | East sidewall (~32' S) | Moist grey silt with orange mottling | +1.5 | 2.6 | U<50 | U<250 |
| **16** | 010925-16 | Base of excavation (~44' S) | Moist brown sand | -1 | 21.4 | U<50 | U<250 |
| **17** | 010925-17 | Sample just west of perf elbow (~36' S) | Sandy gravel asphalt base | -0.5 | 6.0 | U<50 | U<250 |
| **18** | 010925-18 | Base of excavation, beneath perf pipe elbow (~36' S) | Moist grey silt | -1.5 | 3.2 | U<50 | U<250 |
| **19** | 010925-19 | South end along edge of retaining wall (~50' S) | Sandy gravel fill | +2 | 8.0 | U<50 | U<250 |
| **20** | 010925-20 | East sidewall, east of perf pipe elbow (~36' S) | Grey moist silty sand | -1 | 4.6 | U<50 | U<250 |
| **21** | 010925-21 | Deepest location below end of perf pipe (~36' S) | Grey moist silty sand | -3 | 1.2 | U<50 | U<250 |
| **22** | 010925-22 | East sidewall (~22 S) | Moist grey silt | +1 | 39 | **640** | U<250 |
| **A1** | A1 | North end of site (~35'), along retaining wall | Unknown | | | U<50 | **400** |
| **A2** | A2 | North end of site (~31' N), along top of terrace | Unknown | | | **270** | U<250 |
| ***Site-specific Cleanup Level (mg/kg)*** | | | | | | ***2,000a*** | |

^ sample locations measured relative to the NW corner of the garage; * sample depths measured relative to the elevation of the asphalt pathway; U = not detected at reporting limit listed.

## 6.4 Laboratory Quality Assurance

Friedman & Bruya of Seattle, Washington was responsible for completion of the analytical assessment of the samples. The laboratory is accredited with the Department of Ecology (accreditation number C578).

The laboratory reporting limits were below the cleanup standards for all analytes, which indicates that non-detect results are below the cleanup standards. The laboratory conducts quality control through analysis of method blank, matrix spike, and laboratory control samples. All quality control requirements were within acceptable limits.

The laboratory quality control is sufficient and does not affect our ability to interpret the soil sample results for this report.

## 6.5 Confirmation Soil Sample Results Discussion

A total of twenty-four soil samples (22 samples collected by Stratum Group and 2 samples collected by GrayMar) were used to verify the residual soil quality on the site, following excavation and soil removal work.

All samples results were well below the MTCA Method A cleanup standard of 2,000 mg/kg. Most samples were below the reporting limits for diesel and oil-range petroleum; however, four samples had detections of diesel and/or oil-range petroleum. The highest residual combined oil and diesel-range petroleum concentration was 640 mg/kg in sample 22, which is well below the standard of 2,000 mg/kg.

Based upon our significant field assessment of soils using PID readings and soil observation and the laboratory sample results, the diesel and oil-impacts from the dump truck collision with the garage have been successfully remediated. These results indicate the residual soils on the site meet the state's cleanup levels for unrestricted land use.

## 6.6 Soil Disposal

A total of seven dump truck loads of contaminated soil were delivered to Heidelberg Materials at 17 E Marine Drive in Everett, Washington in January 2025. The weigh tickets indicate that a total of 35.68 tons of soil were delivered on January 8 and 9, 2025.

The soil had been pre-approved for disposal and was determined by Heidelberg to be Class 3 soil. Copies of the soil disposal tickets are provided in Appendix III.

In addition to the 35.68 tons in January, approximately 10 drums of contaminated soil was removed from the site by GrayMar (disposal tickets not available). We estimate that the volume of soil removed by GrayMar was likely 5 tons. Based upon this estimate, a total of approximately

40 tons of soil was removed to clean up the spill.

## 7.0 CONCLUSIONS

Based upon our oversight of the final excavation and confirmation sampling, all residual soil at the 16006 75th Place West residential property meets the Model Toxics Control Act Method A cleanup standards for diesel and oil-range petroleum. It is our opinion that the petroleum released from the dump truck collision with the residence's garage has been successfully cleaned up and no longer poses a risk to human health or the environment.

It is our opinion that no further action is warranted to bring the site into compliance with the state's MTCA cleanup regulations.

# APPENDIX I

Figure 1 – Topographic map of site and vicinity

Figure 2 – Annotated aerial image of site and vicinity

Figure 3 – Confirmation Soil Sample Map

Site Photographs


Picnic Point
Norma Beach
Meadowdale
Browns Bay
Perrinville
PUGET SOUND
Lunds Gulch
Meadowdale Park
Meadowdale Sch
Meadowdale High Sch
Drive-in Theater
Maple Park Sch
Seaview Park
Sierra Park
Lynndale Sch
Jr High Sch
Cable Area
148TH
180TH
60TH AVE W
Subject Property
Vicinity Map
Figure 1
16006 75th Place W
Edmonds, Washington
0 0.25 0.5 mi
N
STRATUM GROUP


Annotated Aerial Photo of Site & Vicinity

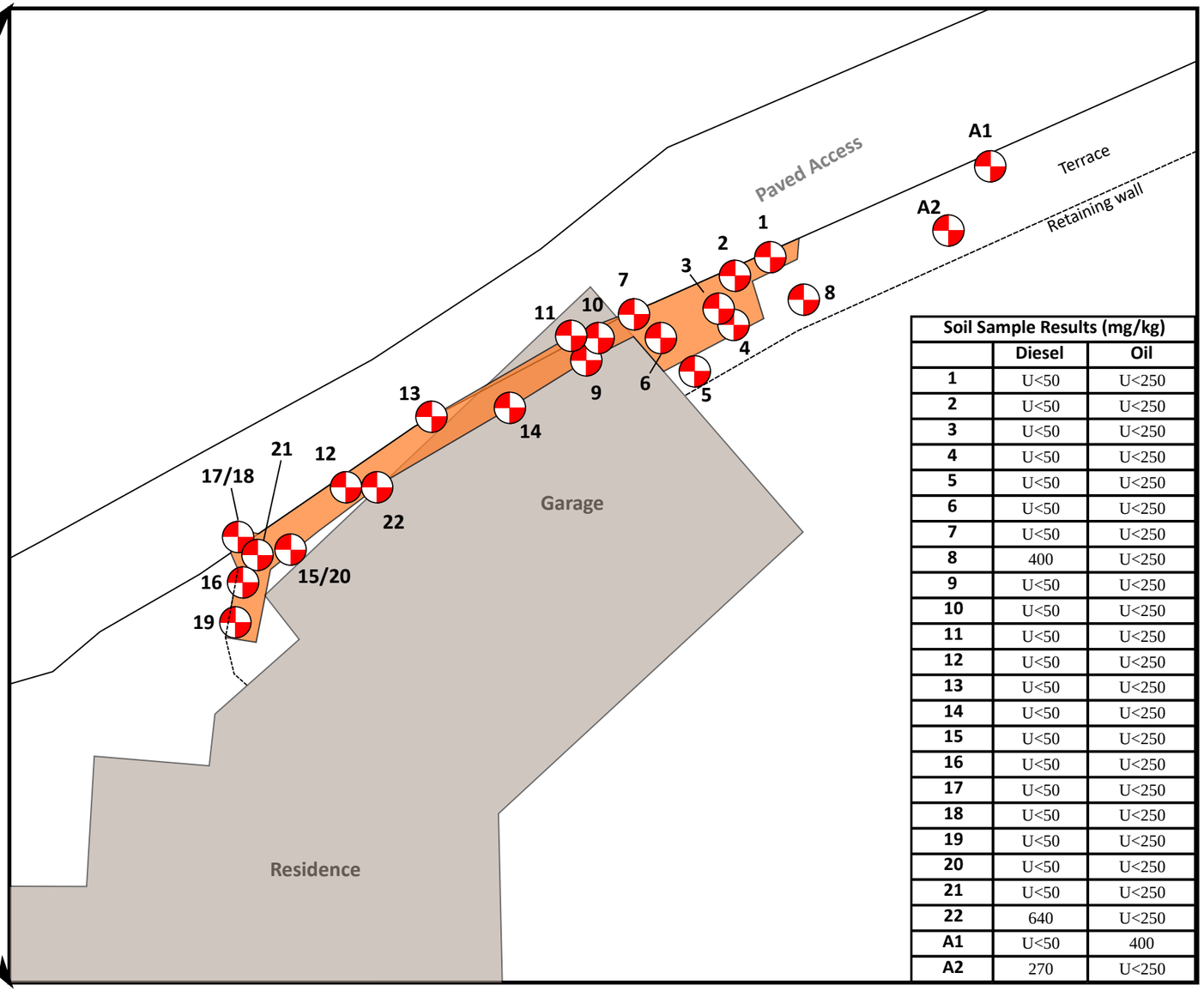
16006 75th Place W
Edmonds, Washington

**Figure 2**

0 Feet 100

N

STRATUM GROUP


| Soil Sample Results (mg/kg) | | |
|---|---|---|
| | Diesel | Oil |
| 1 | U<50 | U<250 |
| 2 | U<50 | U<250 |
| 3 | U<50 | U<250 |
| 4 | U<50 | U<250 |
| 5 | U<50 | U<250 |
| 6 | U<50 | U<250 |
| 7 | U<50 | U<250 |
| 8 | 400 | U<250 |
| 9 | U<50 | U<250 |
| 10 | U<50 | U<250 |
| 11 | U<50 | U<250 |
| 12 | U<50 | U<250 |
| 13 | U<50 | U<250 |
| 14 | U<50 | U<250 |
| 15 | U<50 | U<250 |
| 16 | U<50 | U<250 |
| 17 | U<50 | U<250 |
| 18 | U<50 | U<250 |
| 19 | U<50 | U<250 |
| 20 | U<50 | U<250 |
| 21 | U<50 | U<250 |
| 22 | 640 | U<250 |
| A1 | U<50 | 400 |
| A2 | 270 | U<250 |

**Key**

Soil sample location

1 Soil sample map ID

Jan 2025 excavation area

Confirmation Soil Samples

16606 75th Place W
Edmonds, Washington

0 Feet (approx) 20

**Figure 1**

N

STRATUM GROUP

# SITE PHOTOGRAPHS

View of the site on December 3, 2024.

View of oily leaves and dark stained retaining wall blocks beneath the spill area on December 3, 2024.

View of the camera and red cable being prepared to evaluate the footing drain system by CNI Locates on January 7, 2025.

View of the site on January 8, 2025, following removal of the retaining wall.

Initial discovery of a black 4” perforated pipe beneath the former retaining wall.


View of the excavation taking place on January 8, 2024. Material was excavated with the mini excavator and then placed in the skid-steer for transport to the dump truck parked along 75th Place W.

View of the north end of the excavation, looking south. Sample 8 was collected to evaluate soil conditions in an area that was previously excavated by GrayMar.

View of the sample locations collected north of the garage building, looking east. The shovels are propped against the northwest corner of the garage building.

Different view of the northern end of the excavation and sample locations.

View of sample locations 5, 6, 7, and 9 near the northwest corner of the garage foundation and footing, following excavation.

View of location of sample 10, at the base of the excavation near the building corner.

View of perforated pipe extending beneath the asphalt near southern end of the excavation (January 8, 2025).


Excavation continued on January 9, 2025.

View of excavation and sample locations on January 9, 2025.

View of location where perforated pipe ended, approximately one to 1.5 feet west of retaining wall beneath the asphalt.

View of sample locations collected in sandy gravel fill beneath asphalt (sample 17) and below perforated pipe (sample 18).

View of the final excavation and sample locations near where the perforated pipe ended.

View of southernmost sample (sample 19) collected  in approximately the same location as the southermost sample collected by Stratum Group on December 3, 2024.

# APPENDIX II
# (Release & Initial Response)

Spill Photographs

Incident Report

GrayMar Soil Sample Map & Laboratory Data (Sept 25 – Nov 12, 2024)

Stratum Group Map & Laboratory Data (Dec 3, 2024)

# Spill Photographs

View of dump truck in contact with NW corner of the residential garage. Dump truck is balanced on terrace above asphalt pathway on September 4, 2024.  Photo provided by Rick Nissen, property owner.

View of diesel spill with notable presence of diesel at northwest corner of the building, along soil edge of retaining wall, and along the base of the retaining wall on the asphalt pathway on September 4, 2024. Photo provided by Rick Nissen, property owner.

The Leader in Nationwide 24-Hour Emergency Management
For Emergency Only: 1-800- 579-2872

**ENVIRONMENTAL**

Nov 25, 2024

Washington- DOE- NW Regional Office
15700 Dayton Ave N
Shoreline, WA, 98133
nwroerts@ecy.wa.gov

**RE: GENERIC - DIESEL FUEL #2 AND GENERIC - HYDRAULIC FLUID RELEASE - INITIAL REPORT**

**GREAT WESTERN TRANSPORT**

**16006 75TH PLACE WEST**

**EDMONDS, SNOHOMISH COUNTY, WA**

| | |
|---|---|
| **CES PROJECT NO.** | **EM246544X3 - CMK183** |
| **PROGRESSIVE COMMERCIAL CLAIMS REF. NO.** | **24-375701102** |
| **TRUCK NO.** | **2W10** |
| **WADOE REF. NO.** | **733519** |

To Whom it May Concern:

Enclosed is a copy of the initial Hazardous Materials Incident Report for the *generic - diesel fuel #2 and generic - hydraulic fluid* release that occurred on 9/4/2024, at the above-referenced location. A final report will be submitted to your office in the near future.

Great Western Transport and Cura Emergency Services, L.C. appreciate your assistance in this matter. If you have any questions regarding this project, please do not hesitate to contact me at (972) 378-7333.

Respectfully,
**Cura Emergency Services,L.C.**

Cameron Kerr

Cameron Kerr
Incident Manager

**Cura Emergency Services, L.C.**
6205 Chapel Hill Boulevard,Suite 100
Plano,Texas 75093
Ph. (972) 378-7333 Fax (972) 378-6789

# Hazardous Materials Incident Report

**Client File No :** 24-375701102

**Project Number :** EM246544X3 - CMK183

## A. Incident Information :

**Incident Manager :** Cameron Kerr

**Project No. :** EM246544X3 - CMK183 **Project Name :** Progressive Commercial Claims - Edmonds - WA

**Date of Loss :** 9/4/2024 **Time of Loss :** 08:00 AM CDT

**Date Reported :** 9/16/2024 **Time of Reported :** 12:42 PM CDT

**Person Reporting :** _____ **Phone :** _____

**Driver :** _____ **Tractor # :** 2W10 **Trailer # :** _____

**Incident Location Contact :** Alan Getz **Phone :** (425)754-7646

**Incident Location :** 16006 75th Place West

**City :** Edmonds **County :** Snohomish **State :** WA

**Incident Description :**

On September 4, 2024, at approximately 8:00 AM CDT, a tractor-trailer operated by Great Western Transport (GWT) was traveling at the above-referenced location when the unit was involved in a vehicular collision. As a result, approximately 150 gallons of a combination of diesel fuel and hydraulic fluid were released to the asphalt, grass, and foundation of the home.

**Surface Affected :** Asphalt Soil / grass Foundation

**Water Affected :** None

**Sensitive Report Impact :**

N/A

## B . Chemical Information

| | | Reportable Qnty | Reported Volume | Actual* Volume | Gals /Lbs |
|---|---|---|---|---|---|
| **Chemical :** | Generic - Diesel Fuel #2 | Any | unknown | unknown | Gals |
| **Chemical :** | Generic - Hydraulic fluid | Any | unknown | unknown | Gals |

*Unless specified in the Incident Description section, the "Actual Volume" is an estimate, based on the observations of the CES subcontractor

## C . Health & Safety :

**Site Monitoring (If Applicable) :**

- ☐ **Vapor Concentration (ppm) :** unmetered
- ☐ **Available Oxygen (%) :** ambient
- ☐ **LEL Exceeded**

**PPE :**

- ☐ **Level A**
- ☐ **Level B**
- ☐ **Level C**
- ☒ **Level D**
- ☐ **MSDS Attached**

**Site Special Precations :**

No special precautions were noted for this site.

**Site Condition :**

No complicating conditions existed at the site during cleanup operations.

**Injuries :** **Explain :**

No injuries or fatalities that were a direct result of the released material were reported.

## D . Emergency Response :

On September 4, 2024, at the time of the incident, the property owner, Mr. Rick Nissen, dispatched a crew from Republic Services (RS) to assess and remediate the site as necessary. Crews utilized granular absorbents to partially remediate the release. RS took possession of all waste generated from the response.

On September 16, 2024, at approximately 12:42 PM CDT, a representative from Progressive Commercial Claims (PCC) retained Cura Emergency Services, L.C. (CES) to manage the environmental remediation of the site on their behalf. Based on the available information, the CES incident manager dispatched a crew from GrayMar Environmental Services (GES) to assess and remediate the site as necessary.

## E . Corrective Actions :

On September 16, 2024, at approximately 5:52 PM CDT, a crew from GES arrived on-site. Following a site assessment, GES personnel noted evidence of approximately 150 gallons of a combination of diesel fuel and hydraulic fluid released to the asphalt, grass, and foundation of the home, impacting an area measuring approximately 20 ft x three (3) ft. After scheduling their return to continue remediation at a later date, GES personnel secured the site and demobilized.

On September 18, 2024, at approximately 12:45 PM CDT, a crew from GES arrived back on-site along with the property owner, Mr. Nissen. Crews assessed the site in preparation for remediation. It was determined remediation would take place at a later date at the request of the property owner. Additional photos were taken to document the scene, and crews secured the site and demobilized.

On September 25, 2024, at approximately 11:00 AM CDT, a crew from GES arrived back on-site. Crews utilized a skid steer to begin removing debris from the impacted areas in preparation for excavation. The debris was collected and containerized into one (1) 55-gallon drum for transport and disposal. 10 samples were obtained from the site, placed into laboratory approved containers, and transported under chain of custody protocol to the laboratory to further delineate the area of release. Microblaze was deployed as a precautionary measure. Poly sheeting and absorbent boom were deployed over the impacted area to provide containment until excavation could take place. After scheduling their return to continue removing debris the following day, GES personnel secured the site and demobilized.

On September 26, 2024, at approximately 9:00 AM CDT, a crew from GES arrived back on-site. It was determined a third-party contractor retained by the property owner would remove the remaining debris. GES personnel secured the site and demobilized.

On September 30, 2024, at approximately 11:15 AM CDT, a crew from GES arrived back on-site. Crews utilized hand tools to locate underground utility lines. A vactor truck was utilized to begin removing the impacted soil. Due to a mechanical malfunction, it was determined crews would return at a later date. The excavated area was covered with poly sheeting to provide containment until crews returned. After scheduling their return to continue remediation, GES personnel secured the site and demobilized.

On October 2, 2024, at approximately 1:48 PM CDT, a crew from GES arrived back on-site. A vactor truck was utilized to continue removing the impacted soil from the yard area. After scheduling their return to continue remediation the following day, GES personnel secured the site and demobilized.

On October 3, 2024, at approximately 11:30 AM CDT, a crew from GES arrived back on-site. A vactor truck was utilized to continue removing the impacted soil. Cleaners and a pressure washer were utilized to remove the diesel fuel and hydraulic fluid from the foundation of the home. Microblaze was deployed to the excavated area and to the foundation of the home as a precautionary measure. Four (4) samples were obtained from the site to determine if additional excavation would be required, placed into laboratory approved containers, and transported under chain of custody protocol to the laboratory. After scheduling their return to continue remediation at a later date pending analytical data, GES personnel secured the site and demobilized. Analytical data later confirmed additional excavation would be required.

On October 8, 2024, at approximately 12:13 PM, a crew from GES arrived back on-site. A vactor truck was utilized to continue removing the impacted soil from the yard area. The area was covered with poly sheeting to provide containment. After scheduling their return to continue remediation around the foundation the following day, GES personnel secured the site and demobilized.

On October 9, 2024, at approximately 11:44 AM CDT, a crew from GES arrived back on-site. Crews utilized hand tools to continue removing the impacted soil near the foundation of the home to a depth of approximately eight (8) inches. Microblaze was deployed as a precautionary measure. The impacted soil was collected and containerized into one (1) 55-gallon drum for transport and disposal. It was determined microblaze would be deployed to the foundation to prevent further damage. After scheduling their return at a later date to reapply microblaze, GES personnel secured the site and demobilized.

On October 18, 2024, at approximately 10:52 AM CDT, a crew from GES arrived back on-site. Crews deployed additional microblaze to the foundation of the home. After scheduling their return at a later date to reapply microblaze, GES personnel secured the site and demobilized.

On October 25, 2024, at approximately 10:39 AM CDT, the CES incident manager was notified by Mr. Nissen that additional olfactory evidence of product remained in the yard and around the foundation of the home. GES was notified and scheduled their return to continue remediation at a later date.

On October 29, 2024, at approximately 11:53 AM CDT, a crew from GES arrived back on-site along with the property owner. Crews utilized hand tools to continue removing the impacted soil from the yard and foundation of the home. Two (2) samples were obtained from the site to determine if additional excavation would be required, placed into laboratory approved containers, and transported under chain of custody protocol to the laboratory. Additional microblaze was deployed as a precautionary measure. All impacted soil was collected and containerized into one (1) 55-gallon drum for transport and disposal. After scheduling their return pending analytical data, crews secured the site and demobilized. Analytical data later confirmed additional excavation would be required.

On November 12, 2024, at approximately 1:01 PM CST, a crew from GES arrived back on-site. Crews utilized hand tools to continue removing the impacted soil. Crews utilized a photo-ionization detector (PID) to guide excavation activities. Four (4) samples were obtained from around the foundation of the home to determine if additional remediation would be required, placed into laboratory approved containers, and transported under chain of custody protocol to the laboratory. Additional microblaze was deployed as a precautionary measure. All impacted soil was collected and containerized into 10 55-gallon drums for transport and disposal. After scheduling their return pending analytical data, crews secured the site and demobilized. Analytical data later confirmed additional remediation would be required.

On November 19, 2024, at 2:22 PM CST, the CES incident manager was advise by PCC representative, Ms. Janelle Barajas, that Mr. Nissen requested GES stand down, as he would be obtaining quotes from other third-party contractors to complete remediation. CES and GES remained on standby pending further instruction from PCC.

**F . Responsible Party Information :**

**Responsible Party :** Great Western Transport **RP Ref # :**

**Contact :** Ms. Nin Ely **Contact :** ☐ **Send Report**

**Address :** P.O. Box 686 **Phone :**

**City :** Monroe **State :** WA **Zip :** 98272 **Fax :**

## G . Regulatory Agencies

[X] **Reportable Spill (Check if yes)**

**Explain :** Pursuant to Washington state regulations, all petroleum related releases are considered reportable. This release was estimated to be approximately 150 gallons of a combination of diesel fuel and hydraulic fluid; therefore, regulatory notification was required.

**City of Edmonds**

**Contact :** Mr. Patrick Johnson **Contact Date :** 9/16/2024

**Address :** 121 5th Ave. N **Phone:** **Contact Time:** 02:00PM

**City :** Edmonds **State :** WA **Zip:** 98020 **Fax :**

[X] **Report Required** **Confirmation No :**

**Note :**

**Washington- DOE- NW Regional Office**

**Contact :** **Contact Date :** 9/16/2024

**Address :** 15700 Dayton Ave N **Phone:** (206)594-0000 **Contact Time:** 02:00PM

**City :** Shoreline **State :** WA **Zip:** 98133 **Fax :** (425)649-7098

[X] **Report Required** **Confirmation No :** 733519

**Note :**

**Washington- Emergency Management Division**

**Contact :** **Contact Date :** 11/22/2024

**Address :** 20 Aviation Drive, Building 20 **Phone:** **Contact Time:** 09:23AM

**City :** Camp Murray **State :** WA **Zip:** 98430-5112 **Fax :**

[ ] **Report Required** **Confirmation No :**

**Note :**

## H . Disposal Facilities

**Waste Facility :** Disposal Pending

**Address :**

**City :** **State :** **Zip:**

**Disposal Date :**

**Material :**

**Quantity :** **Container Type/Measurement :**

**Federal ID No. :** **State ID No. :**

**Form Code :** **Sorce Code :**

**Federal Waste Code :**

**State Waste Code :**

- [X] **Disposal Pending**
- [ ] **Federal Hazardous**
- [ ] **State Hazardous**
- [ ] **Non-Hazardous**
- [ ] **Manifest Attached**

## I . Contractors

**Company :** GrayMar Environmental Services

**Contact Person:**

**Address :** 4053 Auburn Way **Phone :** (509)770-4456

**City :** N Auburn **State :** WA **Zip:** 98409 **Fax:**

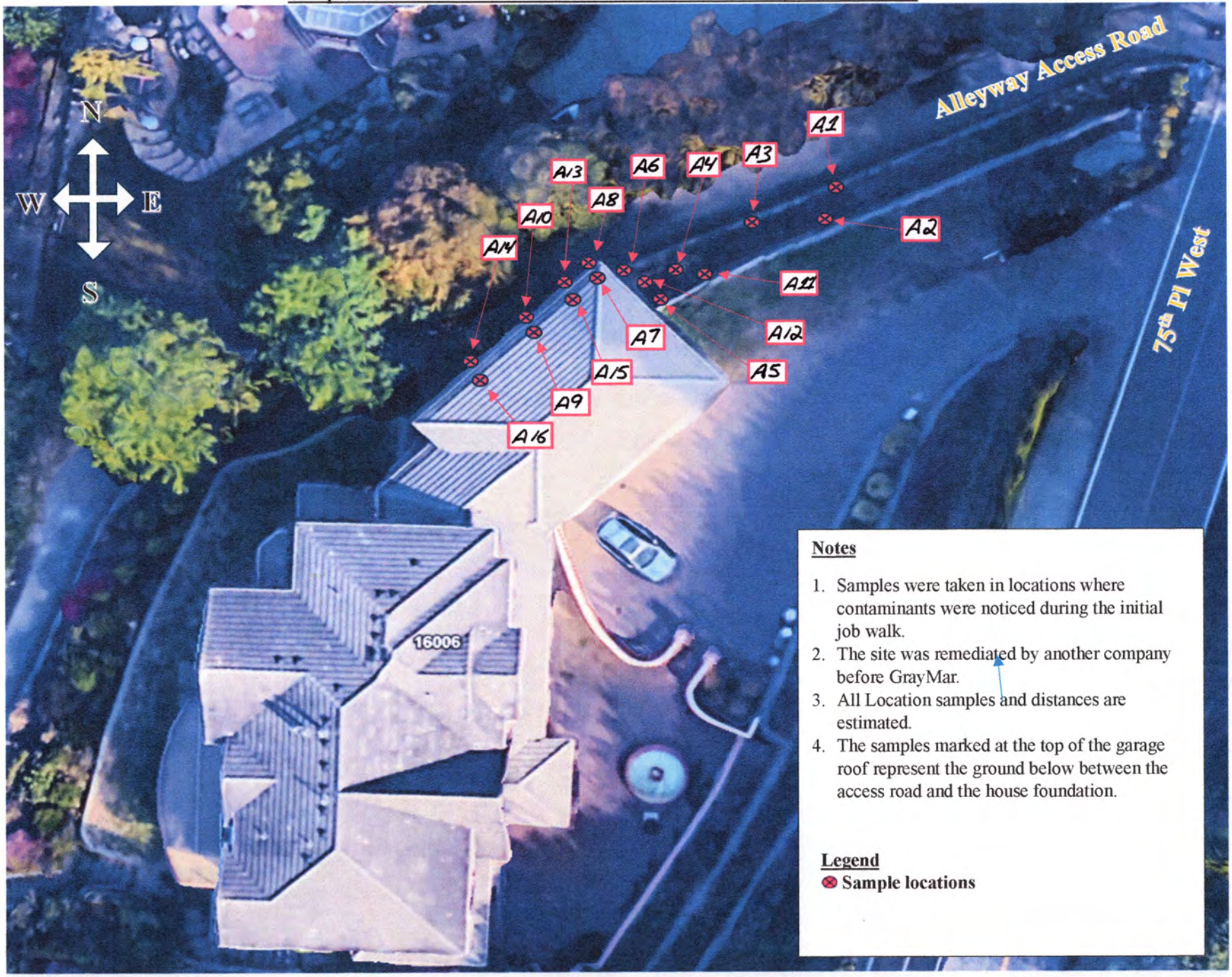
**E-Mail :**

CC: *Progressive Commercial Claims*
*Ms. Janelle Barajas*
*747 Alpha Drive*
*Highland Heights, OH 44143*
*jenelle_barajas@progressive.com*

*Great Western Transport*
*Ms. Nin Ely*
*P.O. Box 686*
*Monroe, WA 98272*

*City of Edmonds*
*Mr. Patrick Johnson*
*121 5th Ave. N*
*Edmonds, WA 98020*
*pat.johnson@edmondswa.gov*

# Sample Locations For Remediation at16006 75th PL West, Edmonds, WA




**Notes**

1. Samples were taken in locations where contaminants were noticed during the initial job walk.
2. The site was remediated by another company before GrayMar.
3. All Location samples and distances are estimated.
4. The samples marked at the top of the garage roof represent the ground below between the access road and the house foundation.

**Legend**

⊗ **Sample locations**

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

Dallas Pierce, Project Manager
Graymar Environmental
4053 Auburn Way N
Auburn, WA 98002

Dear Mr Pierce:

Included are the results from the testing of material submitted on September 25, 2024 from the Dump Truck vs House AUB-0941, F&BI 409412 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.

Mac Goldman
Project Manager

Enclosures
GRM1003R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 25, 2024 by Friedman & Bruya, Inc. from the Graymar Environmental Dump Truck vs House AUB-0941, F&BI 409412 project. Samples were logged in under the laboratory ID's listed below.

| Laboratory ID | Graymar Environmental |
|---|---|
| 409412 -01 | A1 |
| 409412 -02 | A2 |
| 409412 -03 | A3 |
| 409412 -04 | A4 |
| 409412 -05 | A5 |
| 409412 -06 | A6 |
| 409412 -07 | A7 |
| 409412 -08 | A8 |
| 409412 -09 | A9 |
| 409412 -10 | A10 |

Several metals in the 6020B matrix spike and 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 quality control requirements were acceptable.

Date of Report: 10/03/24
Date Received: 09/25/24
Project: Dump Truck vs House AUB-0941, F&BI 409412
Date Extracted: 09/27/24
Date Analyzed: 09/27/24 and 09/30/24

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| A1<br>409412-01 | <50 | 400 | 85 |
| A2<br>409412-02 | 270 | <250 | 92 |
| A3<br>409412-03 | 290 | 3,700 | 92 |
| A4<br>409412-04 | 900 | 450 | 95 |
| A5<br>409412-05 | 930 | <250 | 90 |
| A6<br>409412-06 | 8,200 | 5,100 | 102 |
| A7<br>409412-07 | 4,800 | 430 x | 99 |
| A8<br>409412-08 1/10 | 120,000 | 8,500 x | ip |
| A9<br>409412-09 1/10 | 78,000 | 20,000 | ip |
| A10<br>409412-10 | 45,000 | 3,600 x | ip |
| Method Blank<br>04-2332 MB | <50 | <250 | 84 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A1 | Client: | Graymar Environmental |
| Date Received: | 09/25/24 | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | 409412-01 |
| Date Analyzed: | 09/27/24 | Data File: | 409412-01.046 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 3.4 |
| Barium | 51 |
| Cadmium | <1 |
| Chromium | 23 |
| Copper | 17 |
| Lead | 11 |
| Mercury | <1 |
| Nickel | 27 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | 42 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A2 | Client: | Graymar Environmental |
| Date Received: | 09/25/24 | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | 409412-02 |
| Date Analyzed: | 09/27/24 | Data File: | 409412-02.047 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 4.3 |
| Barium | 66 |
| Cadmium | <1 |
| Chromium | 22 |
| Copper | 20 |
| Lead | 13 |
| Mercury | <1 |
| Nickel | 29 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | 48 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A3 | Client: | Graymar Environmental |
| Date Received: | 09/25/24 | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | 409412-03 |
| Date Analyzed: | 09/27/24 | Data File: | 409412-03.135 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 3.9 |
| Barium | 55 |
| Cadmium | <1 |
| Chromium | 20 |
| Copper | 17 |
| Lead | 12 |
| Mercury | <1 |
| Nickel | 26 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | 43 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A4 | Client: | Graymar Environmental |
| Date Received: | 09/25/24 | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | 409412-04 |
| Date Analyzed: | 09/27/24 | Data File: | 409412-04.136 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 4.3 |
| Barium | 57 |
| Cadmium | <1 |
| Chromium | 23 |
| Copper | 19 |
| Lead | 12 |
| Mercury | <1 |
| Nickel | 29 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | 52 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A5 | Client: | Graymar Environmental |
| Date Received: | 09/25/24 | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | 409412-05 |
| Date Analyzed: | 09/27/24 | Data File: | 409412-05.137 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 4.3 |
| Barium | 61 |
| Cadmium | <1 |
| Chromium | 23 |
| Copper | 19 |
| Lead | 11 |
| Mercury | <1 |
| Nickel | 28 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | 53 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A6 | Client: | Graymar Environmental |
| Date Received: | 09/25/24 | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | 409412-06 |
| Date Analyzed: | 09/27/24 | Data File: | 409412-06.138 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 4.1 |
| Barium | 52 |
| Cadmium | <1 |
| Chromium | 20 |
| Copper | 20 |
| Lead | 14 |
| Mercury | <1 |
| Nickel | 25 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | 57 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A7 | Client: | Graymar Environmental |
| Date Received: | 09/25/24 | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | 409412-07 |
| Date Analyzed: | 09/30/24 | Data File: | 409412-07.132 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 4.5 |
| Barium | 84 |
| Cadmium | <1 |
| Chromium | 28 |
| Copper | 18 |
| Lead | 14 |
| Mercury | <1 |
| Nickel | 37 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | 77 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A8 | Client: | Graymar Environmental |
| Date Received: | 09/25/24 | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | 409412-08 |
| Date Analyzed: | 09/27/24 | Data File: | 409412-08.140 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 16 |
| Barium | 50 |
| Cadmium | <1 |
| Chromium | 19 |
| Copper | 21 |
| Lead | 8.1 |
| Mercury | <1 |
| Nickel | 24 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | 65 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A9 | Client: | Graymar Environmental |
| Date Received: | 09/25/24 | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | 409412-09 |
| Date Analyzed: | 09/27/24 | Data File: | 409412-09.143 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 3.3 |
| Barium | 51 |
| Cadmium | <1 |
| Chromium | 20 |
| Copper | 15 |
| Lead | 9.2 |
| Mercury | <1 |
| Nickel | 27 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | 80 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A10 | Client: | Graymar Environmental |
| Date Received: | 09/25/24 | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | 409412-10 |
| Date Analyzed: | 09/27/24 | Data File: | 409412-10.144 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 5.9 |
| Barium | 50 |
| Cadmium | <1 |
| Chromium | 20 |
| Copper | 24 |
| Lead | 9.3 |
| Mercury | <1 |
| Nickel | 26 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | 60 |

## Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | Method Blank | Client: | Graymar Environmental |
| Date Received: | NA | Project: | Dump Truck vs House AUB-0941 |
| Date Extracted: | 09/26/24 | Lab ID: | I4-805 mb |
| Date Analyzed: | 09/27/24 | Data File: | I4-805 mb.038 |
| 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 |
| Copper | <5 |
| Lead | <1 |
| Mercury | <1 |
| Nickel | <1 |
| Selenium | <1 |
| Silver | <1 |
| Zinc | <5 |

Date of Report: 10/03/24
Date Received: 09/25/24
Project: Dump Truck vs House AUB-0941, F&BI 409412

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 409411-01 (Matrix Spike)

| Analyte | Reporting Units | Spike Level | Sample Result (Wet Wt) | Percent Recovery MS | Percent Recovery MSD | Acceptance Criteria | RPD (Limit 20) |
|---|---|---|---|---|---|---|---|
| Diesel Extended | mg/kg (ppm) | 5,000 | <50 | 100 | 100 | 63-146 | 0 |

Laboratory Code: Laboratory Control Sample

| Analyte | Reporting Units | Spike Level | Percent Recovery LCS | Acceptance Criteria |
|---|---|---|---|---|
| Diesel Extended | mg/kg (ppm) | 5,000 | 104 | 77-123 |

Date of Report: 10/03/24
Date Received: 09/25/24
Project: Dump Truck vs House AUB-0941, F&BI 409412

## QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 409413-12 (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 | 93.1 | 17 b | 0 b | 75-125 | 200 b |
| Barium | mg/kg (ppm) | 50 | 13.1 | 67 b | 68 b | 75-125 | 1 b |
| Cadmium | mg/kg (ppm) | 10 | 1.48 | 66 vo | 66 vo | 75-125 | 0 |
| Chromium | mg/kg (ppm) | 50 | 5.05 | 87 | 86 | 75-125 | 1 |
| Copper | mg/kg (ppm) | 50 | 37.3 | 76 b | 77 b | 75-125 | 1 b |
| Lead | mg/kg (ppm) | 50 | 518 | 70 b | 75 b | 75-125 | 7 b |
| Mercury | mg/kg (ppm | 5 | <1 | 76 | 75 | 75-125 | 1 |
| Nickel | mg/kg (ppm) | 25 | 6.66 | 81 b | 81 b | 75-125 | 0 b |
| Selenium | mg/kg (ppm) | 5 | <1 | 61 vo | 59 vo | 75-125 | 3 |
| Silver | mg/kg (ppm) | 10 | <1 | 61 vo | 60 vo | 75-125 | 2 |
| Zinc | mg/kg (ppm) | 50 | 876 | 94 b | 124 b | 75-125 | 28 b |

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 | 100 | 80-120 |
| Cadmium | mg/kg (ppm) | 10 | 99 | 80-120 |
| Chromium | mg/kg (ppm) | 50 | 99 | 80-120 |
| Copper | mg/kg (ppm) | 50 | 97 | 80-120 |
| Lead | mg/kg (ppm) | 50 | 100 | 80-120 |
| Mercury | mg/kg (ppm) | 5 | 101 | 80-120 |
| Nickel | mg/kg (ppm) | 25 | 98 | 80-120 |
| Selenium | mg/kg (ppm) | 5 | 99 | 80-120 |
| Silver | mg/kg (ppm) | 10 | 99 | 80-120 |
| Zinc | mg/kg (ppm) | 50 | 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.

# SAMPLE CHAIN OF CUSTODY

409412

09/25/24 M3

Report To Dallas Pierce

Company Graymar Environmental

Address 4053 Auburn way N

City, State, ZIP Auburn WA

Phone 503 413 9084 Email Dpierce@graymarEnv.com

SAMPLERS (*signature*)

PROJECT NAME: Dump truck VS House

PO #: Aub-0941

REMARKS: Project specific RLs? - Yes / No

INVOICE TO: Graymar Environmental

Page # 1 of 1

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

| | | | | | | ANALYSES REQUESTED | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Lab ID | Date Sampled | Time Sampled | Sample Type (NP) 9/26 | # of Jars | NWTPH-Dx | NWTPH-Gx | BTEX EPA 8021 | NWTPH-HCID | VOCs EPA 8260 | PAHs EPA 8270 | PCBs EPA 8082 | RCRA 8 | Nickle | Copper | Zinc | Notes |
| A1 | 01 | 9/25/24 | 1240 | Soil | 1 | X | | | | | | | X | X | X | X | |
| A2 | 02 | 9/25/24 | 1240 | | 1 | X | | | | | | | X | X | X | X | |
| A3 | 03 | 9/25/24 | 1240 | | 1 | X | | | | | | | X | X | X | X | |
| A4 | 04 | 9/25/24 | 1240 | | 1 | X | | | | | | | X | X | X | X | |
| A5 | 05 | 9/25/24 | 1240 | | 1 | X | | | | | | | X | X | X | X | |
| A6 | 06 | 9/25/24 | 1240 | | 1 | X | | | | | | | X | X | X | X | |
| A7 | 07 | 9/25/24 | 1240 | | 1 | X | | | | | | | X | X | X | X | |
| A8 | 08 | 9/25/24 | 1240 | | 1 | X | | | | | | | X | X | X | X | |
| A9 | 09 | 9/25/24 | 1240 | | 1 | X | | | | | | | X | X | X | X | |
| A10 | 10 | 9/25/24 | 1240 | | 1 | X | | | | | | | X | X | X | X | |

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: | Jonathen A. Taylor | Graymar Env. | 9/25 | 17:16 |
| Received by: | JOE MOHAMMED | FBT | 09/25/24 | 17:16 |
| Relinquished by: | | Samples received at 3 °C | | |
| Received by: | | | | |

*Friedman & Bruya, Inc.*
*Ph. (206) 285-8282*

# SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 409412 CLIENT GRM INITIALS/ DATE: 09/25/24 GLM

**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: (ND) 9/26
*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

Date of Report: 10/04/24
Date Received: 10/03/24
Project: AUB-0941, F&BI 410080
Date Extracted: 10/04/24
Date Analyzed: 10/04/24

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| A11<br>410080-01 | <50 | <250 | 92 |
| A12<br>410080-02 | 15,000 | 5,800 | ip |
| A13<br>410080-03 | 3,400 | <250 | 110 |
| A14<br>410080-04 | 550 | <250 | 99 |
| Method Blank<br>04-2451 MB2 | <50 | <250 | 89 |

# Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A11 | Client: | Graymar Environmental |
| Date Received: | 10/03/24 | Project: | AUB-0941, F&BI 410080 |
| Date Extracted: | 10/03/24 | Lab ID: | 410080-01 |
| Date Analyzed: | 10/04/24 | Data File: | 410080-01.070 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 5.5 |
| Barium | 68 |
| Cadmium | <1 |
| Chromium | 26 J |
| Lead | 8.0 |
| Mercury | <1 |
| Selenium | <1 |
| Silver | <1 |

# Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A12 | Client: | Graymar Environmental |
| Date Received: | 10/03/24 | Project: | AUB-0941, F&BI 410080 |
| Date Extracted: | 10/03/24 | Lab ID: | 410080-02 |
| Date Analyzed: | 10/04/24 | Data File: | 410080-02.071 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 4.4 |
| Barium | 44 |
| Cadmium | <1 |
| Chromium | 19 J |
| Lead | 5.9 |
| Mercury | <1 |
| Selenium | <1 |
| Silver | <1 |

# Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A13 | Client: | Graymar Environmental |
| Date Received: | 10/03/24 | Project: | AUB-0941, F&BI 410080 |
| Date Extracted: | 10/03/24 | Lab ID: | 410080-03 |
| Date Analyzed: | 10/04/24 | Data File: | 410080-03.072 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 5.3 |
| Barium | 36 |
| Cadmium | <1 |
| Chromium | 9.3 J |
| Lead | 7.7 |
| Mercury | <1 |
| Selenium | <1 |
| Silver | <1 |

# Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | A14 | Client: | Graymar Environmental |
| Date Received: | 10/03/24 | Project: | AUB-0941, F&BI 410080 |
| Date Extracted: | 10/03/24 | Lab ID: | 410080-04 |
| Date Analyzed: | 10/04/24 | Data File: | 410080-04.073 |
| Matrix: | Soil | Instrument: | ICPMS3 |
| Units: | mg/kg (ppm) Dry Weight | Operator: | SP |

| Analyte: | Concentration mg/kg (ppm) |
|---|---|
| Arsenic | 3.2 |
| Barium | 50 |
| Cadmium | <1 |
| Chromium | 20 J |
| Lead | 7.3 |
| Mercury | <1 |
| Selenium | <1 |
| Silver | <1 |

# Analysis For Total Metals By EPA Method 6020B

| | | | |
|---|---|---|---|
| Client ID: | Method Blank | Client: | Graymar Environmental |
| Date Received: | NA | Project: | AUB-0941, F&BI 410080 |
| Date Extracted: | 10/03/24 | Lab ID: | I4-832 mb |
| Date Analyzed: | 10/03/24 | Data File: | I4-832 mb.178 |
| 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 |

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 14, 2024

Nelson Ocasio, Project Manager
Graymar Environmental
4053 Auburn Way N
Auburn, WA 98002

Dear Mr Ocasio:

Included are the results from the testing of material submitted on October 9, 2024 from the AUB-0941, F&BI 410185 project. There are 4 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.

Mac Goldman
Project Manager

Enclosures
GRM1014R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 9, 2024 by Friedman & Bruya, Inc. from the Graymar Environmental AUB-0941, F&BI 410185 project. Samples were logged in under the laboratory ID's listed below.

| Laboratory ID | Graymar Environmental |
|---|---|
| 410185 -01 | A12(1) |
| 410185 -02 | A13(1) |

All quality control requirements were acceptable.

Date of Report: 10/14/24
Date Received: 10/09/24
Project: AUB-0941, F&BI 410185
Date Extracted: 10/10/24
Date Analyzed: 10/10/24

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| A12(1)<br>410185-01 | 6,200 | 2,000 | 108 |
| A13(1)<br>410185-02 | 6,200 | 2,000 | 108 |
| Method Blank<br>04-2482 MB | <50 | <250 | 97 |

Date of Report: 10/14/24
Date Received: 10/09/24
Project: AUB-0941, F&BI 410185

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 410185-01 (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 | 6,200 | 116 | 136 | 64-136 | 16 |

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 |

# 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.

410185

# SAMPLE CHAIN OF CUSTODY

10/09/24

Page # 1 of 1

A1

Report To Nelson Ocasio

Company Gray Mar Environmental

Address 4053 Auburn Way N

City, State, ZIP Auburn WA

Phone 3605289743 Email Nocasio@GrayMarEnv.com

SAMPLERS (*signature*)

PROJECT NAME

PO # Aub-0941

REMARKS

Project specific RLs? - Yes / No

INVOICE TO Gray Mar Environmental

TURNAROUND TIME
- ☐ Standard turnaround
- ☒ RUSH 3 Day

Rush charges authorized by: Gavin Hawkins

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 | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A12(1) | 01 | 10/9/24 | 1015 | | 1 | X | | | | | | | | | | | |
| A13(1) | 02 | 10/9/24 | 1015 | | 1 | X | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | Samples received at 21 °C | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: Gavin Hawkins | | Gray Mar Environmental | 10/9/24 | 1137 |
| Received by: | Anh Phan | FBI | 10/09/24 | 11:37 |
| Relinquished by: | | | | |
| Received by: | | | | |

*Friedman & Bruya, Inc.*
*5500 4th Ave S.*
*Seattle WA 98108*
*(206) 285-8282*
*office@friedmanandbruya.com*

# SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 410185 CLIENT Graymar INITIALS/ DATE: AP 10/09/24

**If custody seals are present on cooler, are they intact?** ☑ NA ☐ YES ☐ NO

**Cooler/Sample temperature** 21 °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: AWB 10/9
*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** _____

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.

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(206) 285-8282
office@friedmanandbruya.com
www.friedmanandbruya.com

November 6, 2024

Nelson Ocasio, Project Manager
Graymar Environmental
4053 Auburn Way N
Auburn, WA 98002

Dear Mr Ocasio:

Included are the results from the testing of material submitted on October 29, 2024 from the Aub-0941, F&BI 410540 project. There are 3 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
GRM1106R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/06/24
Date Received: 10/29/24
Project: Aub-0941, F&BI 410540
Date Extracted: 11/01/24
Date Analyzed: 11/01/24

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| A12(2)<br>410540-01 | 1,400 | 1,400 | 115 |
| A13(2)<br>410540-02 | 8,800 | 900 | 129 |
| Method Blank<br>04-2672 MB | <50 | <250 | 105 |

Date of Report: 11/06/24
Date Received: 10/29/24
Project: Aub-0941, F&BI 410540

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 410593-03 (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 | 56 | 107 | 93 | 64-136 | 14 |

Laboratory Code: Laboratory Control Sample

| Analyte | Reporting Units | Spike Level | Percent Recovery LCS | Acceptance Criteria |
|---|---|---|---|---|
| Diesel Extended | mg/kg (ppm) | 5,000 | 100 | 78-121 |

# 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.

410540 nocasio@graymarenv.com **SAMPLE CHAIN OF CUSTODY** 10/29/24 B1

Page # 1 of 1

Report To Nelson Ocasio
Company GrayMar Environmental
Address 4053 Auburn Way N
City, State, ZIP Auburn, WA, 98002
Phone 3605289743 Email nocasio@graymarenv.com

SAMPLERS (*signature*) SE

PROJECT NAME: Aub-0941

PO #:

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 | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A12 (2) | 01 | 10/29/24 | 1054 | | 1 | X | | | | | | | | | | | |
| A13 (2) | 02 | 10/29/24 | 1054 | | 1 | X | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | Samples received at 15 °C | | | | |
| | | | | | | | | | | | | | | | | | |

ANALYSES REQUESTED

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: SE | Gavin Hawkins | GrayMar Environmental | 10/29/24 | 1240 |
| Received by: | Nhan Phan | FIBI | 10/29/24 | 1240 |
| Relinquished by: | | | | |
| Received by: | | | | |

*Friedman & Bruya, Inc.*
*5500 4th Ave S.*
*Seattle WA 98108*
*(206) 285-8282*
*office@friedmanandbruya.com*

# SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 410540 CLIENT Graymar Env. INITIALS/ DATE: (NP) 10/29/24

If custody seals are present on cooler, are they intact? ☑ NA ☐ YES ☐ NO

Cooler/Sample temperature 15 °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) 10/29
*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 _____

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

November 19, 2024

Nelson Ocasio, Project Manager
Graymar Environmental
4053 Auburn Way N
Auburn, WA 98002

Dear Mr Ocasio:

Included are the results from the testing of material submitted on November 13, 2024 from the Truck vs House Aub-0941, F&BI 411189 project. There are 4 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.

Mac Goldman
Project Manager

Enclosures
GRM1119R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on November 13, 2024 by Friedman & Bruya, Inc. from the Graymar Environmental Truck vs House Aub-0941, F&BI 411189 project. Samples were logged in under the laboratory ID's listed below.

| Laboratory ID | Graymar Environmental |
|---|---|
| 411189 -01 | 13D |
| 411189 -02 | 14D |
| 411189 -03 | 15D |
| 411189 -04 | 16D |

All quality control requirements were acceptable.

Date of Report: 11/19/24
Date Received: 11/13/24
Project: Truck vs House Aub-0941, F&BI 411189
Date Extracted: 11/13/24
Date Analyzed: 11/13/24

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| 13D<br>411189-01 | 1,100 | <250 | 108 |
| 14D<br>411189-02 | 2,900 | <250 | 117 |
| 15D<br>411189-03 | 210 | <250 | 111 |
| 16D<br>411189-04 | 94 x | <250 | 111 |
| Method Blank<br>04-2811 MB | <50 | <250 | 106 |

Date of Report: 11/19/24
Date Received: 11/13/24
Project: Truck vs House Aub-0941, F&BI 411189

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 411176-01 (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 | 116 | 108 | 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 | 116 | 78-121 |

# 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.

411189

# SAMPLE CHAIN OF CUSTODY

11/13/24 D1

Page # 1 of 1

Report To Nelson Ocasio
Company Graymar Environmental
Address 4053 Auburn Way N
City, State, ZIP Auburn WA 98002
Phone (360) 528-9743 Email Nocasio@graymarENV.com

SAMPLERS (*signature*)

| PROJECT NAME | PO # |
|---|---|
| Truck vs House | Aub-0941 |
| REMARKS | INVOICE TO |
| Project Specific RLs - Yes / No | Graymar |

TURNAROUND TIME
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 | BTEX EPA 8021 | VOCs EPA 8260 | PAHs EPA 8270 | PCBs EPA 8082 | | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13D | 01 | 11/12/24 | 1400 | Solid | 1 | X | | | | | | | | | | | |
| 14D | 02 | 11/12/24 | 1400 | Solid | 1 | X | | | | | | | | | | | |
| 15D | 03 | 11/12/24 | 1400 | Solid | 1 | X | | | | | | | | | | | |
| 16D | 04 | 11/12/24 | 1400 | Solid | 1 | X | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | Samples received at 15 °C | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

ANALYSES REQUESTED

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: | Dallas Pierce | Graymar | 11/13/24 | 1056 |
| Received by: | Anh Phan | AFBI | 11/13/24 | 10:56 |
| Relinquished by: | | | | |
| Received by: | | | | |

*Friedman & Bruya, Inc.*
*3012 16th Avenue West*
*Seattle, WA 98119-2029*
*Ph. (206) 285-8282*

# SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 411189 CLIENT Graymar INITIALS/ DATE: AP 11/13/24

**If custody seals are present on cooler, are they intact?** ☑ NA ☐ YES ☐ NO

**Cooler/Sample temperature** 15 °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: AP 11/13/24
*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 | ☐ 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** _____


## Key

Soil sample location

**120324-1** Soil sample ID

| Site Cleanup Level (mg/kg) | |
|---|---|
| *Diesel* | *2,000* |
| *Oil* | |

U = not detected at reporting limit

**Red** = sample exceeds cleanup level

Soil Sample Locations
(Dec 3, 2024)

16606 75th Place W
Edmonds, Washington

0 Feet 40

N

**Figure 1**

STRATUM GROUP

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

December 10, 2024

Kim Ninnemann, Project Manager
Stratum Group
2102 Young St
Bellingham, WA 98225

Dear Ms Ninnemann:

Included are the results from the testing of material submitted on December 4, 2024 from the 75th Edmonds PO 75th, F&BI 412069 project. There are 4 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
STG1210R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 4, 2024 by Friedman & Bruya, Inc. from the Stratum Group 75th Edmonds PO 75th, F&BI 412069 project. Samples were logged in under the laboratory ID's listed below.

| Laboratory ID | Stratum Group |
|---|---|
| 412069 -01 | 120324-1 |
| 412069 -02 | 120324-2 |
| 412069 -03 | 120324-3 |
| 412069 -04 | 120324-4 |
| 412069 -05 | 120324-5 |
| 412069 -06 | 120324-6 |

All quality control requirements were acceptable.

Date of Report: 12/10/24
Date Received: 12/04/24
Project: 75th Edmonds PO 75th, F&BI 412069
Date Extracted: 12/05/24
Date Analyzed: 12/05/24

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| 120324-1<br>412069-01 | 27,000 | 1,600 x | ip |
| 120324-3<br>412069-03 | 3,200 | <250 | 106 |
| 120324-6<br>412069-06 | 28,000 | 1,800 x | ip |
| Method Blank<br>04-2992 MB | <50 | <250 | 111 |

Date of Report: 12/10/24
Date Received: 12/04/24
Project: 75th Edmonds PO 75th, F&BI 412069

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 412069-01 (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 | 23,000 | 3 b | 136 b | 64-136 | 191 b |

Laboratory Code: Laboratory Control Sample

| Analyte | Reporting Units | Spike Level | Percent Recovery LCS | Acceptance Criteria |
|---|---|---|---|---|
| Diesel Extended | mg/kg (ppm) | 5,000 | 102 | 78-121 |

# 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.

# SAMPLE CHAIN OF CUSTODY

412069 — 12/4/24 — G2

Page # 1 of 1

Report To Kim Ninnemann
Company Stratum Grup
Address Po Box 2546
City, State, ZIP Bellingham WA 98227
Phone 3607149409 Email Kim@stratumgrp.net

SAMPLERS (signature)

PROJECT NAME: 75th Edmonds
PO #: 75th

REMARKS
Project specific RLs? - Yes / No

INVOICE TO: Stratum Grup

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 | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | ANALYSES REQUESTED | | | | | | | | | | | |
| 120324-1 | 01 | 12/3/24 | | Soil | 1 | X | | | | | | | | | | | |
| 120324-2 * | 02 | | | | 1 | | | | | | | | | | | | archive |
| 120324-3 | 03 | | | | 1 | X | | | | | | | | | | | |
| 120324-4 * | 04 | | | | 1 | | | | | | | | | | | | archive |
| 120324-5 * | 05 | | | | 1 | | | | | | | | | | | | archive |
| 120324-6 | 06 | ↓ | | ↓ | 1 | X | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | Samples received at 2 °C | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: | Kim Ninnemann | Stratum Grp | 12/4/24 | 0906 |
| Received by: | Kristin Wilmes | Stratum Group | 12/4/24 | 0907 |
| Relinquished by: | Kristin Wilmes | Stratum Group | 12/4/24 | 1434 |
| Received by: | Anh Phan | FBI | 12/04/24 | 14:34 |

*Friedman & Bruya, Inc.*
*5500 4th Ave S.*
*Seattle WA 98108*
*(206) 285-8282*
*office@friedmanandbruya.com*

# SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 412069 CLIENT Stratum INITIALS/ DATE: AP 12/04/24

**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/ Date: (NP) 12/4
*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 | ☐ 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** _____

# APPENDIX III
# (Final Cleanup Documentation)

Laboratory Results with Chain-of-Custody

Soil Disposal Tickets

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

January 10, 2025

Kim Ninnemann, Project Manager
Stratum Group
2102 Young St
Bellingham, WA 98225

Dear Ms Ninnemann:

Included are the results from the testing of material submitted on January 8, 2025 from the Edmonds 75th, F&BI 501086 project. There are 4 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
STG0110R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 8, 2025 by Friedman & Bruya, Inc. from the Stratum Group Edmonds 75th, F&BI 501086 project. Samples were logged in under the laboratory ID's listed below.

| Laboratory ID | Stratum Group |
|---|---|
| 501086 -01 | 010825-1 |
| 501086 -02 | 010825-2 |
| 501086 -03 | 010825-3 |
| 501086 -04 | 010825-4 |
| 501086 -05 | 010825-5 |
| 501086 -06 | 010825-6 |
| 501086 -07 | 010825-7 |
| 501086 -08 | 010825-8 |
| 501086 -09 | 010825-9 |
| 501086 -10 | 010825-10 |

All quality control requirements were acceptable.

Date of Report: 01/10/25
Date Received: 01/08/25
Project: Edmonds 75th, F&BI 501086
Date Extracted: 01/09/25
Date Analyzed: 01/09/25

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| 010825-1<br>501086-01 | <50 | <250 | 102 |
| 010825-2<br>501086-02 | <50 | <250 | 103 |
| 010825-3<br>501086-03 | <50 | <250 | 103 |
| 010825-4<br>501086-04 | <50 | <250 | 106 |
| 010825-5<br>501086-05 | <50 | <250 | 104 |
| 010825-6<br>501086-06 | <50 | <250 | 104 |
| 010825-7<br>501086-07 | <50 | <250 | 103 |
| 010825-8<br>501086-08 | 400 | <250 | 103 |
| 010825-9<br>501086-09 | <50 | <250 | 105 |
| 010825-10<br>501086-10 | <50 | <250 | 106 |
| Method Blank<br>05-122 MB2 | <50 | <250 | 104 |

Date of Report: 01/10/25
Date Received: 01/08/25
Project: Edmonds 75th, F&BI 501086

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 501079-01 (Matrix Spike)

| Analyte | Reporting Units | Spike Level | Sample Result (Wet Wt) | Percent Recovery MS | Percent Recovery MSD | Acceptance Criteria | RPD (Limit 20) |
|---|---|---|---|---|---|---|---|
| Diesel Extended | mg/kg (ppm) | 5,000 | 18,000 | 140 | 120 | 63-146 | 15 |

Laboratory Code: Laboratory Control Sample

| Analyte | Reporting Units | Spike Level | Percent Recovery LCS | Acceptance Criteria |
|---|---|---|---|---|
| Diesel Extended | mg/kg (ppm) | 5,000 | 96 | 77-123 |

# 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.

501086

# SAMPLE CHAIN OF CUSTODY

1/08/24

A2

Page # 1 of

Report To Kim Ninnemann

Company Stratum Grup

Address Po Box 254

City, State, ZIP Bellingham WA 98227

Phone 36-7149409 Email Kim@stratumgroup.net

SAMPLERS (*signature*)

PROJECT NAME: Edmonds 75th

PO #: Edmonds

REMARKS

Project specific RLs? - Yes / No

INVOICE TO: Stratum Grup

TURNAROUND TIME
- ☐ Standard turnaround
- ☒ RUSH 24hr

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 | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 010825_1 | 01 | 1/8/25 | 1115 | Soil | 1 | X | | | | | | | | | | | |
| 010825-2 | 02 | | 1126 | | 1 | X | | | | | | | | | | | |
| 010825-3 | 03 | | 1129 | | 1 | X | | | | | | | | | | | |
| 010825-4 | 04 | | 1136 | | 1 | X | | | | | | | | | | | |
| 010825-5 | 05 | | 1143 | | 1 | X | | | | | | | | | | | |
| 010825-6 | 06 | | 1147 | | 1 | X | | | | | | | | | | | |
| 010825-7 | 07 | | 1222 | | 1 | X | | | | | | | | | | | |
| 010825-8 | 08 | | 1315 | | 1 | X | | | | | | | | | | | |
| 010825-9 | 09 | | 1321 | | 1 | X | | | | | | | | | | | |
| 010825-10 | 10 | ↓ | 1434 | ↓ | 1 | X | | | | | | | | | | | |

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: | Kim Ninnemann | Stratum Grup | 1/8/25 | 1530 |
| Received by: | VINETA MILLS | F and B | 01.08.25 | 1513 |
| Relinquished by: | | | | |
| Received by: | | | | |

**Samples received at 6 °C**

*Friedman & Bruya, Inc.*
*5500 4th Ave S.*
*Seattle WA 98108*
*(206) 285-8282*
*office@friedmanandbruya.com*

# SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 501086 CLIENT STG INITIALS/ DATE: AUB 1/9

**If custody seals are present on cooler, are they intact?** ☑ NA ☐ YES ☐ NO

**Cooler/Sample temperature** 6 °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: AUB 1/9
*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** _____

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

January 13, 2025

Kim Ninnemann, Project Manager
Stratum Group
2102 Young St
Bellingham, WA 98225

Dear Ms Ninnemann:

Included are the results from the testing of material submitted on January 9, 2025 from the Edmonds 75th, F&BI 501106 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
STG0113R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 9, 2025 by Friedman & Bruya, Inc. from the Stratum Group Edmonds 75th, F&BI 501106 project. Samples were logged in under the laboratory ID's listed below.

| Laboratory ID | Stratum Group |
|---|---|
| 501106 -01 | 0109-11 |
| 501106 -02 | 0109-12 |
| 501106 -03 | 0109-13 |
| 501106 -04 | 0109-14 |
| 501106 -05 | 0109-15 |
| 501106 -06 | 0109-16 |
| 501106 -07 | 0109-17 |
| 501106 -08 | 0109-18 |
| 501106 -09 | 0109-19 |
| 501106 -10 | 0109-20 |
| 501106 -11 | 0109-21 |
| 501106 -12 | 0109-22 |

All quality control requirements were acceptable.

Date of Report: 01/13/25
Date Received: 01/09/25
Project: Edmonds 75th, F&BI 501106
Date Extracted: 01/10/25
Date Analyzed: 01/10/25

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| 0109-11<br>501106-01 | <50 | <250 | 83 |
| 0109-12<br>501106-02 | <50 | <250 | 78 |
| 0109-13<br>501106-03 | <50 | <250 | 83 |
| 0109-14<br>501106-04 | <50 | <250 | 81 |
| 0109-15<br>501106-05 | <50 | <250 | 79 |
| 0109-16<br>501106-06 | <50 | <250 | 78 |
| 0109-17<br>501106-07 | <50 | <250 | 80 |
| 0109-18<br>501106-08 | <50 | <250 | 72 |
| 0109-19<br>501106-09 | <50 | <250 | 83 |
| 0109-20<br>501106-10 | <50 | <250 | 78 |
| 0109-21<br>501106-11 | <50 | <250 | 76 |

Date of Report: 01/13/25
Date Received: 01/09/25
Project: Edmonds 75th, F&BI 501106
Date Extracted: 01/10/25
Date Analyzed: 01/10/25

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| 0109-22<br>501106-12 | 640 | <250 | 87 |
| Method Blank<br>05-128 MB | <50 | <250 | 109 |

Date of Report: 01/13/25
Date Received: 01/09/25
Project: Edmonds 75th, F&BI 501106

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 501101-01 (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 | 112 | 108 | 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 | 108 | 78-121 |

# 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.

501106

# SAMPLE CHAIN OF CUSTODY

01/09/25

A2

Page # 1 of 1

Report To Kim Ninnemann
Company Shatm Grup
Address P.O Box 2546
City, State, ZIP Billingham WA 98227
Phone 360 714 4409 Email Kim@shatmgrup.net

SAMPLERS (signature)

PROJECT NAME: Edmonds 75th
PO #: Edmonds
REMARKS: Project specific RLs? - Yes / No
INVOICE TO: Shatm Grup

TURNAROUND TIME
☐ Standard turnaround
☒ RUSH 24hr
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 | | | | | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0109-11 | 01 | 1/9/25 | 1007 | Soil | 1 | X | | | | | | | | | | | |
| 0109-12 | 02 | | 1101 | | 1 | X | | | | | | | | | | | |
| 0109-13 | 03 | | 1118 | | 1 | X | | | | | | | | | | | |
| 0109-14 | 04 | | 1133 | | 1 | X | | | | | | | | | | | |
| 0109-15 | 05 | | 1154 | | 1 | X | | | | | | | | | | | |
| 0109-16 | 06 | | 1159 | | 1 | X | | | | | | | | | | | |
| 0109-17 | 07 | | 1211 | | 1 | X | | | | | | | | | | | |
| 0109-18 | 08 | | 1217 | | 1 | X | | | | | | | | | | | |
| 0109-19 | 09 | | 1245 | | 1 | X | | | | | | | | | | | |
| 0109-20 | 10 | | 1314 | | 1 | X | | | | | | | | | | | |
| 0109-21 | 11 | | 1327 | | 1 | X | | | | | | | | | | | |
| 0109-22 | 12 | | 1337 | | 1 | X | | | | | | | | | | | |

| SIGNATURE | PRINT NAME | COMPANY | DATE | TIME |
|---|---|---|---|---|
| Relinquished by: | Kim Ninnemann | Shatm Grup | 1/9/25 | 1446 |
| Received by: | VINETA MILLS | F and B | 01.09.25 | 15:20 |
| Relinquished by: | | | | |
| Received by: | | Samples received at 4 °C | | |

*Friedman & Bruya, Inc.*
*5500 4th Ave S.*
*Seattle WA 98108*
*(206) 285-8282*
*office@friedmanandbruya.com*

# SAMPLE CONDITION UPON RECEIPT CHECKLIST

PROJECT # 501106 CLIENT Stratum INITIALS/DATE: (NP) 01/09/25

**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/Date: (NP) 01/10
*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)
ID on CoC Stan A 0109-11 > 0109-22 not match with label: 010925-11 > 010925-22.

**Air Samples: Were any additional canisters/tubes received?** ☐ NA ☐ YES ☐ NO

**Number of unused TO15 canisters** _____ **Number of unused TO17 tubes** _____

Heidelberg Materials

(888) 322-6847 425-961-7100

**WEIGHMASTER STATION**
98846900
Sno River Delta Soils
17 E. Marine View Dr.
Everett, WA 98213
425-961-7100

| TICKET NO. | 1124532733 | TICKET TIME | 3:03:27PM | DATE | 1/8/2025 |
|---|---|---|---|---|---|
| Customer No. 9416117 | Payment Type Account | Customer Name ULTRA TANK SERVICE INC | | | Order No. 10144803 |
| Customer Job. No. | Customer P.O. | | Map Ref. / | | Disp. Ord. # |
| Truck Type Solo | Truck No. ULT1 | Vehicle or License Plate No. | Trailer or License Plate No. | | Zone |
| Hauler/Carrier No. | Driver's Name | Delivered/Ordered 25.75 / | Load No. 5 | | Running Total 25.75 |

DEL/P PROGRESSIVE
DEL/P 16006 75TH PL W
EDMONDS

| Product | Description | Total | Unit Price | Amount |
|---|---|---|---|---|
| 99005 | CLASS 3 SOILS (TN) | 4.09 | | |

**SCALE WEIGHT**
Gross 18,220 LB
Tare 10,040 LB/P.T.*
Net 8,180 LB

**GROSS & TARE**
[X] Scale 1 [ ] Scale 2
X Angelique
Deputy Weighmaster

**A STANDBY SURCHARGE WILL BE ASSESSED FOR LOADS THAT EXCEED 10 MINUTES UNLOADING TIME.**

**LIABILITY WAIVER**
Heidelberg Materials, (Inc.) will not assume Liability for any property damage or any equipment damage for any delivery beyond the curb line.

| Fuel Surcharge | |
|---|---|
| Sales Tax | |
| Total | |
| Standby Time | |
| This Tickets Grand Total | |

| No one available to sign, customer waives receipt signature. [ ] | Received by Signature X | Print Name (Customer) X | Driver's Signature X |
|---|---|---|---|

| Arrive Job | | Start Unloading | | Finish Unloading | | Standby Time | | Customer's Initials X |
|---|---|---|---|---|---|---|---|---|

Heidelberg Materials

(888) 322-6847 425-961-7100

**WEIGHMASTER STATION**
98846900
Sno River Delta Soils
17 E. Marine View Dr.
Everett, WA 98213
425-961-7100

| TICKET NO. | 1124532731 | TICKET TIME | 1:54:58PM | DATE | 1/8/2025 |
|---|---|---|---|---|---|
| Customer No. 9416117 | Payment Type Account | Customer Name ULTRA TANK SERVICE INC | | | Order No. 10144803 |
| Customer Job. No. | Customer P.O. | | Map Ref. / | | Disp. Ord. # |
| Truck Type Retail Truck | Truck No. ULT02DS | Vehicle or License Plate No. | Trailer or License Plate No. | | Zone |
| Hauler/Carrier No. | Driver's Name | Delivered/Ordered 21.66 / | Load No. 4 | | Running Total 21.66 |

DEL/P PROGRESSIVE
DEL/P 16006 75TH PL W
EDMONDS

| Product | Description | Total | Unit Price | Amount |
|---|---|---|---|---|
| 99005 | CLASS 3 SOILS (TN) | 6.65 | | |

| SCALE WEIGHT | GROSS & TARE | | |
|---|---|---|---|
| Gross 26,840 LB | [X] Scale 1 [ ] Scale 2 | A STANDBY SURCHARGE WILL BE ASSESSED FOR LOADS THAT EXCEED 10 MINUTES UNLOADING TIME. | Fuel Surcharge |
| Tare 13,540 LB/P.T.* | X Angelique | **LIABILITY WAIVER** Heidelberg Materials, (Inc.) will not assume Liability for any property damage or any equipment damage for any delivery beyond the curb line. | Sales Tax |
| Net 13,300 LB | Deputy Weighmaster | | Total |

| No one available to sign, customer waives receipt signature. [ ] | Received by Signature X | Print Name (Customer) X | Driver's Signature X | Standby Time |
|---|---|---|---|---|

| Arrive Job | Start Unloading | Finish Unloading | Standby Time | Customer's Initials X | This Tickets Grand Total |
|---|---|---|---|---|---|
| | | | | | |

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**WEIGHMASTER STATION**
98846900
Sno River Delta Soils
17 E. Marine View Dr.
Everett, WA 98213
425-961-7100

| TICKET NO. | 1124532730 | TICKET TIME | 12:25:58PM | DATE | 1/8/2025 |
|---|---|---|---|---|---|
| Customer No. 9416117 | Payment Type Account | Customer Name ULTRA TANK SERVICE INC | | | Order No. 10144803 |
| Customer Job. No. | Customer P.O. | | Map Ref. / | | Disp. Ord. # |
| Truck Type Solo | Truck No. ULT1 | Vehicle or License Plate No. | Trailer or License Plate No. | | Zone |
| Hauler/Carrier No. | Driver's Name | Delivered/Ordered 15.01 / | Load No. 3 | | Running Total 15.01 |

DEL/P PROGRESSIVE
DEL/P 16006 75TH PL W
EDMONDS

| Product | Description | Total | Unit Price | Amount |
|---|---|---|---|---|
| 99005 | CLASS 3 SOILS (TN) | 4.21 | | |

| SCALE WEIGHT | GROSS & TARE | | |
|---|---|---|---|
| Gross 18,460 LB | [X] Scale 1 [ ] Scale 2 | A STANDBY SURCHARGE WILL BE ASSESSED FOR LOADS THAT EXCEED 10 MINUTES UNLOADING TIME. | Fuel Surcharge |
| Tare 10,040 LB/P.T.* | X Angelique | **LIABILITY WAIVER** Heidelberg Materials, (Inc.) will not assume Liability for any property damage or any equipment damage for any delivery beyond the curb line. | Sales Tax |
| Net 8,420 LB | Deputy Weighmaster | | Total |

| No one available to sign, customer waives receipt signature. [ ] | Received by Signature X | Print Name (Customer) X | Driver's Signature X | Standby Time |
|---|---|---|---|---|

| Arrive Job | Start Unloading | Finish Unloading | Standby Time | Customer's Initials X | This Tickets Grand Total |
|---|---|---|---|---|---|
| | | | | | |

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**WEIGHMASTER STATION**
98846900
Sno River Delta Soils
17 E. Marine View Dr.
Everett, WA 98213
425-961-7100

| TICKET NO. | 1124532728 | TICKET TIME | 11:37:45AM | DATE | 1/8/2025 |
|---|---|---|---|---|---|
| Customer No. 9416117 | Payment Type Account | Customer Name ULTRA TANK SERVICE INC | | | Order No. 10144803 |
| Customer Job. No. | Customer P.O. | | Map Ref. / | | Disp. Ord. # |
| Truck Type Retail Truck | Truck No. ULT02DS | Vehicle or License Plate No. | Trailer or License Plate No. | | Zone |
| Hauler/Carrier No. | Driver's Name | Delivered/Ordered 10.80 / | Load No. 2 | | Running Total 10.80 |

DEL/P PROGRESSIVE
DEL/P 16006 75TH PL W
EDMONDS

| Product | Description | Total | Unit Price | Amount |
|---|---|---|---|---|
| 99005 | CLASS 3 SOILS (TN) | 6.52 | | |

| SCALE WEIGHT | GROSS & TARE | | |
|---|---|---|---|
| Gross 26,580 LB * | ☐ Scale 1 ☒ Scale 2 | A STANDBY SURCHARGE WILL BE ASSESSED FOR LOADS THAT EXCEED 10 MINUTES UNLOADING TIME. | Fuel Surcharge |
| Tare 13,540 LB/P.T. | X Angelique | **LIABILITY WAIVER** Heidelberg Materials, (Inc.) will not assume Liability for any property damage or any equipment damage for any delivery beyond the curb line. | Sales Tax |
| Net 13,040 LB * | Deputy Weighmaster | | Total |

| No one available to sign, customer waives receipt signature. ☐ | Received by Signature X | Print Name (Customer) X | Driver's Signature X | Standby Time |
|---|---|---|---|---|

| Arrive Job | Start Unloading | Finish Unloading | Standby Time | Customer's Initials X | This Tickets Grand Total |
|---|---|---|---|---|---|
| | | | | | |

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(888) 322-6847 425-961-7100

**WEIGHMASTER STATION**
98846900
Sno River Delta Soils
17 E. Marine View Dr.
Everett, WA 98213
425-961-7100

| TICKET NO. | 1124532725 | TICKET TIME | 10:23:17AM | DATE | 1/8/2025 |
|---|---|---|---|---|---|
| Customer No. 9416117 | Payment Type Account | Customer Name ULTRA TANK SERVICE INC | | | Order No. 10144803 |
| Customer Job. No. | Customer P.O. | | Map Ref. / | | Disp. Ord. # |
| Truck Type Solo | Truck No. ULT1 | Vehicle or License Plate No. | Trailer or License Plate No. | | Zone |
| Hauler/Carrier No. | Driver's Name | Delivered/Ordered 4.28 / | Load No. 1 | | Running Total 4.28 |

DEL/P PROGRESSIVE
DEL/P 16006 75TH PL W
EDMONDS

| Product | Description | Total | Unit Price | Amount |
|---|---|---|---|---|
| 99005 | CLASS 3 SOILS (TN) | 4.28 | | |

| SCALE WEIGHT | GROSS & TARE | | |
|---|---|---|---|
| Gross 18,600 LB * | ☐ Scale 1 ☒ Scale 2 | A STANDBY SURCHARGE WILL BE ASSESSED FOR LOADS THAT EXCEED 10 MINUTES UNLOADING TIME. | Fuel Surcharge |
| Tare 10,040 LB/P.T. | X Angelique | **LIABILITY WAIVER** Heidelberg Materials, (Inc.) will not assume Liability for any property damage or any equipment damage for any delivery beyond the curb line. | Sales Tax |
| Net 8,560 LB * | Deputy Weighmaster | | Total |

| No one available to sign, customer waives receipt signature. ☐ | Received by Signature X | Print Name (Customer) X | Driver's Signature X | Standby Time |
|---|---|---|---|---|

| Arrive Job | Start Unloading | Finish Unloading | Standby Time | Customer's Initials X | This Tickets Grand Total |
|---|---|---|---|---|---|
| | | | | | |

Heidelberg Materials

(888) 322-6847 425-961-7100

**WEIGHMASTER STATION**
98846900
Sno River Delta Soils
17 E. Marine View Dr.
Everett, WA 98213
425-961-7100

| TICKET NO. | 1124532735 | TICKET TIME | 11:47:30AM | DATE | 1/9/2025 |
|---|---|---|---|---|---|
| Customer No. 9416117 | Payment Type Account | Customer Name ULTRA TANK SERVICE INC | | | Order No. 10144803 |
| Customer Job. No. | Customer P.O. | | Map Ref. / | | Disp. Ord. # |
| Truck Type Retail Truck | Truck No. ULT02DS | Vehicle or License Plate No. | Trailer or License Plate No. | | Zone |
| Hauler/Carrier No. | Driver's Name | Delivered/Ordered 7.34 / | Load No. 1 | | Running Total 7.34 |

DEL/P PROGRESSIVE
DEL/P 16006 75TH PL W
EDMONDS

| Product | Description | Total | Unit Price | Amount |
|---|---|---|---|---|
| 99005 | CLASS 3 SOILS (TN) | 7.34 | | |

| SCALE WEIGHT | GROSS & TARE | | | |
|---|---|---|---|---|
| Gross 28,220 LB | [X] Scale 1 [ ] Scale 2 | A STANDBY SURCHARGE WILL BE ASSESSED FOR LOADS THAT EXCEED 10 MINUTES UNLOADING TIME. | Fuel Surcharge | |
| Tare 13,540 LB/P.T.* | X Angelique Deputy Weighmaster | LIABILITY WAIVER Heidelberg Materials, (Inc.) will not assume Liability for any property damage or any equipment damage for any delivery beyond the curb line. | Sales Tax | |
| Net 14,680 LB | | | Total | |

| No one available to sign, customer waives receipt signature. [ ] | Received by Signature X | Print Name (Customer) X | Driver's Signature X | Standby Time | |
|---|---|---|---|---|---|

| Arrive Job | | Start Unloading | | Finish Unloading | | Standby Time | | Customer's Initials X | This Tickets Grand Total | |
|---|---|---|---|---|---|---|---|---|---|---|

Heidelberg Materials

(888) 322-6847 425-961-7100

**WEIGHMASTER STATION**
98846900
Sno River Delta Soils
17 E. Marine View Dr.
Everett, WA 98213
425-961-7100

| TICKET NO. | 1124532736 | TICKET TIME | 2:24:35PM | DATE | 1/9/2025 |
|---|---|---|---|---|---|
| Customer No. 9416117 | Payment Type Account | Customer Name ULTRA TANK SERVICE INC | | | Order No. 10144803 |
| Customer Job. No. | Customer P.O. | | Map Ref. / | | Disp. Ord. # |
| Truck Type Retail Truck | Truck No. ULT02DS | Vehicle or License Plate No. | Trailer or License Plate No. | | Zone |
| Hauler/Carrier No. | Driver's Name | Delivered/Ordered 9.93 / | Load No. 2 | | Running Total 9.93 |

DEL/P PROGRESSIVE
DEL/P 16006 75TH PL W
EDMONDS

| Product | Description | Total | Unit Price | Amount |
|---|---|---|---|---|
| 99005 | CLASS 3 SOILS (TN) | 2.59 | | |

| SCALE WEIGHT | GROSS & TARE | | | |
|---|---|---|---|---|
| Gross 18,720 LB | [X] Scale 1 [ ] Scale 2 | A STANDBY SURCHARGE WILL BE ASSESSED FOR LOADS THAT EXCEED 10 MINUTES UNLOADING TIME. | Fuel Surcharge | |
| Tare 13,540 LB/P.T.* | X Angelique Deputy Weighmaster | LIABILITY WAIVER Heidelberg Materials, (Inc.) will not assume Liability for any property damage or any equipment damage for any delivery beyond the curb line. | Sales Tax | |
| Net 5,180 LB | | | Total | |

| No one available to sign, customer waives receipt signature. [ ] | Received by Signature X | Print Name (Customer) X | Driver's Signature X | Standby Time | |
|---|---|---|---|---|---|

| Arrive Job | | Start Unloading | | Finish Unloading | | Standby Time | | Customer's Initials X | This Tickets Grand Total | |
|---|---|---|---|---|---|---|---|---|---|---|

# APPENDIX IV

Stratum Group Field Procedures

Date of Report: 01/13/25
Date Received: 01/09/25
Project: Edmonds 75th, F&BI 501106
Date Extracted: 01/10/25
Date Analyzed: 01/10/25

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| 0109-11<br>501106-01 | <50 | <250 | 83 |
| 0109-12<br>501106-02 | <50 | <250 | 78 |
| 0109-13<br>501106-03 | <50 | <250 | 83 |
| 0109-14<br>501106-04 | <50 | <250 | 81 |
| 0109-15<br>501106-05 | <50 | <250 | 79 |
| 0109-16<br>501106-06 | <50 | <250 | 78 |
| 0109-17<br>501106-07 | <50 | <250 | 80 |
| 0109-18<br>501106-08 | <50 | <250 | 72 |
| 0109-19<br>501106-09 | <50 | <250 | 83 |
| 0109-20<br>501106-10 | <50 | <250 | 78 |
| 0109-21<br>501106-11 | <50 | <250 | 76 |

Date of Report: 01/13/25
Date Received: 01/09/25
Project: Edmonds 75th, F&BI 501106
Date Extracted: 01/10/25
Date Analyzed: 01/10/25

**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<br>Laboratory ID | Diesel Range<br>($C_{10}$-$C_{25}$) | Motor Oil Range<br>($C_{25}$-$C_{36}$) | Surrogate<br>(% Recovery)<br>(Limit 50-150) |
|---|---|---|---|
| 0109-22<br>501106-12 | 640 | <250 | 87 |
| Method Blank<br>05-128 MB | <50 | <250 | 109 |

Date of Report: 01/13/25
Date Received: 01/09/25
Project: Edmonds 75th, F&BI 501106

## QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 501101-01 (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 | 112 | 108 | 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 | 108 | 78-121 |

# 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.

# STRATUM GROUP FIELD PROCEDURES

## Site Preparatory Activities

Prior to the completion of subsurface exploration activities on the subject property, Stratum Group obtains approval for planned activities from the property owner and obtains or facilitates the public agency permits required for the desired work. Stratum Group marks the location of planned excavations or borings on the subject property with white paint and contacts the local one-call utility locating service at least two business days prior to the onset of exploration activities. Stratum Group also engages the services of a professional private utility locating company to survey the proposed exploration area(s) and conduct ground penetrating radar services to minimize the potential for exploration activities to encounter and/or damage buried utilities or objects.

## Soil Borings & Soil Sampling

Stratum Group engages a licensed professional drilling company to complete subsurface soil borings with a drill rig, unless hand auguring or hand-dug test pits are proposed for the site. Continuous soil cores are typically collected using Geoprobe/push probe samplers. The boring method(s) selected are indicated on the boring logs completed for the project. Stratum Group chooses the sample locations based upon researched site history and project goals with some variability based upon utility locate/GPR findings and/or conditions identified in the field.

### *Field Screening*

Soils recovered from the borehole are examined and field screened for odor, hydrocarbon sheen, discoloration, or other obvious indications of contamination. Any such obvious indicators, if observed, are recorded on the boring logs.

A MiniRAE 3000 photoionization detector (PID) equipped with a 10.6eV lamp is utilized to field scan samples for volatile organic compounds (VOCs). To evaluate for VOCs with the PID, soil is placed into a sealed plastic bag and allowed to sit for approximately 5 minutes. The PID sampler tip is then inserted into the headspace of the plastic bag to retrieve a parts per million (ppm) concentration of VOCs. Measurements obtained from the PID are recorded on the boring log. The PID is calibrated regularly in accordance with the manufacturer's specifications using a hexane or isobutylene standard.

Soils collected from the borings are described according to the Unified Soil Classification System (USCS), with particular note to presence of colors, moisture content, presence of debris and/or indicators of contamination. These descriptions are recorded on the boring log.

### *Soil Sampling (from borehole)*

Soil collected via soil cores from push probe equipment is sampled where contaminants are determined to be most likely based on field indications and background knowledge, such as sample depths where discoloration or odors were noted, the top of the groundwater table, or at depths associated with the suspected base of tanks or piping. Soil samples are labeled with the boring number followed by the depth of the sample. For example, sample B1-5 would have been collected from Boring B1 at 5 feet bgs (below ground surface).

Soil samples are placed into labeled laboratory supplied containers. Sample container selection is based upon laboratory recommendations for volume, container type, and preservation, if necessary. Sampling equipment is either disposable or washed with Alconox and triple-rinsed between samples. Samples are placed into an ice-chilled cooler immediately after sampling and delivered to a Washington State Department of Ecology approved laboratory for analysis. The samples are transferred under chain-of-custody protocol.

### *Borehole Completion*

If no temporary or permanent monitoring well is going to be installed, the soil boring is backfilled with bentonite chips to approximately 1 foot below the ground surface (bgs). The rest of the hole is filled and finished to the surface with material to match the surrounding surface (e.g., asphalt, concrete, dirt, etc.). The borehole is backfilled by the licensed well driller consistent with WAC 173-360 and overseen by Stratum Group.

### *Soil Sampling (from excavation)*

Stratum group engages a licensed excavation contractor to complete excavation activities. As in borehole sampling, soils from the sidewalls and base of the excavation area are regularly examined and field screened for obvious indications of contamination (e.g., odor, hydrocarbon sheen, discoloration, etc.). This field examination in combination with PID screening is used to direct excavation activities.

When field screening indicates that contaminant concentrations in residual soils have fallen below the cleanup standards established for the subject property, soil samples are collected from the base and sidewalls of the excavation. Where possible, samples are collected directly using hand tools that are washed with Alconox and triple-rinsed between each sample. For deeper samples, where the excavation depth is too great for Stratum Group personnel to access directly, samples are collected from the excavator bucket. Overburden slough material that collects on top of soils in the bucket is removed prior to sampling so sampled soils are representative of the desired sampling location. Samples are subsequently handled according to procedures outlined above for borehole samples.

## Monitoring Well Construction & Groundwater Sampling

If groundwater is encountered during soil boring completion, samples may be collected as either a grab sample from a temporary well or from a permanent monitoring well. Prior to well purging or sample collection, the depth of the groundwater table in the borehole or monitoring well is measured using a depth-to-water meter. Prior to sample collection, water is purged from the well. For a temporary well, water is purged until the water becomes clear or turbidity is significantly reduced. For a developed monitoring well, at least three well volumes are purged prior to sampling or until field parameters as measured with a field meter (e.g., temperature, dissolved oxygen, pH, conductivity) stabilize. If low water levels or low conductivity aquifers result in the wells pumping dry during purging, purging is halted and the well is allowed to recharge until it can be purged again. Multiple rounds of purging and recharging may be completed to allow for turbidity to decrease significantly, in the case of a temporary well, or for field parameters to stabilize, in the case of a permanent monitoring well. For a developed monitoring well, at least three well volumes are purged prior to sampling or until field parameters stabilize. Total well purge volumes prior to sampling may only be reduced (i.e., less than three well volumes) if several rounds of purging and recharge do not result in sufficient purge volume within a reasonable time frame. In such cases, the reduced purge volumes will be documented. Obvious indications of contamination observed in purge water such as odors or petroleum sheens are noted on the boring logs.

In the event of low water volumes or slow recharge of the wells, less water may be purged to allow for sample collection within reasonable time frames. Obvious indications of contamination observed in purge water such as odors or petroleum sheens are noted on the boring logs.

Both well purging and subsequent water sampling are accomplished using a low-flow, peristaltic pump, as recommended by the U.S. EPA. Low-flow pumping is utilized because it is more likely to produce a sample representative of actual groundwater conditions due to its relatively low impact on aquifer characteristics and chemistry. Tubing used for well purging and sample collection is single-use and is discarded after sample collection is complete.

Groundwater samples are placed into labeled laboratory supplied containers. Sample container selection is based upon laboratory recommendations for volume, container type, and preservation, if necessary. Samples are immediately placed into an ice-chilled cooler for storage until delivery to a Washington State Department of Ecology approved laboratory.

### *Temporary & Monitoring Well Construction*

Temporary wells are constructed using single-use slotted PVC pipe placed in the depth range of desired groundwater sampling. Blank pipe rises from the top of the screen to the surface. The screen length and placement depth are noted on the boring logs or within report text. Any reusable materials are washed and triple rinsed between uses.

Permanent monitoring wells are similarly constructed with a slotted PVC screen placed at the

desired sampling depth with non-slotted PVC to the surface. The annular space between the PVC and the borehole is filled with a silica sand filter pack, which extends approximately one to two feet above the screen. Hydrated bentonite is used to fill the annular space from the filter pack to approximately one to two feet below the ground surface to form a seal. The surface is finished with concrete surrounding a steel flush-mount or above-grade monument to protect the well and protect against surface water infiltration or placement of substances down the well casing. Well construction details are noted in the boring logs.

After construction, Stratum Group recommends engaging the services of a licensed professional land surveyor to establish the location and elevation of permanent monitoring wells. Markings are made on the north side of the well casing to establish a consistent point for collecting depth-to-water measurements. Established well casing elevations combined with depth-to-water measurements collected during groundwater sampling may then be used to model groundwater flow directions.

### *Well Development*

After construction of a permanent monitoring well, the well is developed using either a submersible pump or disposable bailer. An agitation apparatus that consists of a stainless-steel rod with neoprene washers the diameter of the inside of the well casing is periodically dropped into the well casing to generate additional pressure and suction through the sand filter pack and further remove fine-grained sediment from the well and surrounding filter. The submersible pump and agitator rod are thoroughly washed and rinsed between wells. Well pumping and agitation proceed until purge water turbidity has reduced and stabilized. The volume of water purged during development is recorded.

## Air Sampling

Air samples are commonly collected to help assess the vapor intrusion pathway for contamination into nearby structures. Air samples may be collected either as subsurface soil gas, sub-slab air, or indoor air. Sampling equipment including tubing and valve assemblies are single-use and disposable. After sampling collection, samples are delivered to a Washington State Department of Ecology approved laboratory for analysis. The samples are transferred under chain-of-custody protocol.

### *Sub-slab Vapor Sampling*

Stratum Group engages a professional drilling contractor to install permanent and temporary sub-slab vapor pins. For a permanent pin with a flush-mount installation, first a 1.5-inch hole is drilled approximately 1.75 inches into the concrete slab of the structure. A 5/8-inch diameter hole is then drilled through the bottom of the slab and approximately 1 inch into the underlying soil. The vapor pin is then hammered into the open hole. At least 20 minutes is allowed to pass before beginning the sample collection process to allow for equilibration. Prior to assembling the sampling apparatus, the laboratory supplied and cleaned 1L Summa canister and ~5-minute flow

controller used for sample collection are subjected to a shut-in test to look for leaks in the sampling equipment setup and the initial vacuum is recorded.

To collect a sample, tubing recommended by the vapor pin manufacturer is attached to the barb on the pin and attached to a valve assembly provided by the laboratory. Tubing also runs from the valve assembly to the Summa canister assembly. Prior to sample collection, a leak test and shut-in test are conducted on the sampling apparatus. The leak test is conducted using either a water dam (temporary pin) or by pouring water directly into the flush-mount hole (permanent) and looking for bubbling around the vapor pin or intrusion of water into the sample tubing. A shut-in test of the sampling apparatus involves manually applying a vacuum to the canister via the purge line of the apparatus and verifying that no leaks are allowing the vacuum to rapidly disappear.

Immediately before sampling, the sampling apparatus is purged using a manually applied vacuum sufficiently to remove ambient air from the tubing. The canister valve is then opened and the sample is collected over approximately 5 minutes or until the vacuum reading on the canister is approximately 5 in/Hg, being sure to not allow the vacuum to reach zero. The canister is then closed, and the vapor pin is either removed (temporary) and the hole patched or the pin is capped and covered (permanent) for future sampling.

### *Indoor Air Sampling*

Indoor air samples are collected using laboratory-supplied and cleaned 6L Summa canister attached to either an 8-hour or 24-hour flow controller, depending upon whether the site's use is residential or commercial, per Department of Ecology guidance. Prior to sampling, the canisters and flow controllers are subjected to a shut-in test to look for leaks in the sampling equipment setup and the initial vacuum is recorded. Sampling canisters are placed within the general breathing height zone (4 to 6 feet above the ground surface).

At the same time as indoor air sampling collection, at least one outdoor (ambient) air sample is collected of the same time period as the indoor sample(s). Contaminant concentrations detected in the ambient air samples are subtracted from contaminant concentrations detected in the indoor air samples to assess the contribution of vapor intrusion into site structures more directly.

## Sampling Results Quality Assurance

The laboratory that conducts analysis of the samples collected by Stratum Group conducts their own quality assurance procedures, which typically include surrogate recovery, method blank, laboratory blank, and blank spike duplicate tests. The results of these test are reviewed by Stratum Group and any significant non-conformances or problems identified that limit our ability to use the data is addressed in the body of this report.