Focused Environmental Investigation Report

Bellingham School District Bus Garage Agreement No. TCPIPG-2123-BSD-00032

Prepared for:

Bellingham School District

Bellingham, Washington

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Project No. M0837.02.005

Prepared by:

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MAUL FOSTER ALONGI

Focused Environmental Investigation Report

Bellingham School District Bus Garage Agreement No. TCPIPG-2123-BSD-00032

The material and data in this report were prepared under the supervision and direction of the undersigned.

Maul Foster & Alongi, Inc.

Brenden Murphy
Staff Environmental Scientist

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3/21/2024

Amanda Bixby, LG
Project Geologist

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Abbreviations

AOI	area of interest
bgs	below ground surface
COIs	chemicals of interest
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CSM	conceptual site model
CUL	cleanup level
District	Bellingham School District
DRO	diesel-range organics
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
FEI	focused environmental investigation
MFA	Maul Foster & Alongi, Inc.
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
ORO	oil-range organics
PAH	polycyclic aromatic hydrocarbon
PCE	tetrachloroethene
PID	photoionization detector
POC	point of compliance
the Property	1801 James Street, Bellingham, Washington
TEE	terrestrial ecological evaluation
TEF	toxic equivalent factor
TEQ	toxic equivalent quotient
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code

1 Introduction

On behalf of the Bellingham School District (the District), Maul Foster & Alongi, Inc. (MFA) has prepared this focused environmental investigation (FEI) report summarizing the results of the subsurface investigation conducted at the District bus garage (facility site ID 57487227; cleanup site ID 9775), located at 1801 James Street in Bellingham, Washington (the Property) (see Figure 1-1). For over 70 years, the District has operated a bus storage and maintenance facility on the Property, situated adjacent to Whatcom Creek. The District is evaluating potential improvements for the Property, including habitat restoration of Whatcom Creek, assessment of environmental conditions related to the operational history of the Property, and potential relocation of the bus storage and maintenance facility to accommodate future expansion.

1.1 Regulatory Framework

The District received an Integrated Planning Grant (Agreement No. TCPIPG-2123-BSD-00032) from the Washington State Department of Ecology (Ecology) to support environmental investigation and redevelopment planning activities at the Property. The FEI was conducted in general accordance with the Model Toxics Control Act (MTCA) Washington Administrative Code (WAC) 173-340 and the FEI work plan (MFA 2023). The work plan was developed to assess potential environmental impacts at the Property associated with features of potential environmental concern.

1.2 Purpose and Objectives

The purpose of the FEI was to generate data to evaluate potential environmental contamination in areas of the Property based on historical and current site usage. The objective of the FEI was to collect data for risk screening, and to support an evaluation of potential cleanup actions, if needed. These objectives were supported by the following activities:

- Conduct environmental due diligence activities, including an in-depth file review, to identify potential environmental concerns at the Property.
- Develop a preliminary conceptual site model (CSM) and data quality objectives for site characterization.
- Perform a focused investigation of hazardous substances in environmental media to identify potential sources of contamination and contaminant concentrations for comparison with MTCA cleanup levels (CULs).
- Evaluate potential risks to current and reasonably likely future human and ecological receptors.
- Evaluate potential cleanup options for impacted environmental media on the Property, if needed.

2 Background and Physical Setting

The background and physical setting information for the Property was obtained from site visits and an environmental file review for the development of the FEI work plan (MFA 2023).

2.1 Property Description

The Property is located in section 30 of township 38 north and range 3 east of the Willamette Meridian. The Property comprises one 3.58-acre tax parcel (parcel number 3803305153150000) (Figure 2-1). The Property is relatively level, sloping slightly to the north, toward Whatcom Creek. The western portion of the Property is graveled, while the eastern portion of the Property largely consists of asphalt and concrete.

The physical address for the Property is 1801 James Street in Bellingham, Washington. The Property is bordered by Meador Avenue to the south, Whatcom Creek to the north and west, and James Street to the east. According to a City of Bellingham zoning map, the Property is zoned as industrial (City of Bellingham 2023).

The Property is currently used by the District for bus storage, bus maintenance, and district-wide transportation operations. The Property includes three structures: an office building, a bus garage, and a maintenance building. A bus wash area is present along Meador Avenue. The maintenance building has three in-ground hydraulic lifts and one aboveground hydraulic lift. The building was renovated in 2020; renovations included upgrading the oil-water separator system and improving existing connections to the sanitary sewer system. Along the north and west perimeter of the Property adjacent to Whatcom Creek, the ground surface consists of gravel and shrubs, including invasive Himalayan Blackberry.

2.2 Property History

According to historical aerial photographs, assessor documents, and interviews, the Property was developed by 1968 with the initial construction of the maintenance building and has been in use by the District since the late 1960s. Prior to development, the Property was heavily vegetated. Some areas of the Property were cleared of vegetation by 1955. The bus garage building was constructed between 1976 and 1981 at the center of the Property. The western portion of the Property was developed with temporary structures/vehicle staging by 1972 with the office building constructed later in 1997. The Property has been used for bus storage and maintenance activities since its development.

According to Ecology's underground storage tank (UST) database, two steel USTs were formerly located on the Property: one 1,100-gallon diesel UST and one 6,000-gallon diesel UST. Both USTs were decommissioned by removal in the 1990s, with confirmation soil samples containing levels of diesel-range organics (DRO) below the current MTCA Method A CUL of 2,000 milligrams per kilogram (mg/kg). Due to the limited number of confirmation soil samples analyzed (i.e., three) and the advancement of petroleum analytical methods since the 1990s, Ecology requested that the UST area be reevaluated as part of the FEI.

2.3 Features of Potential Environmental Concern

Based on environmental due diligence research, the following areas of interest (AOIs) were identified based on historical operations that had the potential to impact environmental media on the Property:

- AOI 1: Bus Parking Area
- AOI 2: Bus Wash Area
- AOI 3: Oil-Water Separator
- AOI 4: In-ground Hydraulic Lifts
- AOI 5: Former USTs

2.4 Geology and Hydrogeology

According to the Geologic Map of the Bellingham quadrangle, the Property and vicinity are underlain by Quaternary glaciomarine drift from the Everson Interstade (Lapen 2000). The glaciomarine deposits typically consist of moderately to poorly sorted, moderately to unsorted diamicton with lenses and discontinuous beds of moderately to well-sorted gravel, sand, silt, and clay (Lapen 2000). Bedding in this unit is massive to poorly stratified. This unit is typically gray to blue-gray to olive-gray to brown, depending on oxidation state and very stiff with moderate to high plasticity. Vertical migration in this unit is often minimal due to the tight, stiff soils and thick beds.

Soils encountered during the FEI generally consist of a 2- to 10-foot-thick layer of gravelly sand with silt, underlain by silty sand, then a 5- to 10-foot thick silt layer, underlain by water-bearing sand. Sand was encountered between approximately 15 and 20 feet bgs. Peat was encountered in B02, B03, B06, and B08 (see Figure 2-2). Soils observed in the borings resemble alluvial deposits from Whatcom Creek.

During drilling, groundwater was encountered in all six temporary wells after the 20- to 25-foot push. Groundwater was present below a confining silt layer, and, once punctured, groundwater levels rose in the wells between 11 to 18 feet below ground surface (bgs) (see Appendix B). Due to the limited number of temporary wells and general unreliability of groundwater elevation measurements from reconnaissance borings, a potentiometric surface map was not prepared. However, inferred groundwater flow direction is toward the north and northeast, toward Whatcom Creek (Figure 2-1).

3 Field and Analytical Methods

MFA conducted fieldwork activities at the Property from October 11 through October 12, 2023. The investigation included soil and reconnaissance groundwater sample collection from temporary borings, laboratory analysis for potential chemicals of interest (COIs), field screening with a photoionization detector (PID), logging of soil types encountered in borings, measurement of groundwater levels, and measurement of geochemical groundwater parameters. Sampling was conducted pursuant to an inadvertent discovery plan, which provided procedures in the event of incidental cultural resource discovery (MFA 2023). Specific chemical analyses were determined for

each sample location, based on the potential chemical sources identified in Section 2.4 and in the work plan (MFA 2023).

Field photographs from the investigation are provided in Appendix C.

3.1 Soil Sampling

MFA coordinated public and private underground utility locates prior to drilling activities on the Property. Anderson Environmental Contracting, LLC, of Kelso, Washington, used a track-mounted direct-push drill rig to advance ten borings, B01 through B10 (see Figure 2-2). Continuous soil cores were collected from the ground surface to a maximum depth of 25 feet bgs. Soil conditions were described, visual and olfactory observations were recorded, and soil was screened with a PID for volatiles. Soil types and PID screening results are detailed in the boring logs (Appendix A). Geographic coordinates of the boring locations were recorded using a handheld global positioning system device.

Soil sampling was conducted using the methods and protocol described in the sampling and analysis plan, an appendix in the work plan (MFA 2023). Soil samples, including follow-up samples where applicable, were analyzed for a combination of the following COIs (see the sampling and analysis summary presented in Table 3-1):

- DRO and oil-range organics (ORO) by Northwest Total Petroleum Hydrocarbons-Dx
- Volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260D
- Mercury by EPA Method 1631E
- Metals (cadmium, copper, lead, zinc) by EPA Method 6020B
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270E-SIM (selected ion monitoring)

Soil samples were selected for analysis based on visual and olfactory observations. Soil samples were submitted to Friedman and Bruya, Inc. of Seattle, Washington, for analysis under standard chain-of-custody procedures.

3.2 Groundwater Sampling

To evaluate shallow groundwater, MFA collected seven groundwater samples (including one field duplicate sample) from six temporary borings on the Property, using direct-push drilling methods (B02, B03, and B07 through B10; see Figure 2-2). Temporary polyvinyl chloride well screens were generally set between 12.5 and 25 feet bgs for collection of reconnaissance groundwater samples. Water levels and water quality parameters were measured and recorded on water field sampling data sheets (see Appendix B).

Groundwater samples were analyzed for a combination of the following COIs (see the sampling and analysis summary presented in Table 3-1):

- DRO and ORO by Northwest Total Petroleum Hydrocarbons-Dx
- VOCs by EPA Method 8260D

Groundwater sampling was conducted in accordance with the methods and protocols described in the sampling and analysis plan, as an appendix in the work plan (MFA 2023). Groundwater samples were submitted to Friedman and Bruya, Inc. for analysis under standard chain-of-custody procedures.

4 Analytical Results

Laboratory analytical reports are provided as Appendix D. Analytical data and the laboratory's internal quality assurance and quality control data were reviewed to assess whether they met project-specific data quality objectives. This review was performed consistent with EPA procedures for evaluating laboratory analytical data (EPA 2020a,b) and appropriate laboratory and method-specific guidelines (FBI 2022; Fremont 2020). A data validation memorandum summarizing data evaluation procedures, data usability, and deviations from specific field and/or laboratory methods is included as Appendix E. The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

4.1 Soil

Soil samples were analyzed for a combination of the following COIs: DRO; ORO; metals (including cadmium, copper, lead, mercury, and zinc); VOCs; and/or PAHs. Analytical results from soil sampling on the Property are summarized in Table 4-1.

4.1.1 Diesel- and Oil-Range Organics

DRO were analyzed in 12 soil samples collected from borings B01 through B10. DRO were detected in soil samples from four borings at concentrations between 56 to 390 mg/kg. Boring locations containing DRO detections were limited to AOI 1, the bus parking area.

ORO were analyzed in 12 soil samples collected from borings B01 through B10. ORO were detected in soil samples from four borings at concentrations between 280 to 2,000 mg/kg. Boring locations containing ORO detections were limited to AOI 1, bus parking area, and AOI 5, the former UST area.

4.1.2 Metals

Metals (including cadmium, copper, lead, mercury, and zinc) were analyzed in 11 soil samples collected from borings B01 through B09. Metals were detected in every analyzed soil sample across the Property at depths up to 6.5 feet bgs. Concentrations of metals were generally low and relatively consistent between locations, with the exception of lead. Lead was detected at B01, west of the office building, at 3,000 mg/kg at 1.5 feet bgs and at 491 mg/kg at 6.5 feet bgs. The high lead detections in B01 were well above detections in other borings, which ranged from 8.17 to 377 mg/kg.

4.1.3 Volatile Organic Compounds

VOCs were analyzed in five soil samples collected from borings B07 through B10. No VOCs were detected in soil collected from boring B09 near AOI 4, the in-ground hydraulic lifts. Multiple VOCs were detected in shallow soil at depths between 2 and 3 feet bgs at boring locations near AOI 2, the bus wash area, AOI 3, the oil-water separator, and AOI 5, the former USTs. Of the VOCs detected in soil, tetrachloroethene (PCE) was detected at B10, near the former USTs and inferred upgradient of the maintenance facility.

4.1.4 Polycyclic Aromatic Hydrocarbons

PAHs were analyzed in six soil samples collected from borings B04, and B07 through B09. Multiple PAHs were detected in three shallow soil samples from B04, B07, and B08. No PAHs were detected from boring B09 or in deeper soil samples from boring B04 and B07. PAHs were detected in shallow soil at depths between 1 and 3 feet bgs at locations near AOI 1, the bus parking area, AOI 2, the bus wash area, and AOI 3, the oil-water separator.

4.2 Groundwater

Reconnaissance groundwater samples were analyzed for a combination of the following COIs: DRO, ORO, and VOCs. Reconnaissance groundwater samples were not analyzed for metals, as temporary well screens increase the potential for elevated turbidity (i.e., suspended solids), oftentimes resulting in higher metals concentrations not representative of aquifer conditions. Analytical results from groundwater sampling are summarized in Table 4-2.

4.2.1 Diesel- and Oil-Range Organics

DRO and ORO were analyzed in reconnaissance groundwater samples collected from borings B02, B03, and B07 through B10. DRO were detected in four groundwater samples collected from borings B08 through B10 at concentrations ranging from 64 ug/L to 210 ug/L. Borings locations with DRO detections in groundwater were limited to the northeast portion of the Property.

ORO were not detected in any groundwater samples.

4.2.2 Volatile Organic Compounds

VOCs were analyzed in one reconnaissance groundwater sample from boring B09, near the in-ground hydraulic lifts. Vinyl chloride was the only VOC detected in the groundwater sample.

5 Preliminary Conceptual Site Model

A CSM describes potential chemical sources, release mechanisms, environmental transport processes, exposure routes, and receptors. The primary purpose of the CSM is to describe pathways by which human and ecological receptors could be exposed to site-related chemicals. A complete exposure pathway consists of four necessary elements: (1) a source and mechanism of chemical

release to the environment, (2) an environmental transport medium for a released chemical, (3) a point of potential contact with the impacted medium (referred to as the exposure point), and (4) an exposure route (e.g., soil ingestion) at the exposure point. The potential release mechanisms and pathways are described below.

5.1 Potential Sources and Release Mechanisms

Based on documented historical uses and information obtained from interviews and property visits, it appears that the following historical and/or current operations/uses have the potential to contribute to soil and/or groundwater contamination at the Property:

- Long-term storage of buses in gravel area
- Operation of bus wash area
- Operation of oil-water separator system
- Operation of in-ground hydraulic lifts
- Operation of former USTs

5.2 Contaminants and Media

The Property has been utilized for bus storage and maintenance activities since the late 1960s. Long-term vehicle parking and brake pads can release concentrations of petroleum hydrocarbons and metals to shallow soil (Ecology 2016). PAHs are often found in fuel and exhaust emissions of vehicles (Marr et.al 1999). Vehicle maintenance activities and former fuel storage operations can release petroleum hydrocarbons and VOCs (Ecology 2010).

During drilling, groundwater was generally encountered below a confining silt layer; therefore, transport of surface or near surface releases of contaminants to groundwater is unlikely. There is public concern associated with the long-term operation of the in-ground hydraulic lifts and bus wash area impacting the adjacent Whatcom Creek. Therefore, shallow groundwater was assessed for the presence of heavy oil petroleum hydrocarbons and VOCs.

5.3 Fate and Transport Processes

The primary mechanisms likely to influence the fate and transport of chemicals at the Property include natural biodegradation of organic chemicals, sorption to soil, advection and dispersion in groundwater, transformation under changing chemical conditions, and leaching of chemicals from soil to groundwater. The relative importance of these processes varies, depending on the chemical and physical properties of the released contaminant. The properties of soil and the dynamics of groundwater flow also affect contaminant fate and transport.

The Property contains gravel areas and partially intact asphalt and concrete surfaces. It is possible that precipitation may infiltrate into the soil through unpaved ground surfaces at the Property into the vadose-zone soil. Leaching of near-surface soil impacts during precipitation events could result in impacts to perched groundwater at the Property if present. Surface soil impacts are unlikely to impact groundwater at depth due to the presence of a confining silt layer. If present, dissolved-phase contamination in groundwater has the potential to migrate via groundwater flow, potentially resulting

in impacts via discharge to Whatcom Creek. Contaminant releases to the surface also have the potential to be transported to the subsurface during precipitation events where the ground surface becomes saturated. Surface contaminants could then travel as overland flow before discharging into Whatcom Creek; however, this is unlikely due to infiltration in gravel areas present across a large portion of the Property.

5.4 Potential Receptors

The following current and future human and ecological receptors may potentially be exposed to chemicals originating from the Property:

- Construction workers
- Occupational workers
- Ecological (terrestrial and aquatic plants, wildlife, and biota)

5.5 Potential Exposure Scenarios

The following are potential current or future exposure pathways for the Property:

- Incidental ingestion of surface or subsurface soil or groundwater
- Incidental contact with surface or subsurface soil or groundwater
- Inhalation of fugitive dusts generated from surface and/or subsurface soil
- Inhalation of air vapors emanating from soil or groundwater
- Ingestion, contact, and inhalation via use of groundwater as drinking water

Pathways are presented in the preliminary CSM on Figure 5-1.

Drinking water at the Property is provided by the City of Bellingham; however, it is assumed that groundwater is potentially potable unless otherwise determined, consistent with MTCA. Fishing is not an anticipated exposure scenario, as recreational fishing along Whatcom Creek is only legal below Dupont Street (see WAC 220-312-040 (306)(a)).

5.6 Terrestrial Ecological Evaluation

A terrestrial ecological evaluation (TEE) was performed in accordance with the procedures outlined in WAC 173-340-7490 and WAC 173-340-7491. The purpose of the TEE is to present sufficient information to assess ecological protectiveness of the Property (see WAC 173-340-7490(1)(b)).

The Property qualifies for an exclusion based on the size of the adjacent undeveloped contiguous land (approximately 1.4 acres), as outlined in WAC 173-340-7491(1)(c). Based on TEE evaluation form and figure presented in Appendix F, it is concluded that no adverse effects to plant, soil biota, or wildlife receptors are expected at the Property.

6 Cleanup Standards

According to MTCA, the cleanup standards for a site have two primary components: chemical-specific CULs and points of compliance (POCs). The CUL is the concentration of a chemical in a specific environmental medium that will not pose unacceptable risks to human health or the environment. The POC is the location where the CUL must be met.

MTCA provides three different options for establishing CULs for human health: Methods A, B, and C. MTCA Method A is designed for cleanups at relatively simple sites, such as small sites that have only a few hazardous substances. Method B can be used at any site. Method C is used primarily for industrial sites. CULs were developed for screening purposes, as discussed below.

6.1 Soil Cleanup and Screening Levels

For human health screening, soil was screened against MTCA Method A CULs for unrestricted land use. The MTCA Method A values are for protection of human health via the direct-contact or ingestion pathways and protection of groundwater via the soil-leaching-to-groundwater pathway. For certain constituents, MTCA Method A CULs are not available and data were screened to Method B direct contact CULs and soil protective of groundwater to surface water (vadose zone, fresh water) screening criteria. Method B CULs may be used at any site.

As discussed in Section 5.6 and Appendix F, the Property qualifies for an exclusion from the TEE and no adverse effects to plant, soil biota, or wildlife receptors are expected at the Property.

6.1.1 Points of Compliance in Soil

The soil POC is the depth at which CULs shall be attained. The standard POC in soil for human direct contact is from the surface to 15 feet bgs throughout the entire site. This standard POC is applied to soil on the Property.

6.2 Groundwater Cleanup and Screening Levels

Generally, groundwater was screened to MTCA Method A CULs. For certain constituents, MTCA Method A CULs are not available and Method B CULs were applied.

6.2.1 Points of Compliance in Groundwater

For groundwater, the POC is the point or points where the groundwater CULs must be attained for a site to comply with the cleanup standards. Groundwater CULs shall be attained in all groundwater from the POC to the outer boundary of a hazardous-substance plume. Under WAC 173-340-720(8)(c), Ecology may approve a conditional POC if it is not practicable to meet the CULs throughout the site within a reasonable restoration time frame.

7 Risk Screening

Soil and groundwater screening results are summarized in Tables 4-1 and 4-2.

Analytical results were reviewed for usability and were qualified consistent with EPA procedures and appropriate laboratory and method-specific guidelines (see Appendix E). Detected concentrations of some constituents were summed for comparison to applicable CULs, as follows:

- Diesel+Oil (heavy oils) is sum of DRO and ORO
- Total xylenes is sum of m,p-xylene and o-xylene
- Total naphthalenes is sum of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene

Consistent with WAC 173-340-708(8), mixtures of carcinogenic PAHs (cPAHs) are considered as single hazardous substances when evaluating compliance with CULs and remediation levels such that the toxicity of a particular congener is expressed relative to the most toxic cPAH congener (i.e., benzo(a)pyrene). The toxicity of cPAHs as a group was assessed using a toxic equivalent approach. Each cPAH is assigned a toxic equivalent factor (TEF) describing the toxicity of that congener relative to the toxicity of the reference compound benzo(a)pyrene. Multiplying the concentration of a cPAH by its TEF produces the concentration of cPAH that is equivalent in toxicity to the congener concentration of concern (i.e., benzo(a)pyrene). Summing those values permits expression of all congener concentration in terms of total cPAH toxic equivalent quotient (TEQ):

$$\text{cPAH TEQ} = \sum_{i=1}^{k} \text{Ci x TEFi}$$

The cPAH TEQs were qualified and calculated as follows:

- Congeners qualified as non-detect and flagged with a “U” are used in the TEQ calculation at one-half the associated value.
- Congeners qualified as estimated and flagged with a “J” are used without modification in the TEQ calculation.
- Congeners qualified as non-detect with an estimated limit (i.e., flagged with a “UJ”) are used in the TEQ calculation at one-half the associated value.
- If all congeners in a chemical group are undetected, the group sum is reported as undetected.

TEFs for cPAHs were used consistent with WAC 173-340-708(8).

7.1 Soil

Exceedances of MTCA criteria were identified in four soil samples collected from borings B01, B04, and B07, located on the northwest portion of the bus parking area, west of the office, and north of the bus wash, respectively (see Figure 2-2).

B01. Lead concentrations in soil samples from boring B01, located in the bus parking area, were detected at 3,000 and 491 mg/kg from 1.5 and 6.5 feet bgs respectively, both exceeding the MTCA Method A CUL of 250 mg/kg.

B04. Heavy oils in soil from boring B04, located west of the office, were detected at 2,400 mg/kg from 1 feet bgs, exceeding the MTCA Method A CUL of 2,000 mg/kg. A deeper sample at 7.0 feet bgs had no detections of DRO or ORO in the soil.

B07. One soil sample from B07, located near the bus wash, had a lead concentration of 377 mg/kg at 2.0 feet bgs, exceeding the MTCA Method A CUL. Additionally, benzene and the cPAH TEQ concentrations in the sample were above their respective MTCA Method A CULs. A deeper sample at 6.0 feet contained a lead concentration below the MTCA Method A CUL and no detections of PAHs.

Additionally, copper and zinc exceeded the soil protective of groundwater to surface water (vadose zone, fresh water) screening criteria in numerous locations (B01, B02, B03, and B07). As described in WAC 173-340-747(4)(a), the three-phase partitioning model used to develop these screening levels has a number of limitations, including conservative, default input parameters; no incorporation of site-specific measurements; no accounting for attenuation along the groundwater to surface water pathway; and no accounting for dilution from groundwater-surface water mixing. Due to the limitations of the model used to develop these screening criteria, exceedances are not necessarily indicative of impacts to surface water.

7.2 Groundwater

No detections of COIs in groundwater exceeded screening criteria at the Property.

Detections of heavy oils were limited to borings B08 through B10, located near the oil-water separator, in-ground hydraulic lifts, and former USTs around the maintenance building. Detections of TPH in groundwater were below the MTCA Method A CULs.

One VOC, vinyl chloride, was detected in groundwater at boring B09 at a concentration well below the MTCA Method A CUL.

8 Conclusions

Based on the results of the FEI, current operations (bus storage and maintenance) at the Property do not appear to be contributing to soil or groundwater impacts.

The following data gaps were identified from the FEI:

- Localized lead and heavy oils exceedances in shallow soil in the bus parking area, far from the maintenance building, oil-water separator, and former fueling operations.
- Isolated detections of VOCs, as described below:
  - PCE detected in soil at B10, inferred upgradient of the maintenance facility and near the former diesel USTs, and vinyl chloride detected in groundwater at B09, in the maintenance facility, indicate the potential for an off-property solvent source.

  - There is no known current or historical use of chemicals containing PCE or vinyl chloride at the Property. However, these chemicals are often detected at low concentrations in urban environments due to dry cleaning, metal degreasing, or small-quantity use of regulated solvents.
  - Benzene exceeding the CUL in soil at B07, near the bus wash, and benzene detected in soil at B10, near the former USTs, indicates the potential presence of gasoline-range organics in soil as benzene is a common gasoline fuel additive.
- Copper and zinc exceedances of soil protective of groundwater to surface water (vadose zone, fresh water) screening criteria indicate that additional groundwater evaluation may be warranted to further inform the groundwater to surface water pathway.

Groundwater to surface water discharge is the primary pathway that could contribute to impacts in Whatcom Creek. Based on the sampling and analysis conducted, groundwater beneath the Property does not appear to be contributing to potential impacts to Whatcom Creek. Additionally, the potential for overland flow to transport surface contaminants to the creek is low, as infiltration occurs in the gravel areas present over a large portion of the Property.

9 Recommendations

Due to the limited soil and groundwater data collected during this FEI, additional investigation would be required to inform redevelopment (e.g., for material disposal considerations) and to assess the data gaps described in Section 8. Follow-up investigation may include additional sampling to further assess potential contribution to the vinyl chloride detection in groundwater and/or further delineation of localized benzene, lead, heavy oils, and PAH concentrations in shallow soil.

The benzene exceedance and detections of VOCs such as naphthalene, toluene, ethylbenzene, and xylenes below their respective MTCA Method A CULs near the bus wash may indicate the presence of gasoline-range organics in soil. Additional data is required to inform soil and groundwater management and disposal considerations during future earthwork.

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Limitations

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Figures

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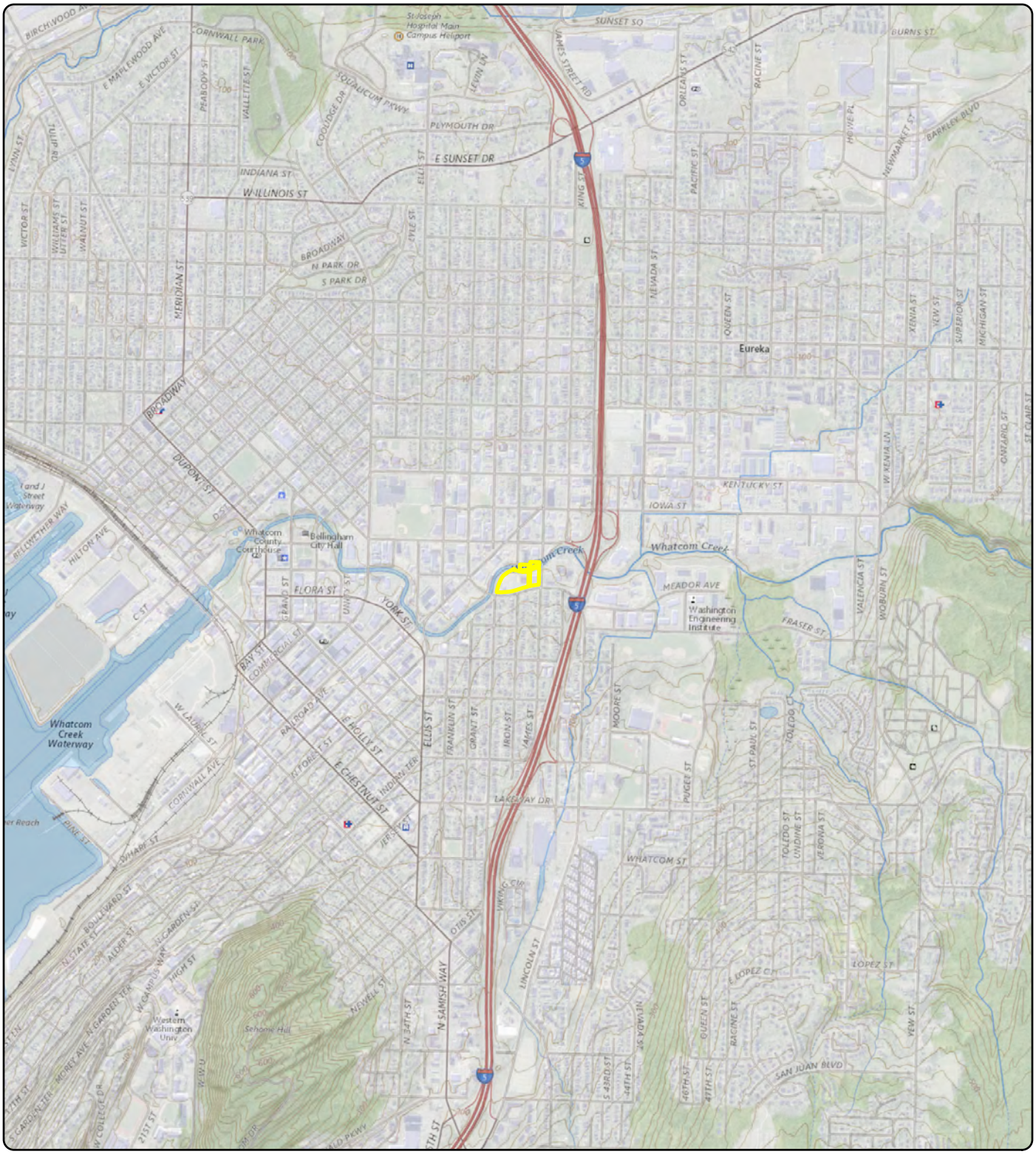

Notes
U.S. Geological Survey 7.5-minute topographic quadrangle (2020): Bellingham North.
Township 38 north, range 3 east, section 30.

Data Source
Property boundary obtained from Whatcom County.

Legend

Property Boundary

Figure 1-1
Property Location

Bellingham School District Bus Garage
Bellingham, Washington

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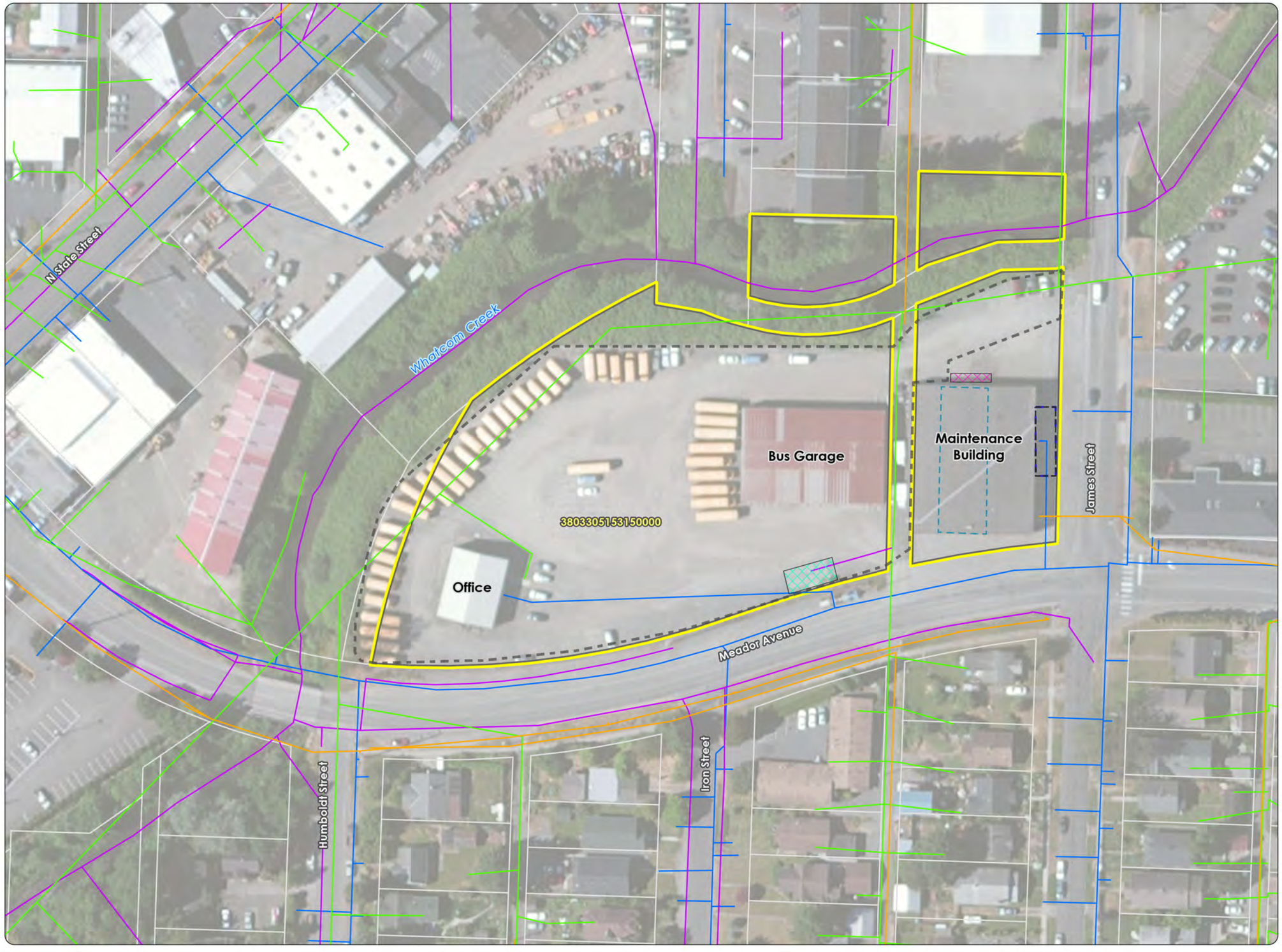
p. 971 544 2139 | www.maulfoster.com

0 1,000 2,000
Feet

Figure 2-1
Property Features

Bellingham School District
Bus Garage
Bellingham, Washington



Legend

- Tax lot
- Property Boundary
- Former USTs
- Gravel Area
- Hydraulic Lifts
- Bus Wash Area
- Oil-Water Separator System
- Electric Line
- Sewer Line
- Storm Line
- Water Line

Note
All features are approximate.
UST = underground storage tank.

0 50 100
Feet

Data Sources
Aerial photograph obtained from Esri;
tax lot data obtained from Whatcom County;
utilities obtained from Port of Bellingham.

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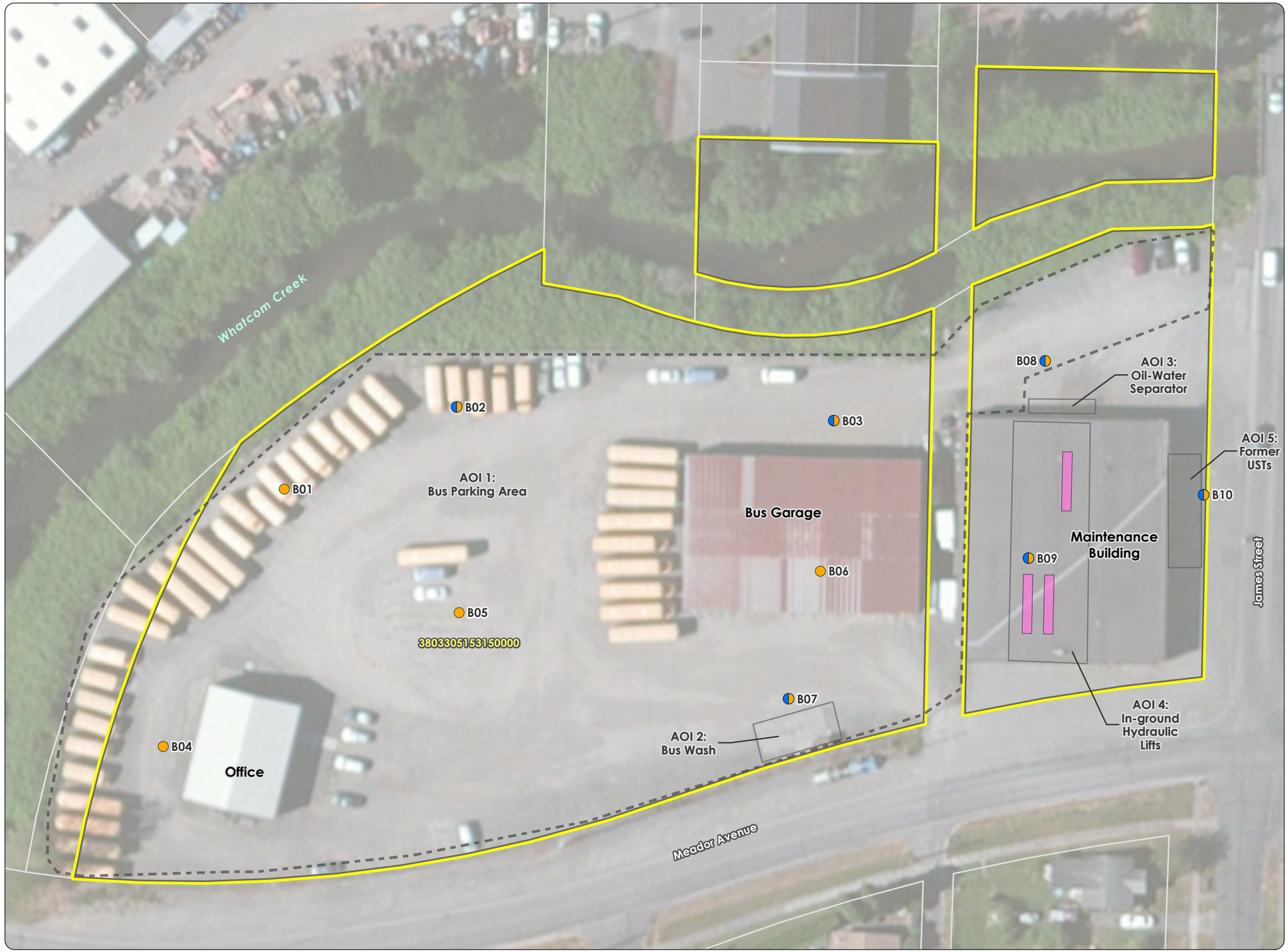
Figure 2-2
Sampling Locations

Bellingham School District
Bus Garage
Bellingham, WA



Legend

- Soil
- Soil and Groundwater
- Gravel Area
- In-ground Hydraulic Lift
- AOI
- Property Boundary
- Tax lot

Notes
All features are approximate.
AOI = area of interest.
UST = underground storage tank.

0 40
Feet

Data Sources
Aerial photograph obtained Esri; tax lot data obtained from Whatcom County. Utilities obtained from Port of Bellingham.

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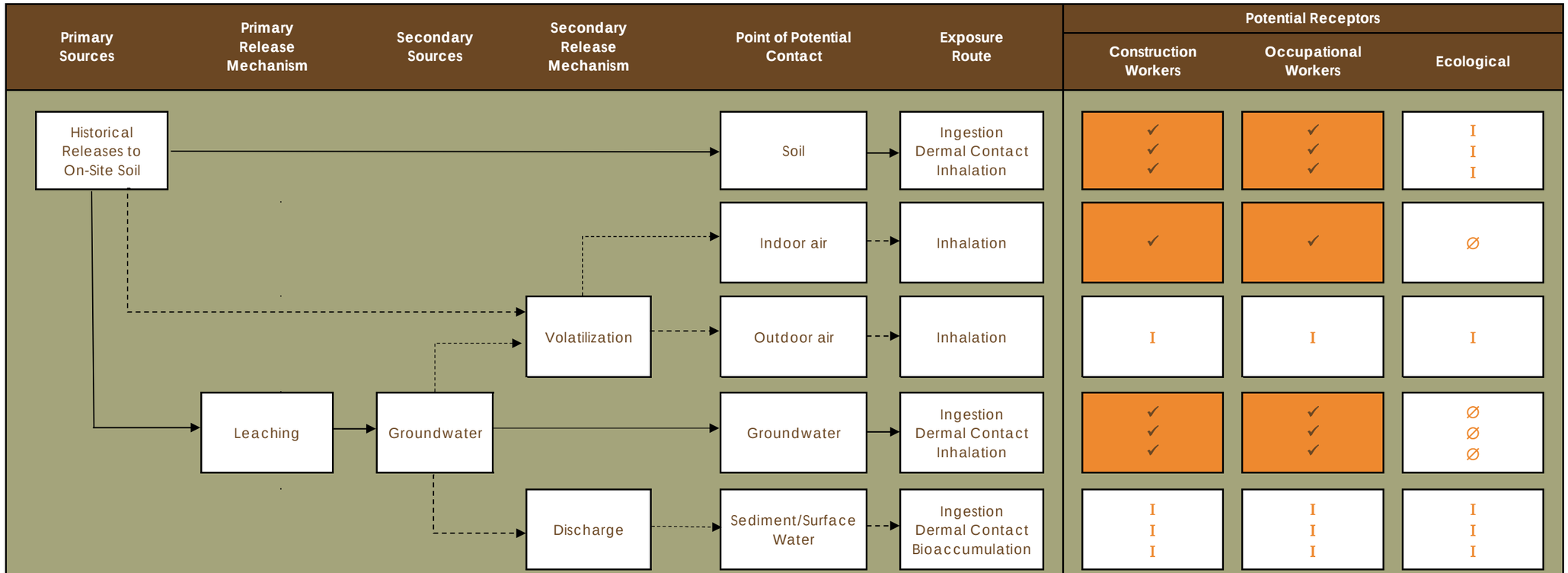
Path: X:\0837.02_BellinghamSchoolDistrict\Pro\M0837_02_005_001_001D.aprx\Fig 3-1 Sampling Locations
Print Date: 12/7/2023
Reviewed By: abixby
Produced By: stturner
Project: M0837.02.005

Figure 5-1
Preliminary Conceptual Site Model
Focused Environmental Investigation
Bellingham School District Bus Garage



Notes

→ Primary pathway.

- - - → Potential pathway.

✓ Potentially complete exposure route.

∅ Potentially incomplete exposure route.

I Potentially insignificant exposure route.

Tables

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Table 3-1
Sampling and Analysis Summary
Focused Environmental Investigation
Bellingham School District Bus Garage

AOI	Boring ID	Sample ID	Collection Date	Total Depth (feet bgs)	Sample Matrix	Sample or Screened Interval (feet bgs)	Analytical Suite					
							DRO/ORO by NWTPH-Dx	VOCs by EPA 8260D[b]	PAHs by 8270E-SIM	Mercury by EPA 1631E	Lead by EPA 6020B	Metals[a] by EPA 6020B
AOI 1: Bus Parking Area	B01	B01-S-1.5	10/12/23	10	Soil	1.4 - 1.7	X	--	--	X	X	X
		B01-S-6.5			Soil	5.5 - 7.5	--	--	--	--	X	--
	B02	B02-S-3.0	10/11/23	25	Soil	2.5 - 3.3	X	--	--	X	X	X
		B02-GW-22.5			GW	20 - 25	X	--	--	--	--	--
	B03	B03-S-2.5	10/12/23	25	Soil	0.5 - 2.5	X	--	--	X	X	X
		B03-GW-21.5			GW	19 - 24	X	--	--	--	--	--
	B04	B04-S-1.0	10/12/23	10	Soil	0 - 1.2	X	--	X	X	X	X
		B04-S-7.0		10	Soil	5.0 - 7.0	X	--	X	--	--	--
	B05	B05-S-1.7	10/12/23	10	Soil	0 - 3.2	X	--	--	X	X	X
	B06	B06-S-1.0	10/12/23	10	Soil	0.3 - 2.0	X	--	--	X	X	X
AOI 2: Bus Wash Area	B07	B07-S-2.0	10/12/23	20	Soil	0.9 - 2.0	X	X	X	X	X	X
		B07-S-6.0			Soil	5.7 - 9.5	--	--	X	--	X	--
		B07-GW-18.0			GW	15 - 24	X	--	--	--	--	--
AOI 3: Oil-Water Separator	B08	B08-S-3.0	10/11/23	25	Soil	2.8 - 3.1	X	X	X	X	X	X
		B08-GW-22.5	10/11/23		GW	20 - 25	X	--	--	--	--	--
AOI 4: In-ground Hydraulic Lifts	B09	B09-S-3.0	10/11/23	25	Soil	0.9 - 4.0	X	X	X	X	X	X
		B09-GW-21.0			GW	14 - 24	X	X	--	--	--	--
AOI 5: Former USTs	B10	B10-S-2.5[b]	10/12/23	19.9	Soil	1.4 - 3.5	X	X	--	--	--	--
		B10-GW-15.0[b]	10/12/23		GW	12.5 - 17.5	X	--	--	--	--	--

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Table 3-1
Sampling and Analysis Summary
Focused Environmental Investigation
Bellingham School District Bus Garage

Notes

-- = not analyzed.

AOI = area of interest.

bgs = below ground surface.

DRO/ORO = diesel-range organics/oil-range organics.

EPA = U.S. Environmental Protection Agency.

GW = groundwater.

ID = identification.

NWTPH = Northwest Total Petroleum Hydrocarbons.

PAH = polycyclic aromatic hydrocarbon.

SIM = selected ion monitoring.

UST = underground storage tank.

VOC = volatile organic compound.

X = analyzed.

[(a)]Metals include cadmium, copper, and zinc.

[(b)]Field duplicate sample location.

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Table 4-1
Summary of Soil Analytical Results
Focused Environmental Investigation
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use[a][1]	MTCA Method B[a][b][1]	MTCA, Soil, Protective of Groundwater to Surface Water[1]	Background Metals Concentrations[2]	B01		B02	B03	B04		B05
Sample Name:					B01-S-1.5	B01-S-6.5	B02-S-3.0	B03-S-2.5	B04-S-1.0	B04-S-7.0	B05-S-1.7
Collection Date:					10/12/2023	10/12/2023	10/11/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			Vadose at 13°C, Freshwater	Puget Sound	1.5	6.5	3.0	2.5	1.0	7.0	1.7
TPH (mg/kg)											
Diesel-range hydrocarbons	2,000	NV	NV	NV	240	--	390	50 U	410	50 U	56
Motor-oil-range hydrocarbons	2,000	NV	NV	NV	1,600	--	250 U	1,200	2,000	250 U	430
Diesel+Oil[c]	2,000	NV	NV	NV	1,800	--	520	1,200	2,400	250 U	490
Total Metals (mg/kg)											
Cadmium	2	NA	NA	1	1.64	--	1 U	1 U	1 U	--	1 U
Copper	NV	3,200	**4.9**	36	**36.6**	--	**51.9**	**40.3**	17.2	--	19.4
Lead	250	NV	NA	24	3,000	491	55.3	173	76.3	--	80.3
Mercury	2	NV	NA	0.07	0.11	--	0.22	0.11	0.11	--	0.1 U
Zinc	NV	24,000	**120**	85	97.8	--	**146**	73.0	41.3	--	37.8
VOCs (mg/kg)											
1,1,1,2-Tetrachloroethane	NV	38	NV	NV	--	--	--	--	--	--	--
1,1,1-Trichloroethane	2	NA	NA	NV	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	0.00056	NV	--	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	18	0.0019	NV	--	--	--	--	--	--	--
1,1-Dichloroethane	NV	180	NV	NV	--	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	2	NV	--	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	64	NV	NV	--	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	0.0063	NV	NV	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34	0.0013	NV	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	800	NV	NV	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	0.23	NV	NV	--	--	--	--	--	--	--
1,2-Dibromoethane	0.005	NA	NA	NV	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	8.2	NV	--	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	0.043	NV	--	--	--	--	--	--	--
1,2-Dichloropropane	NV	27	0.0036	NV	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	0.023	NV	--	--	--	--	--	--	--
1,3-Dichloropropane	NV	1,600	NV	NV	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	190	3.3	NV	--	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	--	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	--	--	--	--	--	--	--

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Table 4-1
Summary of Soil Analytical Results
Focused Environmental Investigation
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use[(a)(1)]	MTCA Method B[(a)(b)(1)]	MTCA, Soil, Protective of Groundwater to Surface Water[(1)]	Background Metals Concentrations[(2)]	B01		B02	B03	B04		B05
Sample Name:					B01-S-1.5	B01-S-6.5	B02-S-3.0	B03-S-2.5	B04-S-1.0	B04-S-7.0	B05-S-1.7
Collection Date:					10/12/2023	10/12/2023	10/11/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			Vadose at 13°C, Freshwater	Puget Sound	1.5	6.5	3.0	2.5	1.0	7.0	1.7
2-Hexanone	NV	400	NV	NV	--	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	--	--	--	--	--	--	--
VOCs (mg/kg) cont.											
4-Isopropyltoluene	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	6,400	NV	NV	--	--	--	--	--	--	--
Acetone	NV	72,000	NV	NV	--	--	--	--	--	--	--
Benzene	0.03	NA	NA	NV	--	--	--	--	--	--	--
Bromobenzene	NV	640	NV	NV	--	--	--	--	--	--	--
Bromodichloromethane	NV	16	0.0034	NV	--	--	--	--	--	--	--
Bromoform	NV	130	0.03	NV	--	--	--	--	--	--	--
Bromomethane	NV	110	0.45	NV	--	--	--	--	--	--	--
Carbon tetrachloride	NV	14	0.0016	NV	--	--	--	--	--	--	--
Chlorobenzene	NV	1,600	0.86	NV	--	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloroform	NV	32	0.31	NV	--	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibromochloromethane	NV	12	0.0028	NV	--	--	--	--	--	--	--
Dibromomethane	NV	800	NV	NV	--	--	--	--	--	--	--
Dichlorodifluoromethane (Freon 12)	NV	16,000	NV	NV	--	--	--	--	--	--	--
Ethylbenzene	6	NA	NA	NV	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	13	0.00021	NV	--	--	--	--	--	--	--
Isopropylbenzene	NV	8,000	NV	NV	--	--	--	--	--	--	--
m,p-Xylene	NV	NV	NV	NV	--	--	--	--	--	--	--
Methyl tert-butyl ether	0.1	NA	NA	NV	--	--	--	--	--	--	--
Methylene chloride	0.02	NA	NA	NV	--	--	--	--	--	--	--
Naphthalene	5	NA	NA	NV	--	--	--	--	--	--	--
n-Hexane	NV	4,800	NV	NV	--	--	--	--	--	--	--
n-Propylbenzene	NV	8,000	NV	NV	--	--	--	--	--	--	--
o-Xylene	NV	16,000	NV	NV	--	--	--	--	--	--	--
sec-Butylbenzene	NV	8,000	NV	NV	--	--	--	--	--	--	--
Styrene	NV	16,000	NV	NV	--	--	--	--	--	--	--
tert-Butylbenzene	NV	8,000	NV	NV	--	--	--	--	--	--	--

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Table 4-1
Summary of Soil Analytical Results
Focused Environmental Investigation
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use[a][1]	MTCA Method B[a][b][1]	MTCA, Soil, Protective of Groundwater to Surface Water[1]	Background Metals Concentrations[2]	B01		B02	B03	B04		B05
Sample Name:					B01-S-1.5	B01-S-6.5	B02-S-3.0	B03-S-2.5	B04-S-1.0	B04-S-7.0	B05-S-1.7
Collection Date:					10/12/2023	10/12/2023	10/11/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			Vadose at 13°C, Freshwater	Puget Sound	1.5	6.5	3.0	2.5	1.0	7.0	1.7
Tetrachloroethene	0.05	NA	NA	NV	--	--	--	--	--	--	--
Toluene	7	NA	NA	NV	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	NV	1,600	0.52	NV	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	NV	NV	NV	--	--	--	--	--	--	--
VOCs (mg/kg) cont.											
Trichloroethene	0.03	NA	NA	NV	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	NV	24,000	NV	NV	--	--	--	--	--	--	--
Vinyl chloride	NV	0.67	0.00012	NV	--	--	--	--	--	--	--
Xylenes, total[d]	9	NA	NA	NV	--	--	--	--	--	--	--
PAHs (mg/kg)											
1-Methylnaphthalene	NV	34	NV	NV	--	--	--	--	2.1	0.01 U	--
2-Methylnaphthalene	NV	320	NV	NV	--	--	--	--	0.1	0.01 U	--
Acenaphthene	NV	4,800	3.1	NV	--	--	--	--	0.1 U	0.01 U	--
Acenaphthylene	NV	NV	NV	NV	--	--	--	--	0.1 U	0.01 U	--
Anthracene	NV	24,000	47	NV	--	--	--	--	0.1 U	0.01 U	--
Benzo(a)anthracene	NV	NV	NV	NV	--	--	--	--	0.026 J	0.01 U	--
Benzo(a)pyrene	0.19[e][3]	NA	NA	NV	--	--	--	--	0.075 J	0.01 U	--
Benzo(b)fluoranthene	NV	NV	NV	NV	--	--	--	--	0.10 J	0.01 U	--
Benzo(ghi)perylene	NV	NV	NV	NV	--	--	--	--	0.13 J	0.01 U	--
Benzo(k)fluoranthene	NV	NV	NV	NV	--	--	--	--	0.1 UJ	0.01 U	--
Chrysene	NV	NV	NV	NV	--	--	--	--	0.21	0.01 U	--
Dibenzo(a,h)anthracene	NV	NV	NV	NV	--	--	--	--	0.057 J	0.01 U	--
Fluoranthene	NV	3,200	5.9	NV	--	--	--	--	0.057 J	0.01 U	--
Fluorene	NV	3,200	1.6	NV	--	--	--	--	0.21	0.01 U	--
Indeno(1,2,3-cd)pyrene	NV	NV	NV	NV	--	--	--	--	0.033 J	0.01 U	--
Naphthalene	5	NA	NA	NV	--	--	--	--	0.1 U	0.01 U	--
Phenanthrene	NV	NV	NV	NV	--	--	--	--	0.15	0.01 U	--
Pyrene	NV	2,400	11	NV	--	--	--	--	0.25	0.01 U	--
Naphthalenes, total[f]	5	NA	NA	NV	--	--	--	--	2.3	0.01 U	--
cPAH TEQ[g][4]	0.19[e][3]	NA	NA	NV	--	--	--	--	0.10 J	0.01 U	--

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Table 4-1
Summary of Soil Analytical Results
Focused Environmental Investigation
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use[a][1]	MTCA Method B[a][b][1]	MTCA, Soil, Protective of Groundwater to Surface Water[1]	Background Metals Concentrations[2]	B06	B07		B08	B09	B10	
Sample Name:					B06-S-1.0	B07-S-2.0	B07-S-6.0	B08-S-3.0	B09-S-3.0	B10-S-2.5	BDUP-S-2.5
Collection Date:					10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			Vadose at 13°C, Freshwater	Puget Sound	1.0	2.0	6.0	3.0	3.0	2.5	2.5
TPH (mg/kg)											
Diesel-range hydrocarbons	2,000	NV	NV	NV	50 U	50 U	--	50 U	50 U	50 U	50 U
Motor-oil-range hydrocarbons	2,000	NV	NV	NV	280	250 U	--	250 U	250 U	440	250 U
Diesel+Oil[c]	2,000	NV	NV	NV	310	250 U	--	250 U	250 U	470	250 U
Total Metals (mg/kg)											
Cadmium	2	NA	NA	1	1 U	1.62	--	1 U	1 U	--	--
Copper	NV	3,200	**4.9**	36	21.6	**60.8**	--	26.5	26.7	--	--
Lead	250	NV	NA	24	11.3	377	8.17	71.4	9.67	--	--
Mercury	2	NV	NA	0.07	0.1 U	0.26	--	0.1 U	0.1 U	--	--
Zinc	NV	24,000	**120**	85	57.4	**616**	--	58.4	48.5 J	--	--
VOCs (mg/kg)											
1,1,1,2-Tetrachloroethane	NV	38	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane	2	NA	NA	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
1,1,2,2-Tetrachloroethane	NV	5	0.00056	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane	NV	18	0.0019	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	NV	180	NV	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloroethene	NV	4,000	2	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
1,1-Dichloropropene	NV	NV	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene	NV	64	NV	NV	--	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane	NV	0.0063	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trichlorobenzene	NV	34	0.0013	NV	--	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene	NV	800	NV	NV	--	0.13	--	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dibromo-3-chloropropane	NV	0.23	NV	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.005	NA	NA	NV	--	0.005 U	--	0.005 U	0.005 U	0.005 U	0.005 U
1,2-Dichlorobenzene	NV	7,200	8.2	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	NV	11	0.043	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
1,2-Dichloropropane	NV	27	0.0036	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
1,3,5-Trimethylbenzene	NV	800	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene	NV	NV	0.023	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane	NV	1,600	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene	NV	190	3.3	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
2,2-Dichloropropane	NV	NV	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone	NV	48,000	NV	NV	--	1 U	--	1 U	1 U	1 U	1 U
2-Chlorotoluene	NV	1,600	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U

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Table 4-1
Summary of Soil Analytical Results
Focused Environmental Investigation
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use[(a)(1)]	MTCA Method B[(a)(b)(1)]	MTCA, Soil, Protective of Groundwater to Surface Water[(1)]	Background Metals Concentrations[(2)]	B06	B07		B08	B09	B10	
Sample Name:					B06-S-1.0	B07-S-2.0	B07-S-6.0	B08-S-3.0	B09-S-3.0	B10-S-2.5	BDUP-S-2.5
Collection Date:					10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			Vadose at 13°C, Freshwater	Puget Sound	1.0	2.0	6.0	3.0	3.0	2.5	2.5
2-Hexanone	NV	400	NV	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene	NV	1,600	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
VOCs (mg/kg) cont.											
4-Isopropyltoluene	NV	NV	NV	NV	--	0.055	--	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone	NV	6,400	NV	NV	--	1 U	--	1 U	1 U	1 U	1 U
Acetone	NV	72,000	NV	NV	--	5 UJ	--	5 UJ	5 UJ	5 UJ	5 UJ
Benzene	0.03	NA	NA	NV	--	0.044	--	0.001 U	0.001 U	0.001 U	0.0019
Bromobenzene	NV	640	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane	NV	16	0.0034	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform	NV	130	0.03	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane	NV	110	0.45	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	NV	14	0.0016	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene	NV	1,600	0.86	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	NV	NV	NV	NV	--	0.1 U	--	0.1 U	0.1 U	0.1 U	0.1 U
Chloroform	NV	32	0.31	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane	NV	NV	NV	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	NV	160	NV	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	NV	NV	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane	NV	12	0.0028	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane	NV	800	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane (Freon 12)	NV	16,000	NV	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	6	NA	NA	NV	--	0.20	--	0.0045	0.001 U	0.0017	0.0037
Hexachlorobutadiene	NV	13	0.00021	NV	--	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene	NV	8,000	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylene	NV	NV	NV	NV	--	0.47	--	0.019	0.002 U	0.0061 J	0.022 J
Methyl tert-butyl ether	0.1	NA	NA	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
Methylene chloride	0.02	NA	NA	NV	--	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U
Naphthalene	5	NA	NA	NV	--	0.24	--	0.014	0.01 U	0.01 U	0.013
n-Hexane	NV	4,800	NV	NV	--	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U
n-Propylbenzene	NV	8,000	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
o-Xylene	NV	16,000	NV	NV	--	0.20	--	0.0083	0.001 U	0.0027 J	0.014 J
sec-Butylbenzene	NV	8,000	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Styrene	NV	16,000	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene	NV	8,000	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U

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Table 4-1
Summary of Soil Analytical Results
Focused Environmental Investigation
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use[a][1]	MTCA Method B[a][b][1]	MTCA, Soil, Protective of Groundwater to Surface Water[1]	Background Metals Concentrations[2]	B06	B07		B08	B09	B10	
Sample Name:					B06-S-1.0	B07-S-2.0	B07-S-6.0	B08-S-3.0	B09-S-3.0	B10-S-2.5	BDUP-S-2.5
Collection Date:					10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			Vadose at 13°C, Freshwater	Puget Sound	1.0	2.0	6.0	3.0	3.0	2.5	2.5
Tetrachloroethene	0.05	NA	NA	NV	--	0.002 U	--	0.002 U	0.002 U	0.0026	0.0028
Toluene	7	NA	NA	NV	--	0.94	--	0.0075	0.001 U	0.0088	0.0084
trans-1,2-Dichloroethene	NV	1,600	0.52	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	NV	NV	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
VOCs (mg/kg) cont.											
Trichloroethene	0.03	NA	NA	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane (Freon 11)	NV	24,000	NV	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	NV	0.67	0.00012	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
Xylenes, total[d]	9	NA	NA	NV	--	0.67	--	0.027	0.002 U	0.0088 J	0.036 J
PAHs (mg/kg)											
1-Methylnaphthalene	NV	34	NV	NV	--	0.05 U	0.01 U	0.026	0.05 U	--	--
2-Methylnaphthalene	NV	320	NV	NV	--	0.05 U	0.01 U	0.032	0.05 U	--	--
Acenaphthene	NV	4,800	3.1	NV	--	0.05 U	0.01 U	0.019	0.05 U	--	--
Acenaphthylene	NV	NV	NV	NV	--	0.05 U	0.01 U	0.025	0.05 U	--	--
Anthracene	NV	24,000	47	NV	--	0.05 U	0.01 U	0.01 U	0.05 U	--	--
Benzo(a)anthracene	NV	NV	NV	NV	--	0.28	0.01 U	0.014	0.05 U	--	--
Benzo(a)pyrene	0.19[e][3]	NA	NA	NV	--	0.47	0.01 U	0.020 J	0.05 U	--	--
Benzo(b)fluoranthene	NV	NV	NV	NV	--	0.42	0.01 U	0.041 J	0.05 U	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	--	0.082	0.01 U	0.011 J	0.05 U	--	--
Benzo(k)fluoranthene	NV	NV	NV	NV	--	0.16	0.01 U	0.015 J	0.05 U	--	--
Chrysene	NV	NV	NV	NV	--	0.33	0.01 U	0.021	0.05 U	--	--
Dibenzo(a,h)anthracene	NV	NV	NV	NV	--	0.05 U	0.01 U	0.01 UJ	0.05 U	--	--
Fluoranthene	NV	3,200	5.9	NV	--	0.26	0.01 U	0.041	0.05 U	--	--
Fluorene	NV	3,200	1.6	NV	--	0.05 U	0.01 U	0.014	0.05 U	--	--
Indeno(1,2,3-cd)pyrene	NV	NV	NV	NV	--	0.099	0.01 U	0.01 UJ	0.05 U	--	--
Naphthalene	5	NA	NA	NV	--	0.073	0.01 U	0.047	0.05 U	--	--
Phenanthrene	NV	NV	NV	NV	--	0.11	0.01 U	0.035	0.05 U	--	--
Pyrene	NV	2,400	11	NV	--	0.46	0.01 U	0.046	0.05 U	--	--
Naphthalenes, total[f]	5	NA	NA	NV	--	0.12	0.01 U	0.11	0.05 U	--	--
cPAH TEQ[g][4]	0.19[e][3]	NA	NA	NV	--	0.57	0.01 U	0.028 J	0.05 U	--	--

Table 4-1
Summary of Soil Analytical Results
Focused Environmental Investigation
Bellingham School District Bus Garage

Notes

Background metals concentrations for Puget Sound are shown for reference.

Shading/bolding (key below) indicates values that exceed screening criteria; non-detects (U and UJ) and detections below background metals concentrations were not compared with screening criteria.

MTCA Method A, Unrestricted Land Use

MTCA, Soil, Protective of Groundwater to Surface Water, Vadose at 13°C, Freshwater

-- = not analyzed.

°C = degrees Celsius.

cPAH = carcinogenic polycyclic aromatic hydrocarbon.

ft bgs = feet below ground surface.

J = result is estimated.

mg/kg = milligrams per kilogram.

MTCA = Model Toxics Control Act.

NA = not applicable.

NV = no value.

PAH = polycyclic aromatic hydrocarbon.

TPH = total petroleum hydrocarbons.

U = result is non-detect at the method reporting limit.

UJ = result is non-detect with an estimated method reporting limit.

VOC = volatile organic compound.

[a]When MTCA Method A value is available, value is not screened to MTCA Method B. When MTCA Method A value is not available, value is screened against the lower of MTCA Method B cancer and noncancer values as well as MTCA Protective of Groundwater to Surface Water values (where available).

[b]Lower of cancer and noncancer values are shown.

[c]Diesel+Oil is the sum of diesel- and motor-oil-range hydrocarbons. When results are non-detect, half the reporting limit is used. When both results are non-detect, the highest reporting limit is shown.

[d]Total xylenes is the sum of m,p-xylene and o-xylene. When both results are non-detect, the highest reporting limit is shown.

[e]MTCA Method A value for benzo(a)pyrene and cPAH TEQ is not applicable. Screening level shown is the MTCA B value.

[f]Total naphthalenes is the sum of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. When results are non-detect, half the reporting limit is used. When all results are non-detect, the highest reporting limit is shown.

[g]One-half the reporting limit is used for non-detect results in the cPAH TEQ calculation. When all cPAHs are non-detect, the highest reporting limit is used.

References

[1]Ecology. 2023. *Cleanup Levels and Risk Calculation (CLARC) table.* Washington State Department of Ecology, Toxics Cleanup Program. August.

[2]Ecology. 1994. *Natural Background Soil Metals Concentrations in Washington State.* Publication 94-115. Washington State Department of Ecology. October.

[3]Ecology. 2021. *Polycyclic Aromatic Hydrocarbons and Benzo[a]pyrene: Changes to MTCA Default Cleanup Levels for 2017.* Supporting material for Cleanup Levels and Risk Calculation (CLARC). Washington State Department of Ecology, Toxics Cleanup Program. July.

[4]Ecology. 2015. *Implementation Memorandum #10: Evaluating the Human Health Toxicity of Carcinogenic PAHs (cPAHs) Using Toxicity Equivalency Factors (TEFs)*. Publication No. 15-09-049. Washington State Department of Ecology, Toxics Cleanup Program. April 20.

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Table 4-2
Summary of Groundwater Analytical Results
Focused Environmental Investigation
Bellingham School District Bus Garage

Location:	MTCA Method A[(a)(1)]	MTCA Method B[(a)(b)(1)]	B02	B03	B07	B08	B09	B10	
Sample Name:			B02-GW-22.5	B03-GW-21.5	B07-GW-18.0	B08-GW-22.5	B09-GW-21.0	B10-GW-15.0	BDUP-GW-15.0
Collection Date:			10/11/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			22.5	21.5	18.0	22.5	21.0	15.0	15.0
TPH (ug/L)									
Diesel-range hydrocarbons	500	NV	50 U	50 U	50 U	64	170	210	200
Motor-oil-range hydrocarbons	500	NV	250 U	250 U	250 U	300 U	300 U	250 U	250 U
Diesel+Oil[(c)]	500	NV	250 U	250 U	250 U	210	320	340	330
VOCs (ug/L)									
1,1,1,2-Tetrachloroethane	NV	1.7	--	--	--	--	1 U	--	--
1,1,1-Trichloroethane	200	NA	--	--	--	--	1 U	--	--
1,1,2,2-Tetrachloroethane	NV	0.22	--	--	--	--	0.2 U	--	--
1,1,2-Trichloroethane	NV	0.77	--	--	--	--	0.5 U	--	--
1,1-Dichloroethane	NV	7.7	--	--	--	--	1 U	--	--
1,1-Dichloroethene	NV	400	--	--	--	--	1 U	--	--
1,1-Dichloropropene	NV	NV	--	--	--	--	1 U	--	--
1,2,3-Trichlorobenzene	NV	6.4	--	--	--	--	1 U	--	--
1,2,3-Trichloropropane	NV	0.00038	--	--	--	--	1 U	--	--
1,2,4-Trichlorobenzene	NV	1.5	--	--	--	--	1 U	--	--
1,2,4-Trimethylbenzene	NV	80	--	--	--	--	1 U	--	--
1,2-Dibromo-3-chloropropane	NV	0.014	--	--	--	--	10 U	--	--
1,2-Dibromoethane	0.01	NA	--	--	--	--	0.01 U	--	--
1,2-Dichlorobenzene	NV	720	--	--	--	--	1 U	--	--
1,2-Dichloroethane	5	NA	--	--	--	--	0.2 U	--	--
1,2-Dichloropropane	NV	1.2	--	--	--	--	1 U	--	--
1,3,5-Trimethylbenzene	NV	80	--	--	--	--	1 U	--	--
1,3-Dichlorobenzene	NV	NV	--	--	--	--	1 U	--	--
1,3-Dichloropropane	NV	160	--	--	--	--	1 U	--	--
1,4-Dichlorobenzene	NV	8.1	--	--	--	--	1 U	--	--
2,2-Dichloropropane	NV	NV	--	--	--	--	1 U	--	--
2-Butanone	NV	4,800	--	--	--	--	20 U	--	--
2-Chlorotoluene	NV	160	--	--	--	--	1 U	--	--
2-Hexanone	NV	40	--	--	--	--	10 U	--	--
4-Chlorotoluene	NV	160	--	--	--	--	1 U	--	--
4-Isopropyltoluene	NV	NV	--	--	--	--	1 U	--	--
4-Methyl-2-pentanone	NV	640	--	--	--	--	10 U	--	--
Acetone	NV	7,200	--	--	--	--	50 UJ	--	--
Benzene	5	NA	--	--	--	--	0.35 U	--	--
Bromobenzene	NV	64	--	--	--	--	1 U	--	--
Bromodichloromethane	NV	0.71	--	--	--	--	0.5 U	--	--

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Table 4-2
Summary of Groundwater Analytical Results
Focused Environmental Investigation
Bellingham School District Bus Garage

Location:	MTCA Method A[(a)(1)]	MTCA Method B[(a)(b)(1)]	B02	B03	B07	B08	B09	B10	
Sample Name:			B02-GW-22.5	B03-GW-21.5	B07-GW-18.0	B08-GW-22.5	B09-GW-21.0	B10-GW-15.0	BDUP-GW-15.0
Collection Date:			10/11/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			22.5	21.5	18.0	22.5	21.0	15.0	15.0
Bromoform	NV	5.5	--	--	--	--	5 U	--	--
Bromomethane	NV	11	--	--	--	--	5 U	--	--
VOCs (ug/L) cont.									
Carbon tetrachloride	NV	0.63	--	--	--	--	0.5 U	--	--
Chlorobenzene	NV	160	--	--	--	--	1 U	--	--
Chloroethane	NV	NV	--	--	--	--	1 U	--	--
Chloroform	NV	1.4	--	--	--	--	1 U	--	--
Chloromethane	NV	NV	--	--	--	--	10 U	--	--
cis-1,2-Dichloroethene	NV	16	--	--	--	--	1 U	--	--
cis-1,3-Dichloropropene	NV	NV	--	--	--	--	0.4 U	--	--
Dibromochloromethane	NV	0.52	--	--	--	--	0.5 U	--	--
Dibromomethane	NV	80	--	--	--	--	1 U	--	--
Dichlorodifluoromethane (Freon 12)	NV	1,600	--	--	--	--	1 U	--	--
Ethylbenzene	700	NA	--	--	--	--	1 U	--	--
Hexachlorobutadiene	NV	0.56	--	--	--	--	0.5 U	--	--
Isopropylbenzene	NV	800	--	--	--	--	1 U	--	--
m,p-Xylene	NV	NV	--	--	--	--	2 U	--	--
Methyl tert-butyl ether	20	NA	--	--	--	--	1 U	--	--
Methylene chloride	5	NA	--	--	--	--	5 U	--	--
Naphthalene	160	NA	--	--	--	--	1 U	--	--
n-Hexane	NV	480	--	--	--	--	5 U	--	--
n-Propylbenzene	NV	800	--	--	--	--	1 U	--	--
o-Xylene	NV	1,600	--	--	--	--	1 U	--	--
sec-Butylbenzene	NV	800	--	--	--	--	1 U	--	--
Styrene	NV	1,600	--	--	--	--	1 U	--	--
tert-Butylbenzene	NV	800	--	--	--	--	1 U	--	--
Tetrachloroethene	5	NA	--	--	--	--	1 U	--	--
Toluene	1,000	NA	--	--	--	--	1 U	--	--
trans-1,2-Dichloroethene	NV	160	--	--	--	--	1 U	--	--
trans-1,3-Dichloropropene	NV	NV	--	--	--	--	0.4 U	--	--
Trichloroethene	5	NA	--	--	--	--	0.5 U	--	--
Trichlorofluoromethane (Freon 11)	NV	2,400	--	--	--	--	1 U	--	--
Vinyl chloride	0.2	NA	--	--	--	--	0.023	--	--
Xylenes, total[(d)]	1,000	NA	--	--	--	--	2 U	--	--

Table 4-2
Summary of Groundwater Analytical Results
Focused Environmental Investigation
Bellingham School District Bus Garage

Notes

Detected results were compared with screening criteria. No exceedances were identified.

-- = not analyzed.

ft bgs = feet below ground surface.

MTCA = Model Toxics Control Act.

NA = not applicable.

NV = no value.

TPH = total petroleum hydrocarbons.

U = result is non-detect at the method reporting limit.

ug/L = micrograms per liter.

UJ = result is non-detect with an estimated method reporting limit.

VOC = volatile organic compound.

[a]When MTCA Method A value is available, value is not screened to MTCA Method B. When MTCA Method A value is not available, value is screened against the lower of MTCA Method B cancer and noncancer values.

[b]Lower of cancer and noncancer values are shown.

[c]Diesel+Oil is the sum of diesel- and motor-oil-range hydrocarbons. When results are non-detect, half the reporting limit is used. When both results are non-detect, the highest reporting limit is shown.

[d]Total xylenes is the sum of m,p-xylene and o-xylene. When both results are non-detect, the highest reporting limit is shown.

Reference

[1]Ecology. 2023. *Cleanup Levels and Risk Calculation (CLARC) table.* Washington State Department of Ecology, Toxics Cleanup Program. August.

Appendix A

Geologic Boring Logs

MAUL FOSTER ALONGI

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	**B01**	**1 of 1**

Project Name	**Bellingham Bus Garage Focused Environmental Investigation**		
Project Location	**1801 James Street, Bellingham, WA**	Surface Elevation (feet)	
Start/End Date	**10/12/2023 to 10/12/2023**	Northing	
Driller/Equipment	**Anderson Environmental Contracting, LLC/Direct-push Geoprobe**	Easting	
Geologist/Engineer	**C. Sifford**	Total Depth of Borehole	**10.0 feet**
Sample Method	**Core Barrel**	Outer Hole Diam	**2.25 inch**

Depth (feet, bgs)	Water Levels	Sample Data: Percent Recovery	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
1						0.0 to 0.6 feet: GRAVELLY SAND (SP); tannish gray; 50% sand, medium to coarse; 50% gravel, fine to medium, angular to subrounded; loose; no odor; dry.
						0.6 to 0.8 feet: COBBLE; light gray; crystalline; dry.
						0.8 to 1.2 feet: GRAVELLY SAND WITH SILT (SP-SM); light brown; 10% fines, nonplastic; 70% sand, fine to medium; 20% gravel, fine to medium, subangular to subrounded; loose; no odor; dry.
2			**B01-S-1.5**	**0**		1.2 to 1.4 feet: COBBLE; light gray; crystalline; dry.
			BDUP-S-1.5			1.4 to 1.7 feet: GRAVELLY SAND (SP); gray; 80% sand, fine to medium; 20% gravel, fine to medium, angular to subrounded; loose; no odor; dry.
3		**62**		**0**		1.7 to 2.2 feet: SANDY SILT (ML); dark brown; 60% fines, low plasticity; 40% sand, fine to medium; firm; no odor; moist.
						2.2 to 3.1 feet: SILTY SAND WITH GRAVEL (SM); gray; 20% fines, low plasticity; 70% sand, medium; 10% gravel, fine to medium, rounded to subrounded; trace organic material (wood); loose; no odor; moist.
4						@ 2.9 feet: Blue plastic pieces.
						3.1 to 5.0 feet: NO RECOVERY.
5						
						5.0 to 5.5 feet: SILTY SAND WITH GRAVEL (SM); gray; 20% fines, low plasticity; 70% sand, medium; 10% gravel, fine to medium, rounded to subrounded; trace organic material (wood); loose; no odor; moist.
6						5.5 to 7.9 feet: GRAVELLY SAND (SP); 70% sand, medium; 30% gravel, fine to medium, rounded to subrounded; loose; trace wood chips; no odor; moist.
7			**B01-S-6.5**	**0**		@ 6.7 feet: Pulverized brick.
		58		**0**		
8						7.9 to 10.0 feet: NO RECOVERY.
9						
10						

Total Depth = 10.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Abandonment Details
0 to 10.0 feet: 2.25-inch borehole.
0 to 10.0 feet: Bentonite chips hydrated with potable water.

MFA BOREHOLE WRECON SCREEN W:\GINT\GINTWPROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	B02	1 of 2

Project Name	Bellingham Bus Garage Focused Environmental Investigation		
Project Location	1801 James Street, Bellingham, WA	Surface Elevation (feet)	
Start/End Date	10/11/2023 to 10/11/2023	Northing	
Driller/Equipment	Anderson Environmental Contracting, LLC/Direct-push Geoprobe	Easting	
Geologist/Engineer	C. Sifford	Total Depth of Borehole	25.0 feet
Sample Method	Core Barrel	Outer Hole Diam	2.25 inch

Depth (feet, bgs)	Water Levels	Sample Data: Percent Recovery	Sample Data: Screen Int.	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
1					0		0.0 to 0.4 feet: GRAVEL WITH SAND (GP); dark gray; 10% sand, medium; 90% gravel, medium, subangular to angular; very loose; no odor; dry.
							0.4 to 1.2 feet: GRAVELLY SAND (SP); tan; 70% sand, fine to medium; 30% gravel, fine to coarse, subangular to subrounded; very loose; no odor; dry.
2					0		1.2 to 2.5 feet: GRAVELLY SAND WITH SILT (SW-SM); dark gray; 10% fines; 50% sand, fine to coarse; 40% gravel, fine to coarse, rounded to subrounded; medium dense; no odor; dry.
		94					
3				B02-S-3.0	0		2.5 to 3.3 feet: SILTY SAND WITH GRAVEL (SM); brown; 40% fines, nonplastic; 50% sand, fine to medium; 10% gravel, medium, rounded to subrounded; medium dense; no odor; dry.
4							3.3 to 4.7 feet: SILT WITH SAND AND GRAVEL (ML); gray; 70% fines, low plasticity; 15% sand, fine; 15% gravel, fine to medium, subrounded; firm; no odor; moist.
					0		
5							4.7 to 5.0 feet: NO RECOVERY.
							5.0 to 5.8 feet: GRAVELLY SAND (SP); dark brown; 70% sand, fine to medium; 30% gravel, fine to medium, rounded; trace broken glass and metal; very loose; no odor; dry.
6				B02-S-5.5 (not analyzed)	3		@ 5.5 to 5.7 feet: Layer of GRAVEL WITH SAND; 90% rounded gravel; 10% medium sand.
							5.8 to 6.2 feet: WOODY DEBRIS; no odor; moist.
7					0		6.2 to 8.0 feet: SANDY SILT (ML); tannish gray; 60% fines, low plasticity; 20% sand, fine; 20% organic material (peat); trace gravel, fine to medium, rounded to subrounded; firm; no odor; moist.
		60					
8					0		8.0 to 10.0 feet: NO RECOVERY.
9							
10							
							10.0 to 10.3 feet: SANDY SILT (ML); tannish gray; 60% fines, low plasticity; 20% sand, fine; 20% organic material (peat); trace gravel, fine to medium, rounded to subrounded; firm; no odor; moist.
11							10.3 to 11.1 feet: SILT (ML); gray; 100% fines, medium plasticity; soft; no odor; moist.
				B02-S-11.0 (not analyzed)	0		11.1 to 11.3 feet: SILTY SAND (SM); gray; 30% fines, low plasticity; 70% sand, fine; medium dense; no odor; moist.
12							11.3 to 11.7 feet: SAND (SP); brown; 50% sand, medium; 50% organic material (sticks, twigs); loose; no odor; moist.
					0		11.7 to 13.0 feet: SANDY SILT (ML); grayish brown; 50% fines, low plasticity; 40% sand, fine; 10% organic material (rootlets); stiff; no odor; moist.
		60					
13							13.0 to 15.0 feet: NO RECOVERY.
14							
15							

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Geologic Borehole Log

Project Number	Boring Number	Sheet
M0837.02.005	**B02**	**2 of 2**

Depth (feet, bgs)	Water Levels	Percent Recovery	Screen Int.	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
16	▼			**B02-S-16.0 (not analyzed)**	**0**		*15.0 to 17.1 feet: SANDY SILT (ML); grayish brown; 50% fines, low plasticity; 40% sand, fine; 10% organic material (rootlets); firm; no odor; moist.*
							@ 16.1 feet: Organic material increases to 20% (peat); 50% fines, low plasticity; 30% sand, fine.
17	▽				**0**		*17.1 to 17.5 feet: SILTY SAND (SM); dark gray; 30% fines, low plasticity; 70% sand, medium; loose; no odor; wet.*
		50					*17.5 to 20.0 feet: NO RECOVERY.*
18							
19							
20							*20.0 to 25.0 feet: SAND (SP); gray; 100% sand, medium; loose; no odor; wet.*
21					**0**		
22					**0**		
		100		**B02-GW-22.5**			
23					**0**		*@ 22.7 to 23.1 feet: Layer of SILT; 100% fines, medium plasticity; very soft; no odor; wet.*
24					**0**		
25							

Total Depth = 25.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Reconnaissance Well Completion Details
Temporary slotted polyvinyl chloride well screen set from 20.0 to 25.0 bgs.

Borehole Abandonment Details
0 to 25.0 feet: 2.25-inch borehole.
0 to 25.0 feet: Bentonite chips hydrated with potable water.

▽ *Soil becomes wet at 17.1 feet bgs as observed in soil core.* ▼ *Water level measured is 15.80 feet bgs, following temporary well installation.*

MFA BOREHOLE W/RECON SCREEN W:\GINT\GINTW\PROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	**B03**	**1 of 2**

Project Name	**Bellingham Bus Garage Focused Environmental Investigation**		
Project Location	**1801 James Street, Bellingham, WA**	Surface Elevation (feet)	
Start/End Date	**10/12/2023 to 10/12/2023**	Northing	
Driller/Equipment	**Anderson Environmental Contracting, LLC/Direct-push Geoprobe**	Easting	
Geologist/Engineer	**C. Sifford**	Total Depth of Borehole	**25.0 feet**
Sample Method	**Core Barrel**	Outer Hole Diam	**2.25 inch**

Depth (feet, bgs)	Water Levels	Sample Data: Percent Recovery	Screen Int.	Sample ID	PID (ppm)	Lithologic Column	Soil Description
0							0.0 to 0.5 feet: SANDY GRAVEL (GP); dark gray; 20% sand, medium; 80% gravel, fine to medium, angular; very loose; no odor; dry.
1					0		0.5 to 2.5 feet: GRAVELLY SAND (SW); brownish gray; 70% sand, fine to coarse; 30% gravel, fine to coarse, subangular to rounded; medium dense; no odor; dry.
2							
3		**100**		**B03-S-2.5**	**0**		2.5 to 7.4 feet: PEAT; brown; 30% fines, nonplastic; 70% organic material (peat); firm; no odor; moist.
4					**0**		
5							
6				**B03-S-6.0 (not analyzed)**	**0**		
7							
8		**90**			**0**		7.4 to 9.5 feet: SANDY SILT (ML); dark gray; 60% fines, low plasticity; 40% sand, fine to medium; trace gravel, fine, rounded; trace organic material (sticks, rootlets); soft; no odor; moist.
9							@ 8.8 to 8.9 feet: Layer of SILTY GRAVEL; 60% gravel, fine to medium, rounded; 30% fines, low plasticity; 10% sand, fine to medium. @ 9.1 to 9.3 feet: Layer of PEAT; 30% fines, nonplastic; 70% organic material (peat).
10							9.5 to 10.0 feet: NO RECOVERY.
11							10.0 to 10.9 feet: SANDY SILT (ML); dark gray; 60% fines, low plasticity; 40% sand, fine to medium; trace organic material (sticks, rootlets); soft; no odor; moist.
12				**B03-S-11.0 (not analyzed)**	**0**		10.9 to 12.7 feet: SILT (ML); gray; 90% fines, low plasticity; 10% sand, fine; trace gravel, fine, rounded; stiff; no odor; moist.
13		**84**			**0**		12.7 to 14.2 feet: SILTY SAND (SM); dark brown; 40% fines, low plasticity; 60% sand, fine; trace organic material (rootlets); medium dense; no odor; moist.
14							@ 13.6 to 14.2 feet: Becomes gray; 20% fines, low plasticity; 80% sand, medium; trace organic material (rootlets); loose; no odor; moist.
15							14.2 to 15.0 feet: NO RECOVERY.

MFA BOREHOLE WRECON SCREEN W:\GINT\GINTWPROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

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Geologic Borehole Log

Project Number	Boring Number	Sheet
M0837.02.005	**B03**	**2 of 2**

Depth (feet, bgs)	Water Levels	Percent Recovery	Screen Int.	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
16				**B03-S-16.0 (not analyzed)**	**0**		15.0 to 17.8 feet: SILTY SAND (SM); gray; 20% fines, low plasticity; 80% sand, medium; trace organic material (rootlets); loose; no odor; moist.
17	▼						@ 16.7 to 17.8 feet: Alternating layers of gray SILTY SAND (20% fines, 80% sand) and brown PEAT (50% organic material, 30% fines, 20% sand).
18	▽	**68**			**0**		17.8 to 18.4 feet: SAND (SP); dark gray; 100% sand, medium; loose; no odor; wet.
19							18.4 to 20.0 feet: NO RECOVERY.
20							20.0 to 20.8 feet: SAND (SP); dark gray; 100% sand, medium; loose; no odor; wet.
21					**0**		20.8 to 21.3 feet: SANDY GRAVEL (GP); dark gray; 40% sand, medium to coarse; 60% gravel, fine to medium, rounded; very loose; no odor; wet.
22				**B03-GW-21.5**	**0**		21.3 to 22.9 feet: SAND (SP); dark gray; 100% sand, medium; loose; no odor; wet.
23		**84**					22.9 to 23.3 feet: SANDY GRAVEL (GP); dark gray; 40% sand, medium to coarse; 60% gravel, fine to medium, rounded; very loose; no odor; wet.
24					**0**		23.3 to 24.2 feet: SAND (SP); dark gray; 100% sand, medium; loose; no odor; wet. @ 23.4 to 23.6 feet: Sand becomes coarse.
25							24.2 to 25.0 feet: NO RECOVERY.

Total Depth = 25.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Reconnaissance Well Completion Details
Temporary slotted polyvinyl chloride well screen set from 19.0 to 24.0 bgs.

Borehole Abandonment Details
0 to 25.0 feet: 2.25-inch borehole.
0 to 24.0 feet: Bentonite chips hydrated with potable water.
24.0 to 25.0 feet: Slough.

▽ Soil becomes wet at 17.8 feet bgs as observed in soil core. ▼ Water level measured is 16.70 feet bgs, following temporary well installation.

MFA BOREHOLE W/RECON SCREEN W:\GINT\GINTW\PROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	**B04**	**1 of 1**

Project Name	**Bellingham Bus Garage Focused Environmental Investigation**		
Project Location	**1801 James Street, Bellingham, WA**	Surface Elevation (feet)	
Start/End Date	**10/12/2023 to 10/12/2023**	Northing	
Driller/Equipment	**Anderson Environmental Contracting, LLC/Direct-push Geoprobe**	Easting	
Geologist/Engineer	**B. Murphy**	Total Depth of Borehole	**10.0 feet**
Sample Method	**Core Barrel**	Outer Hole Diam	**2.25 inch**

Depth (feet, bgs)	Water Levels	Sample Data: Percent Recovery	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
1			**B04-S-1.0**	**1**		0.0 to 1.2 feet: GRAVELLY SAND (SP); tannish gray; 80% sand, medium to coarse; 20% gravel, fine to medium, angular to subrounded; loose; no odor; dry.
						@ 0.9 to 1.0 feet: Trace black, tar-like sticky substance; slight asphalt-like odor.
2		**90**		**0**		1.2 to 4.5 feet: SANDY SILT (ML); brown; 70% fines, low plasticity; 30% sand, fine to medium; trace gravel; stiff; no odor; dry.
						@ 1.6 to 1.8 feet: Layer of GRAVELLY SAND; brown; 80% sand, medium to coarse; 20% gravel, fine to medium, subrounded to rounded; loose; no odor; dry.
3						@ 1.8 feet: Becomes moist.
4				**0**		@ 4.2 to 4.4 feet: Root.
5						4.5 to 5.0 feet: NO RECOVERY.
6				**0**		5.0 to 7.0 feet: SANDY SILT (ML); brown with orange mottling; 70% fines, low plasticity; 30% sand, fine to medium; trace organic material (woody debris); firm; no odor; moist.
7		**76**	**B04-S-7.0**	**0**		7.0 to 7.5 feet: SILTY SAND (SM); brown with orange mottling; 40% fines, low plasticity; 60% sand, fine to medium; medium dense; no odor; moist.
8				**0**		7.5 to 8.8 feet: SAND WITH SILT (SP-SM); grayish brown; 10% fines; 90% sand, medium; loose; no odor; moist.
9						8.8 to 10.0 feet: NO RECOVERY.
10						

Total Depth = 10.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Abandonment Details
0 to 10.0 feet: 2.25-inch borehole.
0 to 10.0 feet: Bentonite chips hydrated with potable water.

MFA BOREHOLE W/RECON SCREEN W:\GINT\GINTWPROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	**B05**	**1 of 1**

Project Name	**Bellingham Bus Garage Focused Environmental Investigation**		
Project Location	**1801 James Street, Bellingham, WA**	Surface Elevation (feet)	
Start/End Date	**10/12/2023 to 10/12/2023**	Northing	
Driller/Equipment	**Anderson Environmental Contracting, LLC/Direct-push Geoprobe**	Easting	
Geologist/Engineer	**B. Murphy**	Total Depth of Borehole	**10.0 feet**
Sample Method	**Core Barrel**	Outer Hole Diam	**2.25 inch**

Depth (feet, bgs)	Water Levels	Sample Data: Percent Recovery	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
1		64	B05-S-1.7	0		0.0 to 3.2 feet: GRAVELLY SAND (SP); tannish gray; 50% sand, medium to coarse; 50% gravel, fine to medium, angular to subrounded; loose; no odor; dry.
2				1		@ 0.9 to 1.5 feet: Gravel becomes fine to coarse.
3				0		@ 1.9 to 2.7 feet: Gravel becomes fine to coarse.
4						3.2 to 5.0 feet: NO RECOVERY.
5		60	B05-S-5.5 (not analyzed)	0		5.0 to 6.0 feet: GRAVELLY SAND (SP); gray; 80% sand, medium to coarse; 20% gravel, fine to medium, angular to subrounded; loose; no odor; dry.
6						6.0 to 7.2 feet: GRAVELLY SILTY SAND (SM); grayish brown; 20% fines, nonplastic; 40% sand, medium to coarse; 40% gravel, fine to coarse, angular to subrounded; loose; strong organic-like odor; moist.
7				0		7.2 to 7.6 feet: SILTY SANDY GRAVEL (GM); medium gray; 40% fines, nonplastic; 20% sand, fine to medium; 40% gravel, fine to medium, subangular to subrounded; medium dense; slight organic-like odor; moist.
8						7.6 to 8.0 feet: GRAVELLY SILTY SAND (SM); grayish brown; 20% fines, nonplastic; 40% sand, medium to coarse; 40% gravel, fine to coarse, angular to subrounded; loose; no odor; moist.
9						8.0 to 10.0 feet: NO RECOVERY.
10						

Total Depth = 10.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Abandonment Details

0 to 10.0 feet: 2.25-inch borehole.
0 to 10.0 feet: Bentonite chips hydrated with potable water.

MFA BOREHOLE W/RECON SCREEN W:\GINT\GINTWPROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	B06	1 of 1

Project Name	Bellingham Bus Garage Focused Environmental Investigation		
Project Location	1801 James Street, Bellingham, WA	Surface Elevation (feet)	
Start/End Date	10/12/2023 to 10/12/2023	Northing	
Driller/Equipment	Anderson Environmental Contracting, LLC/Direct-push Geoprobe	Easting	
Geologist/Engineer	C. Sifford	Total Depth of Borehole	10.0 feet
Sample Method	Core Barrel	Outer Hole Diam	2.25 inch

Depth (feet, bgs)	Water Levels	Sample Data: Percent Recovery	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
0						0.0 to 0.3 feet: GRAVEL (GP); gray; 100% gravel, medium, angular; very loose; no odor; dry.
1			B06-S-1.0	0		0.3 to 2.0 feet: GRAVELLY SAND (SP); gray; 50% sand, medium to coarse; 50% gravel, fine to coarse, subangular to rounded; loose; no odor; dry.
2						2.0 to 2.5 feet: CONCRETE; light gray; pulverized; dry.
3		76				2.5 to 3.0 feet: GRAVELLY SAND (SP); gray; 50% sand, medium to coarse; 50% gravel, fine to coarse, subangular to rounded; loose; no odor; dry.
				0		3.0 to 3.8 feet: PEAT; dark brown; 30% fines, nonplastic; 20% sand, medium; 50% organic material (peat); firm; no odor; moist.
4						3.8 to 5.0 feet: NO RECOVERY.
5						5.0 to 8.5 feet: PEAT; dark brown; 30% fines, nonplastic; 20% sand, medium; 50% organic material (peat); firm; no odor; moist.
6			B06-S-6.0 (not analyzed)	0		
7		70				
				0		@ 7.5 feet: Becomes 30% fines, nonplastic; 70% organic material (peat, wood).
8						
9						8.5 to 10.0 feet: NO RECOVERY.
10						

Total Depth = 10.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Borehole Abandonment Details

0 to 10.0 feet: 2.25-inch borehole.
0 to 10.0 feet: Bentonite chips hydrated with potable water.

MFA BOREHOLE WRECON SCREEN W:\GINT\GINTWPROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	B07	1 of 2

Project Name	Bellingham Bus Garage Focused Environmental Investigation		
Project Location	1801 James Street, Bellingham, WA	Surface Elevation (feet)	
Start/End Date	10/12/2023 to 10/12/2023	Northing	
Driller/Equipment	Anderson Environmental Contracting, LLC/Direct-push Geoprobe	Easting	
Geologist/Engineer	C. Sifford	Total Depth of Borehole	20.0 feet
Sample Method	Core Barrel	Outer Hole Diam	2.25 inch

Depth (feet, bgs)	Water Levels	Sample Data: Percent Recovery	Sample Data: Screen Int.	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
0					0		0.0 to 0.9 feet: GRAVELLY SAND (SP); gray; 50% sand, fine to medium; 50% gravel, fine to coarse, angular to subrounded; loose; no odor; dry.
1							0.9 to 3.0 feet: SILTY SAND (SM); dark brown; 40% fines, nonplastic; 60% sand, fine; dense; no odor; moist.
2				B07-S-2.0	0		
3		60					3.0 to 5.0 feet: NO RECOVERY.
4							
5							5.0 to 5.7 feet: SILTY SAND (SM); dark brown; 40% fines, nonplastic; 60% sand, fine; dense; no odor; moist.
6				B07-S-6.0	0		5.7 to 9.5 feet: SANDY SILT (ML); gray; 60% fines, nonplastic; 40% sand, fine; stiff; no odor; moist.
7							
8		90			0		
9							
10							9.5 to 10.0 feet: NO RECOVERY.
							10.0 to 10.2 feet: SANDY SILT (ML); gray; 60% fines, nonplastic; 40% sand, fine; stiff; no odor; moist.
11					0		10.2 to 13.5 feet: SAND (SP); gray; 100% sand, medium; medium dense; no odor; moist.
12							
13		70		B07-S-12.5 (not analyzed)	0		
14							13.5 to 15.0 feet: NO RECOVERY.
15	▽						

MFA BOREHOLE WRECON SCREEN W:\GINT\GINTW\PROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

MAUL FOSTER ALONG

Geologic Borehole Log

Project Number	Boring Number	Sheet
M0837.02.005	**B07**	**2 of 2**

Depth (feet, bgs)	Water Levels	Percent Recovery	Screen Int.	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
16	▼				0		15.0 to 19.1 feet: SAND (SP); gray; 100% sand, medium; medium dense; no odor; wet. @ 16.1 feet: Becomes brown.
17		82		B07-S-16.7 (not analyzed)	0		@ 16.8 to 16.9 feet: Layer of SILT; 100% fines, medium plasticity; soft; no odor; wet.
18				B07-GW-18.0	0		@ 18.0 to 18.3 feet: Layer of SILT; 100% fines, medium plasticity; soft; no odor; wet.
19							19.1 to 20.0 feet: NO RECOVERY.
20							

Total Depth = 20.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Reconnaissance Well Completion Details
Temporary slotted polyvinyl chloride well screen set from 15.0 to 20.0 bgs.

Borehole Abandonment Details
0 to 20.0 feet: 2.25-inch borehole.
0 to 20.0 feet: Bentonite chips hydrated with potable water.

▽ Soil becomes wet at 15.0 feet bgs as observed in soil core. ▼ Water level measured is 16.43 feet bgs, following temporary well installation.

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	**B08**	**1 of 2**

Project Name	**Bellingham Bus Garage Focused Environmental Investigation**		
Project Location	**1801 James Street, Bellingham, WA**	Surface Elevation (feet)	
Start/End Date	**10/11/2023 to 10/11/2023**	Northing	
Driller/Equipment	**Anderson Environmental Contracting, LLC/Direct-push Geoprobe**	Easting	
Geologist/Engineer	**C. Sifford**	Total Depth of Borehole	**25.0 feet**
Sample Method	**Core Barrel**	Outer Hole Diam	**2.25 inch**

Depth (feet, bgs)	Water Levels	Sample Data: Percent Recovery	Screen Int.	Sample ID	PID (ppm)	Lithologic Column	Soil Description
0							0.0 to 0.4 feet: ASPHALT; dark gray; dry.
1					0		0.4 to 1.7 feet: GRAVELLY SAND (SP); brown; 70% sand, fine to medium; 30% gravel, fine to coarse, subangular to subrounded; loose; no odor; dry.
2					0		1.7 to 2.3 feet: GRAVELLY SILT WITH SAND (ML); brown; 60% fines, low plasticity; 10% sand, medium; 30% gravel, fine to medium, rounded to subrounded; firm; no odor; moist.
3		**62**		**B08-S-3.0**	0		2.3 to 2.8 feet: GRAVELLY SAND (SP); tannish brown; 80% sand, medium; 20% gravel, fine to medium, rounded to subrounded; occasional metal, brick, and glass debris; loose; no odor; moist. 2.8 to 3.1 feet: SILT WITH SAND (ML); dark brown; 80% fines, nonplastic; 20% sand, fine; soft; no odor; moist.
4							3.1 to 5.0 feet: NO RECOVERY.
5					0		5.0 to 5.2 feet: COBBLE; white; crystalline.
6				**B08-S-5.5 (not analyzed)**	0		5.2 to 5.8 feet: SILT WITH SAND (ML); dark brown; 80% fines, nonplastic; 20% sand, fine; soft; no odor; moist.
7					0		5.8 to 6.5 feet: GRAVELLY SILT WITH SAND (ML); brown; 60% fines, low plasticity; 10% sand, medium; 30% gravel, fine to medium, rounded to subrounded; firm; no odor; moist.
8		**30**					6.5 to 10.0 feet: NO RECOVERY.
9							
10							10.0 to 11.1 feet: GRAVELLY SILT WITH SAND (ML); brown; 60% fines, low plasticity; 10% sand, medium; 30% gravel, fine to medium, rounded to subrounded; firm; no odor; moist.
11					0		11.1 to 13.3 feet: GRAVELLY SILT (ML); dark gray; 70% fines, low plasticity; 15% gravel, fine to medium, rounded to subrounded; 15% organic material (peat); no odor; moist.
12				**B08-S-12.0 (not analyzed)**	0		
13		**66**			0		
14							13.3 to 15.0 feet: NO RECOVERY.
15							

MFA BOREHOLE WRECON SCREEN W:\GINT\GINTWPROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

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Geologic Borehole Log

Project Number	Boring Number	Sheet
M0837.02.005	**B08**	**2 of 2**

Depth (feet, bgs)	Water Levels	Percent Recovery	Screen Int.	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
16					0		15.0 to 15.4 feet: GRAVELLY SILT (ML); dark gray; 70% fines, low plasticity; 15% gravel, fine to medium, rounded to subrounded; 15% organic material (peat); no odor; moist.
							15.4 to 17.6 feet: SANDY SILT (ML); gray; 70% fines, low plasticity; 30% sand, fine; trace organic material (peat); firm; no odor; moist.
17				**B08-S-17.0 (not analyzed)**	0		
18	▽▼	68					17.6 to 18.4 feet: SAND (SP); gray; 100% sand, medium; medium dense; no odor; wet.
							18.4 to 20.0 feet: NO RECOVERY.
19							
20							20.0 to 25.0 feet: SAND (SP); gray; 100% sand, medium; trace organic material (decayed woody debris); medium dense; no odor; wet.
21					0		
22					0		
		100		**B08-GW-22.5**			
23					0		
24							
25							

Total Depth = 25.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Reconnaissance Well Completion Details
Temporary slotted polyvinyl chloride well screen set from 20.0 to 25.0 bgs.

Borehole Abandonment Details
0 to 25.0 feet: 2.25-inch borehole.
0 to 25.0 feet: Bentonite chips hydrated with potable water.

▽ *Soil becomes wet at 17.6 feet bgs as observed in soil core.* ▼ *Water level measured is 17.83 feet bgs, following temporary well installation.*

MFA BOREHOLE W/RECON SCREEN W:\GINT\GINTW\PROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	**B09**	**1 of 2**

Project Name	**Bellingham Bus Garage Focused Environmental Investigation**		
Project Location	**1801 James Street, Bellingham, WA**	Surface Elevation (feet)	
Start/End Date	**10/11/2023 to 10/11/2023**	Northing	
Driller/Equipment	**Anderson Environmental Contracting, LLC/Direct-push Geoprobe**	Easting	
Geologist/Engineer	**C. Sifford**	Total Depth of Borehole	**25.0 feet**
Sample Method	**Core Barrel**	Outer Hole Diam	**2.25 inch**

Depth (feet, bgs)	Water Levels	Sample Data: Percent Recovery	Sample Data: Screen Int.	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
0							0.0 to 0.6 feet: CONCRETE; gray.
							@ 0.6 feet: Yellow plastic liner (vapor barrier).
1					0		0.6 to 0.9 feet: SANDY GRAVEL (GP); gray; 20% sand, fine to medium; 80% gravel, fine to medium, subangular to subrounded; very loose; no odor; dry.
							0.9 to 4.0 feet: SILTY GRAVELLY SAND (SM); brown; 30% fines, low plasticity; 40% sand, fine to medium; 30% gravel, fine to coarse, rounded; dense; no odor; dry to moist.
2					0		
		80					
3				B09-S-3.0	1		
4					0		
							4.0 to 5.0 feet: NO RECOVERY.
5							
							5.0 to 6.1 feet: SILTY GRAVELLY SAND (SM); brown; 30% fines, low plasticity; 40% sand, fine to medium; 30% gravel, fine to coarse, rounded; dense; no odor; dry.
6					0		
				B09-S-6.3 (not analyzed)	0		6.1 to 7.4 feet: GRAVELLY SILT WITH SAND (ML); brown; 50% fines, low plasticity; 10% sand, coarse; 40% gravel, fine to coarse, rounded to subrounded; stiff; no odor; moist.
7					0		
		58					
8					0		7.4 to 7.9 feet: SILTY GRAVELLY SAND (SM); brown; 30% fines, low plasticity; 40% sand, fine to medium; 30% gravel, fine to coarse, rounded; dense; no odor; moist.
							7.9 to 10.0 feet: NO RECOVERY.
9							
10							
							10.0 to 10.5 feet: SILTY GRAVELLY SAND (SM); brown; 30% fines, low plasticity; 40% sand, fine to medium; 30% gravel, fine to coarse, rounded; dense; no odor; moist.
11					0		10.5 to 11.7 feet: GRAVELLY SILT WITH SAND (ML); brown; 50% fines, low plasticity; 10% sand, coarse; 40% gravel, fine to coarse, rounded to subrounded; stiff; no odor; moist.
				B09-S-11.5 (not analyzed)	0		
12							11.7 to 11.9 feet: SANDY SILT (ML); dark gray; 60% fines, low plasticity; 40% sand, fine, trace coarse sand; soft; no odor; moist.
							11.9 to 15.0 feet: NO RECOVERY.
		38					
13							
14							
15							

MFA BOREHOLE W/RECON SCREEN W:\GINT\GINTW\PROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	**B09**	**2 of 2**

Depth (feet, bgs)	Water Levels	Percent Recovery	Screen Int.	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
16	▼						15.0 to 15.5 feet: SANDY SILT WITH GRAVEL (ML); dark gray; 50% fines, low plasticity; 40% sand, fine; 10% gravel, fine to coarse, rounded to subrounded; firm; no odor; moist.
							15.5 to 15.7 feet: SILTY SAND (SM); dark gray; 40% fines, low plasticity; 60% sand, medium to coarse; trace gravel, fine to medium, rounded to subrounded; medium dense; no odor; moist.
				B09-S-16.0 (not analyzed)	**0**		15.7 to 18.8 feet: SILT WITH SAND (ML); dark gray; 80% fines, medium plasticity; 20% sand, fine; trace gravel, medium, subrounded; very stiff; no odor; moist.
17					**0**		
		56					
18							@ 18.6 feet: Woody debris; slight organic-like odor.
19							18.8 to 20.0 feet: NO RECOVERY.
20							20.0 to 20.7 feet: SILT WITH SAND (ML); dark gray; 80% fines, medium plasticity; 20% sand, fine; trace gravel, medium, subrounded; very stiff; no odor; moist.
21	▽			**B09-GW-21.0**	**0**		20.7 to 23.6 feet: SAND (SP); 100% sand, medium; medium dense; no odor; wet.
22					**0**		
		84					
23					**0**		@ 22.6 to 23.0 feet: Wood and sticks.
24					**0**		23.6 to 24.2 feet: SILT (ML); gray; 100% fines, medium plasticity; trace sand, fine; soft; no odor; wet.
							24.2 to 25.0 feet: NO RECOVERY.
25							

Total Depth = 25.0 feet bgs

NOTES:

1) bgs = below ground surface. 2) Depths are relative to feet bgs. 3) ID = identification. 4) PID = photoionization detector. 5) ppm = parts per million.

Reconnaissance Well Completion Details
Temporary slotted polyvinyl chloride well screen set from 14.0 to 24.0 bgs.

Borehole Abandonment Details
0 to 25.0 feet: 2.25-inch borehole.
0 to 24.0 feet: Bentonite chips hydrated with potable water.
24.0 to 25.0 feet: Slough.

▽ *Soil becomes wet at 20.7 feet bgs as observed in soil core.* ▼ *Water level measured is 15.10 feet bgs, following temporary well installation.*

MFA BOREHOLE W/RECON SCREEN W:\GINT\GINTWPROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

Geologic Borehole Log

MAUL FOSTER ALONG

Project Number	Boring Number	Sheet
M0837.02.005	**B10**	**1 of 2**

Project Name	**Bellingham Bus Garage Focused Environmental Investigation**		
Project Location	**1801 James Street, Bellingham, WA**	Surface Elevation (feet)	
Start/End Date	**10/12/2023 to 10/12/2023**	Northing	
Driller/Equipment	**Anderson Environmental Contracting, LLC/Direct-push Geoprobe**	Easting	
Geologist/Engineer	**C. Sifford**	Total Depth of Borehole	**19.9 feet**
Sample Method	**Core Barrel**	Outer Hole Diam	**2.25 inch**

Depth (feet, bgs)	Water Levels	Percent Recovery	Screen Int.	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
							0.0 to 0.7 feet: CONCRETE; gray; dry.
1					0		0.7 to 1.4 feet: GRAVELLY SAND (SP); brown; 70% sand, medium; 30% gravel, fine to medium, rounded to subrounded; loose; no odor; moist.
2							1.4 to 3.5 feet: SILTY GRAVELLY SAND (SM); brown; 40% fines, low plasticity; 40% sand, medium; 20% gravel, fine to coarse, rounded; medium dense; no odor; moist.
3		70		**B10-S-2.5** **BDUP-S-2.5**	0		
4							3.5 to 5.0 feet: NO RECOVERY.
5							5.0 to 7.0 feet: SILTY GRAVELLY SAND (SM); brown; 40% fines, low plasticity; 40% sand, medium; 20% gravel, fine to coarse, rounded; medium dense; no odor; moist.
6				**B10-S-6.0** **(not analyzed)**	0		
7							@ 6.7 feet: Becomes grayish brown.
							7.0 to 10.0 feet: NO RECOVERY.
8		40					
9							
10							10.0 to 12.5 feet: SILTY GRAVELLY SAND (SM); grayish brown; 40% fines, low plasticity; 40% sand, medium; 20% gravel, fine to coarse, rounded; medium dense; no odor; moist.
11	▽ ▼				0		@ 10.5 feet: Becomes wet; loose.
12							@ 12.4 feet: Very slight petroleum hydrocarbon-like odor.
13		82		**B10-S-12.4** **(not analyzed)**	1		12.5 to 13.4 feet: SAND (SP); gray; 100% sand, medium; loose; no odor; wet.
14					1		13.4 to 14.1 feet: SANDY SILT (ML); gray with orange mottling; 60% fines, low plasticity; 40% sand, fine to medium; stiff; no odor; moist.
							14.1 to 15.0 feet: NO RECOVERY.
15							

MFA BOREHOLE W/RECON SCREEN W:\GINT\GINTW\PROJECTS\0837.02.005\B01 TO B10.GPJ 12/7/23

MAUL FOSTER ALONG

Geologic Borehole Log

Project Number	Boring Number	Sheet
M0837.02.005	**B10**	**2 of 2**

Depth (feet, bgs)	Water Levels	Percent Recovery	Screen Int.	Sample Data: Sample ID	Sample Data: PID (ppm)	Lithologic Column	Soil Description
16				**B10-GW-15.0** **BDUP-GW-15.0**	**0**		*15.0 to 16.6 feet: SAND (SP); gray; 100% sand, medium; loose; no odor; wet.*
17		**100**		**B10-S-17.0** **(not analyzed)**	**0**		*16.6 to 18.1 feet: SANDY SILT (ML); gray with orange mottling; 60% fines, low plasticity; 40% sand, fine to medium; stiff; no odor; moist.*
18					**0**		*18.1 to 19.4 feet: SILTY SAND WITH GRAVEL (SM); gray; 20% fines, nonplastic; 70% sand, fine; 10% gravel, coarse, rounded; very dense; no odor; moist.*
19							*19.4 to 19.9 feet: Pulverized, weathered rock; light gray; crystalline; granitic.* *@ 19.9 feet: Refusal.*

Total Depth = 19.9 feet bgs

NOTES:

1) Drill hit refusal at 19.9 feet. 2) bgs = below ground surface. 3) Depths are relative to feet bgs. 4) ID = identification. 5) PID = photoionization detector. 6) ppm = parts per million.

Reconnaissance Well Completion Details
Temporary slotted polyvinyl chloride well screen set from 12.5 to 17.5 bgs.

Borehole Abandonment Details
0 to 19.9 feet: 2.25-inch borehole.
0 to 17.5 feet: Bentonite chips hydrated with potable water.
17.5 to 19.9 feet: Slough.

▽ Soil becomes wet at 10.5 feet bgs as observed in soil core. ▼ Water level measured is 11.04 feet bgs, following temporary well installation.

Appendix B

Water Field Sampling Data Sheets

MAUL FOSTER ALONGI

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	Bellingham School District	**Sample Location**	B02
Project #	M0837.02.005	**Sampler**	A. Bixby
Project Name	Bus Garage IPG	**Sampling Date**	10/11/2023
Sampling Event	October 2023	**Sample Name**	B02-GW-22.5
Sub Area	AOI 1: Bus Parking Area	**Sample Depth**	22.5
FSDS QA:	C. Sifford	**Easting**	**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
10/11/2023	16:45	24.95		15.8		9.15	0.21

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	5:20:00 PM	1.5	0.4	6.57	14.8	400			31.8
	5:23:00 PM	1.7	0.4	6.45	14.7	390			20.1
	5:25:00 PM	1.9	0.4	6.45	14.5	390			15.3
	5:28:00 PM	2.1	0.4	6.46	14.5	390			13.5
Final Field Parameters	5:31:00 PM	2.3	0.4	6.46	14.5	390			

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Cloudy then clear, brown tint, no odor, no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	5:40:00 PM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 16:46.
Temporary well screen from 20 to 25 feet bgs.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	Bellingham School District	**Sample Location**	B03		
Project #	M0837.02.005	**Sampler**	B. Murphy		
Project Name	Bus Garage IPG	**Sampling Date**	10/12/2023		
Sampling Event	October 2023	**Sample Name**	B03-GW-21.5		
Sub Area	AOI 1: Bus Parking Area	**Sample Depth**	21.5		
FSDS QA:	C. Sifford	**Easting**		**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
10/12/2023	8:27	23.96		16.7		7.26	0.17

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	9:07:00 AM	1.2	0.15	6.61	12.3	510			103
	9:11:00 AM	1.3	0.15	6.58	12.3	510			80.1
	9:15:00 AM	1.5	0.15	6.58	12.3	510			57.6
	9:19:00 AM	1.7	0.15	6.57	12.4	500			58
	9:23:00 AM	1.8	0.15	6.57	12.4	500			46.4
Final Field Parameters	9:27:00 AM	2	0.15	6.57	12.4	500			41.4

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Cloudy then clear, gray tint, no odor, no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	9:30:00 AM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 8:37.
Temporary well screen from 19 to 24 feet bgs.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	Bellingham School District	**Sample Location**	B07				
Project #	M0837.02.005	**Sampler**	B. Murphy				
Project Name	Bus Garage IPG	**Sampling Date**	10/12/2023				
Sampling Event	October 2023	**Sample Name**	B07-GW-18.0				
Sub Area	AOI 2: Bush Wash Area	**Sample Depth**	18				
FSDS QA:	C. Sifford	**Easting**		**Northing**		**TOC**	

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
10/12/2023	12:50	19.72		16.43		3.29	0.08

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	1:40:00 PM	1.1	0.1	5.88	16.7	250			54.6
	1:44:00 PM	1.2	0.1	5.85	16.6	250			17.5
	1:48:00 PM	1.3	0.1	5.82	16.6	250			16.8
	1:52:00 PM	1.5	0.1	5.8	16.7	250			14.8
Final Field Parameters	1:56:00 PM	1.3	0.1	5.8	16.7	250			14.2

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Cloudy then clear, brown tint then colorless, no odor, no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	1:58:00 PM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 13:08.
Temporary well screen from 15 to 20 feet bgs.

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	Bellingham School District	**Sample Location**	B08
Project #	M0837.02.005	**Sampler**	A. Bixby
Project Name	Bus Garage IPG	**Sampling Date**	10/11/2023
Sampling Event	October 2023	**Sample Name**	B08-GW-22.5
Sub Area	AOI 3: Oil-Water Separator	**Sample Depth**	22.5
FSDS QA:	C. Sifford	**Easting**	**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
10/11/2023	15:07	24.56		17.83		6.73	0.15

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	3:31:00 PM	0.6	0.4	6.5	15.3	650			110
	3:37:00 PM	0.8	0.4	6.52	15.2	650			49.1
	3:40:00 PM	1	0.4	6.51	15.2	650			32.4
	3:43:00 PM	1.2	0.4	6.5	15.2	650			26.1
Final Field Parameters	3:45:00 PM	1.3	0.4	6.49	15.1	650			21

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Cloudy then clear, brown tint, no odor, no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	3:50:00 PM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 15:10.
Temporary well screen from 20 to 25 feet bgs.

Maul Foster & Alongi, Inc.

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Water Field Sampling Data Sheet

Client Name	Bellingham School District	**Sample Location**	B09		
Project #	M0837.02.005	**Sampler**	A. Bixby		
Project Name	Bus Garage IPG	**Sampling Date**	10/11/2023		
Sampling Event	October 2023	**Sample Name**	B09-GW-21.0		
Sub Area	AOI 4: In-ground Hydraulic Lifts	**Sample Depth**	21		
FSDS QA:	C. Sifford	**Easting**		**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
10/11/2023	13:38	23.76		15.1		8.66	0.2

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	1:58:00 PM	0.8	0.4						978
	2:05:00 PM	1	0.4	6.42	18.3	810			541
	2:10:00 PM	1.2	0.4	6.45	18.3	810			565
	2:45:00 PM	2.3	0.4	6.48	18.2	770			311
	2:48:00 PM	2.5	0.4	6.46	18.2	770			281
	2:51:00 PM	2.7	0.4	6.45	18.2	770			153
Final Field Parameters	2:54:00 PM	2.8	0.4	6.45	18.3	770			93.2

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Cloudy, brown, no odor, no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	3:00:00 PM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 13:40.
Temporary well screen from 14 to 24 feet bgs.

Maul Foster & Alongi, Inc.

109 East 13th Street, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1

Water Field Sampling Data Sheet

Client Name	Bellingham School District	**Sample Location**	B10
Project #	M0837.02.005	**Sampler**	B. Murphy
Project Name	Bus Garage IPG	**Sampling Date**	10/12/2023
Sampling Event	October 2023	**Sample Name**	B10-GW-15.0
Sub Area	AOI 5: Former USTs	**Sample Depth**	15
FSDS QA:	C. Sifford	**Easting**	**Northing**	**TOC**

Hydrology/Level Measurements

					(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
Date	**Time**	**DT-Bottom**	**DT-Product**	**DT-Water**	**DTP-DTW**	**DTB-DTW**	**Pore Volume**
10/12/2023	10:15	17.27		11.04		6.23	0.14

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	**Time**	**Purge Vol (gal)**	**Flowrate l/min**	**pH**	**Temp (C)**	**E Cond (uS/cm)**	**DO (mg/L)**	**ORP**	**Turbidity**
(2) Peristaltic Pump	11:00:00 AM	1.1	0.15	6.38	18.3	660			41.4
	11:04:00 AM	1.3	0.15	6.36	18.3	650			137
	11:08:00 AM	1.4	0.15	6.36	18.2	650			128
	11:12:00 AM	1.6	0.15	6.35	18.3	650			91
	11:16:00 AM	1.8	0.15	6.35	18.3	650			104
	11:20:00 AM	1.9	0.15	6.36	18.3	650			103
Final Field Parameters	11:24:00 AM	2	0.15	6.35	18.4	650			54.6

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Cloudy, gray tint, no odor, no sheen.

Sample Information

Sampling Method	**Sample Type**	**Sampling Time**	**Container Code/Preservative**	**#**	**Filtered**
(2) Peristaltic Pump	Groundwater	11:26:00 AM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Began purge at 10:28.
Temporary well screen from 12.5 to 17.5 feet bgs.
Duplicate sample BDUP-GW-15.0 collected here.

Appendix C

Field Photographs

MAUL
FOSTER
ALONGI

Photographs

Project Name: Bellingham School District Bus Garage
Focused Environmental Investigation
Project Number: M0837.02.005
Location: 1801 James Street
Bellingham, Washington

Photo No. 1.

Description

Maintenance building, looking southeast.

Photo No. 2.

Description

Bus garage, looking south.

Photographs

Project Name: Bellingham School District Bus Garage
Focused Environmental Investigation
Project Number: M0837.02.005
Location: 1801 James Street
Bellingham, Washington

Photo No. 3.

Description

Office building, looking south.

Photo No. 4.

Description

Soil core from boring location B01.

Photographs

Project Name: Bellingham School District Bus Garage
Focused Environmental Investigation
Project Number: M0837.02.005
Location: 1801 James Street
Bellingham, Washington

Photo No. 5.

Description

Soil core from boring location B02.

Photo No. 6.

Description

Drilling at boring location B03, north of the bus garage, looking west.

Photographs

Project Name: Bellingham School District Bus Garage Focused Environmental Investigation
Project Number: M0837.02.005
Location: 1801 James Street Bellingham, Washington

Photo No. 7.

Description

Soil core from boring location B03.

Photo No. 8.

Description

Soil core from boring location B04.

Photographs

Project Name: Bellingham School District Bus Garage
Focused Environmental Investigation

Project Number: M0837.02.005

Location: 1801 James Street
Bellingham, Washington

Photo No. 9.

Description

Soil core from boring location B05.

Photo No. 10.

Description

Soil core from boring location B06.

Photographs

Project Name: Bellingham School District Bus Garage
Focused Environmental Investigation

Project Number: M0837.02.005

Location: 1801 James Street
Bellingham, Washington

Photo No. 11.

Description

Soil core from boring location B07.

Photo No. 12.

Description

Drilling at boring location B08, north of the maintenance building, looking east.

Photographs

Project Name: Bellingham School District Bus Garage
Focused Environmental Investigation
Project Number: M0837.02.005
Location: 1801 James Street
Bellingham, Washington

Photo No. 13.

Description

Soil core from boring location B08.

Photo No. 14.

Description

Drilling at boring location B09, inside the maintenance building.

Photographs

Project Name: Bellingham School District Bus Garage
Focused Environmental Investigation
Project Number: M0837.02.005
Location: 1801 James Street
Bellingham, Washington

Photo No. 15.

Description

Reconnaissance groundwater sampling at boring location B09, inside the maintenance building.

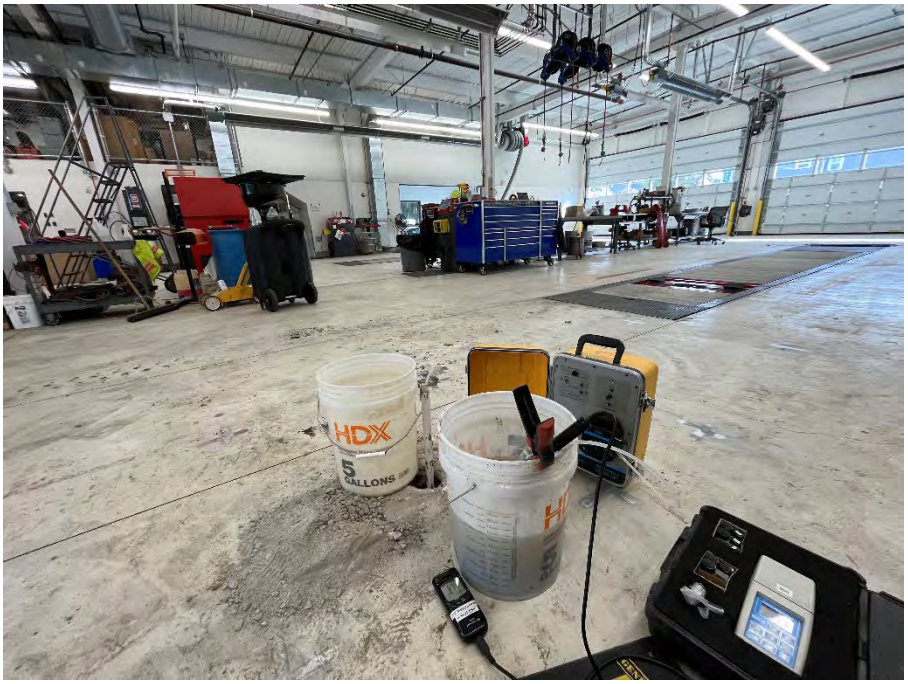


Photo No. 16.

Description

Soil core from boring location B09.

Photographs

Project Name: Bellingham School District Bus Garage
Focused Environmental Investigation
Project Number: M0837.02.005
Location: 1801 James Street
Bellingham, Washington

Photo No. 17.

Description

Reconnaissance groundwater sampling at boring location B10, east of the maintenance building, looking west.

Photo No. 18.

Description

Soil core from boring location B10.

Appendix D

Analytical Laboratory Reports

MAUL FOSTER ALONGI

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 Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 20, 2023

Amanda Bixby, Project Manager
Maul Foster Alongi
1329 N State St, Suite 301
Bellingham, WA 98225

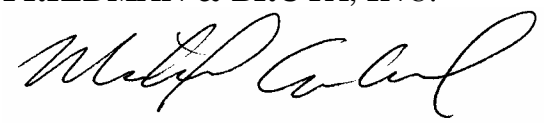
Dear Ms Bixby:

Included are the results from the testing of material submitted on October 13, 2023 from the Bellingham Bus Garage M0837.02.005, F&BI 310254 project. There are 13 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
MFA1020R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 13, 2023 by Friedman & Bruya, Inc. from the Maul Foster Alongi Bellingham Bus Garage M0837.02.005, F&BI 310254 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
310254 -01	B05-S-1.7
310254 -02	B05-S-5.5
310254 -03	B04-S-1.0
310254 -04	B04-S-7.0

All quality control requirements were acceptable.

Date of Report: 10/20/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254
Date Extracted: NA
Date Analyzed: 10/13/23

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR PERCENT MOISTURE USING ASTM D2216-98

Sample ID Laboratory ID	% Moisture
B05-S-1.7 310254-01	4
B04-S-1.0 310254-03	4

Date of Report: 10/20/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254
Date Extracted: 10/16/23
Date Analyzed: 10/16/23

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B05-S-1.7 310254-01	56 x	430	98
B04-S-1.0 310254-03	410	2,000	100
Method Blank 03-2443 MB	<50	<250	92

Analysis For Total Metals By EPA Method 6020B

Client ID:	B05-S-1.7	Client:	Maul Foster Alongi
Date Received:	10/13/23	Project:	Bellingham Bus Garage
Date Extracted:	10/16/23	Lab ID:	310254-01
Date Analyzed:	10/17/23	Data File:	310254-01.268
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Copper	19.4
Zinc	37.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	B05-S-1.7	Client:	Maul Foster Alongi
Date Received:	10/13/23	Project:	Bellingham Bus Garage
Date Extracted:	10/16/23	Lab ID:	310254-01 x2
Date Analyzed:	10/17/23	Data File:	310254-01 x2.049
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	80.3

Analysis For Total Metals By EPA Method 6020B

Client ID:	B04-S-1.0	Client:	Maul Foster Alongi
Date Received:	10/13/23	Project:	Bellingham Bus Garage
Date Extracted:	10/16/23	Lab ID:	310254-03
Date Analyzed:	10/16/23	Data File:	310254-03.070
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Copper	17.2
Zinc	41.3

Analysis For Total Metals By EPA Method 6020B

Client ID:	B04-S-1.0	Client:	Maul Foster Alongi
Date Received:	10/13/23	Project:	Bellingham Bus Garage
Date Extracted:	10/16/23	Lab ID:	310254-03 x2
Date Analyzed:	10/17/23	Data File:	310254-03 x2.050
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	76.3

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	Bellingham Bus Garage
Date Extracted:	10/16/23	Lab ID:	I3-819 mb
Date Analyzed:	10/16/23	Data File:	I3-819 mb.042
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Copper	<5
Lead	<1
Zinc	<5

Date of Report: 10/20/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254
Date Extracted: 10/16/23
Date Analyzed: 10/17/23

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL MERCURY
USING EPA METHOD 1631E
Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Total Mercury
B05-S-1.7 310254-01	<0.1
B04-S-1.0 310254-03	0.11
Method Blank I3-819 MB	<0.1

Date of Report: 10/20/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254

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

Laboratory Code: 310250-01 (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	108	110	64-136	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	78-121

Date of Report: 10/20/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254

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

Laboratory Code: 310258-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Cadmium	mg/kg (ppm)	10	<5	91	101	75-125	10
Copper	mg/kg (ppm)	50	<25	87	95	75-125	9
Lead	mg/kg (ppm)	50	<5	87	98	75-125	12
Zinc	mg/kg (ppm)	50	<25	87	100	75-125	14

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Cadmium	mg/kg (ppm)	10	99	80-120
Copper	mg/kg (ppm)	50	103	80-120
Lead	mg/kg (ppm)	50	97	80-120
Zinc	mg/kg (ppm)	50	104	80-120

Date of Report: 10/20/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Laboratory Code: 310258-01 x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	mg/kg (ppm)	5	<0.1	104	111	71-125	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/kg (ppm)	5	84	68-143

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 10/13/23 A1

310254

Report To Amanda Bixby

Company Mauf Foster & Alongi, Inc.

Address 1329 N State Street, Suite 301

City, State, ZIP Bellingham, WA 98225

Phone 360-685-8371 Email abixby@maulfoster.com

SAMPLERS (*signature*)

PROJECT NAME: Bellingham Bus Garage

PO #: M0837.02.005

REMARKS
x = comp
O = hold
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

Page # _____ of _____

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH _____
Rush charges authorized by:

SAMPLE DISPOSAL
☒ Archive samples
☐ Other _____
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Metals by EPA 6020 B	Mercury by EPA 1631E			Notes
B05-S-1.7	01	10/12/23	15:50	Soil	1	X							X	X			
B05-S-5.5	02	10/12/23	15:55	Soil	1	O							O	O			hold
B04-S-1.0	03	10/12/23	16:25		1	X							X	X			
B04-S-7.0	04	10/12/23	16:30		1	O							O	O			hold
							Samples received at 2 °C										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Christian Sifford	MFA	10/12/23	16:45
Received by:	ANH PHAN	FBB	10/13/23	13:24
Relinquished by:				
Received by:				

Metals Include cadmium, copper, lead, and zinc

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

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 Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 30, 2023

Amanda Bixby, Project Manager
Maul Foster Alongi
1329 N State St, Suite 301
Bellingham, WA 98225

Dear Ms Bixby:

Included are the additional results from the testing of material submitted on October 13, 2023 from the Bellingham Bus Garage M0837.02.005, F&BI 310254 project. There are 12 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
MFA1030R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 13, 2023 by Friedman & Bruya, Inc. from the Maul Foster Alongi Bellingham Bus Garage M0837.02.005, F&BI 310254 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
310254 -01	B05-S-1.7
310254 -02	B05-S-5.5
310254 -03	B04-S-1.0
310254 -04	B04-S-7.0

An 8270E internal standard failed the acceptance criteria for sample B04-S-1.0. The sample was diluted and reanalyzed with acceptable results. Both data sets were reported.

All other quality control requirements were acceptable.

Date of Report: 10/30/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254
Date Extracted: NA
Date Analyzed: 10/23/23

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR PERCENT MOISTURE USING ASTM D2216-98

Sample ID Laboratory ID	% Moisture
B04-S-7.0 310254-04	19

Date of Report: 10/30/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254
Date Extracted: 10/23/23
Date Analyzed: 10/23/23

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B04-S-7.0 310254-04	<50	<250	68
Method Blank 03-2536 MB	<50	<250	69

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B04-S-1.0	Client:	Maul Foster Alongi
Date Received:	10/13/23	Project:	Bellingham Bus Garage M0837.02.005
Date Extracted:	10/23/23	Lab ID:	310254-03 1/50
Date Analyzed:	10/26/23	Data File:	102622.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	65 d	16	137
2-Fluorobiphenyl	89 d	46	122
2,4,6-Tribromophenol	108 d	17	154
Terphenyl-d14	138 d	31	167

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.1
2-Methylnaphthalene	0.10
1-Methylnaphthalene	2.1
Acenaphthylene	<0.1
Acenaphthene	<0.1
Fluorene	0.21
Phenanthrene	0.15
Anthracene	<0.1
Fluoranthene	0.057 j
Pyrene	0.25
Benz(a)anthracene	0.026 j
Chrysene	0.21
Benzo(a)pyrene	0.075 j J
Benzo(b)fluoranthene	0.10 J
Benzo(k)fluoranthene	<0.1 J
Indeno(1,2,3-cd)pyrene	0.033 j J
Dibenz(a,h)anthracene	0.057 j J
Benzo(g,h,i)perylene	0.13 J

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B04-S-1.0	Client:	Maul Foster Alongi
Date Received:	10/13/23	Project:	Bellingham Bus Garage M0837.02.005
Date Extracted:	10/23/23	Lab ID:	310254-03 1/250
Date Analyzed:	10/25/23	Data File:	102518.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	75 d	16	137
2-Fluorobiphenyl	85 d	46	122
2,4,6-Tribromophenol	167 d	17	154
Terphenyl-d14	90 d	31	167

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.5
2-Methylnaphthalene	<0.5
1-Methylnaphthalene	2.2
Acenaphthylene	<0.5
Acenaphthene	<0.5
Fluorene	<0.5
Phenanthrene	<0.5
Anthracene	<0.5
Fluoranthene	<0.5
Pyrene	<0.5
Benz(a)anthracene	<0.5
Chrysene	<0.5
Benzo(a)pyrene	0.087 j
Benzo(b)fluoranthene	0.087 j
Benzo(k)fluoranthene	<0.5
Indeno(1,2,3-cd)pyrene	<0.065 j
Dibenz(a,h)anthracene	<0.12 j
Benzo(g,h,i)perylene	0.11 j

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B04-S-7.0	Client:	Maul Foster Alongi
Date Received:	10/13/23	Project:	Bellingham Bus Garage M0837.02.005
Date Extracted:	10/24/23	Lab ID:	310254-04 1/5
Date Analyzed:	10/25/23	Data File:	102426.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	75	16	137
2-Fluorobiphenyl	83	46	122
2,4,6-Tribromophenol	75	17	154
Terphenyl-d14	82	31	167

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Bellingham Bus Garage M0837.02.005
Date Extracted:	10/24/23	Lab ID:	03-2540 mb 1/5
Date Analyzed:	10/24/23	Data File:	102408.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	91	16	137
2-Fluorobiphenyl	97	46	122
2,4,6-Tribromophenol	78	17	154
Terphenyl-d14	96	31	167

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Bellingham Bus Garage M0837.02.005
Date Extracted:	10/23/23	Lab ID:	03-2532 mb 1/5
Date Analyzed:	10/23/23	Data File:	102306.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	88	16	137
2-Fluorobiphenyl	96	46	122
2,4,6-Tribromophenol	84	17	154
Terphenyl-d14	95	31	167

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Date of Report: 10/30/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254

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

Laboratory Code: 310402-01 (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	106	106	64-136	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	78-121

Date of Report: 10/30/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 310396-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.83	<0.01	72	76	50-150	5
2-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	75	78	50-150	4
1-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	75	78	50-150	4
Acenaphthylene	mg/kg (ppm)	0.83	<0.01	82	82	50-150	0
Acenaphthene	mg/kg (ppm)	0.83	<0.01	79	80	50-150	1
Fluorene	mg/kg (ppm)	0.83	<0.01	81	80	50-150	1
Phenanthrene	mg/kg (ppm)	0.83	<0.01	80	81	10-170	1
Anthracene	mg/kg (ppm)	0.83	<0.01	82	80	37-139	2
Fluoranthene	mg/kg (ppm)	0.83	<0.01	87	85	10-203	2
Pyrene	mg/kg (ppm)	0.83	<0.01	84	82	10-208	2
Benz(a)anthracene	mg/kg (ppm)	0.83	<0.01	86	86	37-146	0
Chrysene	mg/kg (ppm)	0.83	<0.01	86	84	36-144	2
Benzo(a)pyrene	mg/kg (ppm)	0.83	<0.01	88	85	40-150	3
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	<0.01	86	86	45-157	0
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	<0.01	89	86	50-150	3
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	<0.01	90	84	24-145	7
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	<0.01	89	85	31-137	5
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	<0.01	87	83	14-141	5

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.83	82	59-105
2-Methylnaphthalene	mg/kg (ppm)	0.83	87	62-108
1-Methylnaphthalene	mg/kg (ppm)	0.83	87	62-108
Acenaphthylene	mg/kg (ppm)	0.83	87	61-111
Acenaphthene	mg/kg (ppm)	0.83	84	61-110
Fluorene	mg/kg (ppm)	0.83	86	62-114
Phenanthrene	mg/kg (ppm)	0.83	85	64-112
Anthracene	mg/kg (ppm)	0.83	83	63-111
Fluoranthene	mg/kg (ppm)	0.83	89	66-115
Pyrene	mg/kg (ppm)	0.83	88	65-112
Benz(a)anthracene	mg/kg (ppm)	0.83	91	64-116
Chrysene	mg/kg (ppm)	0.83	89	66-119
Benzo(a)pyrene	mg/kg (ppm)	0.83	89	62-116
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	89	61-118
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	90	65-119
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	92	64-130
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	93	67-131
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	90	67-126

Date of Report: 10/30/23
Date Received: 10/13/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310254

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 310399-02 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.83	<0.01	68	77	50-150	12
2-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	74	81	50-150	9
1-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	75	81	50-150	8
Acenaphthylene	mg/kg (ppm)	0.83	<0.01	77	83	50-150	7
Acenaphthene	mg/kg (ppm)	0.83	<0.01	74	79	50-150	7
Fluorene	mg/kg (ppm)	0.83	<0.01	77	83	50-150	7
Phenanthrene	mg/kg (ppm)	0.83	<0.01	74	83	10-170	11
Anthracene	mg/kg (ppm)	0.83	<0.01	74	83	37-139	11
Fluoranthene	mg/kg (ppm)	0.83	<0.01	80	89	10-203	11
Pyrene	mg/kg (ppm)	0.83	<0.01	74	83	10-208	11
Benz(a)anthracene	mg/kg (ppm)	0.83	<0.01	81	88	37-146	8
Chrysene	mg/kg (ppm)	0.83	<0.01	78	85	36-144	9
Benzo(a)pyrene	mg/kg (ppm)	0.83	<0.01	81	89	40-150	9
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	<0.01	77	85	45-157	10
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	<0.01	80	87	50-150	8
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	<0.01	77	90	24-145	16
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	<0.01	77	90	31-137	16
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	<0.01	68	81	14-141	17

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.83	77	59-105
2-Methylnaphthalene	mg/kg (ppm)	0.83	81	62-108
1-Methylnaphthalene	mg/kg (ppm)	0.83	81	62-108
Acenaphthylene	mg/kg (ppm)	0.83	85	61-111
Acenaphthene	mg/kg (ppm)	0.83	82	61-110
Fluorene	mg/kg (ppm)	0.83	84	62-114
Phenanthrene	mg/kg (ppm)	0.83	85	64-112
Anthracene	mg/kg (ppm)	0.83	86	63-111
Fluoranthene	mg/kg (ppm)	0.83	90	66-115
Pyrene	mg/kg (ppm)	0.83	92	65-112
Benz(a)anthracene	mg/kg (ppm)	0.83	87	64-116
Chrysene	mg/kg (ppm)	0.83	87	66-119
Benzo(a)pyrene	mg/kg (ppm)	0.83	87	62-116
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	87	61-118
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	88	65-119
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	92	64-130
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	91	67-131
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	89	67-126

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 10/13/23 A1

310254

Report To Amanda Bixby
Company Maul Foster & Alongi, Inc
Address 1329 N State Street, Suite 301
City, State, ZIP Bellingham, WA 98225
Phone 360-635-8371 Email abixby@maulfoster.com

SAMPLERS (*signature*)

PROJECT NAME: Bellingham Bus Garage
PO #: M0837.02.005

REMARKS
x = composite
O = hold
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

Page # _____ of _____

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	Metals by EPA 6020 B	Mercury by EPA 1631E			Notes
						ANALYSES REQUESTED											● per AB 10/20/23 ME (x) per AB 10/24/23 ME
B05-S-1.7	01	10/12/23	15:50	soil	1	X							X	X			
B05-S-5.5	02	10/12/23	15:55	soil	1	O							O	O			hold
B04-S-1.0	03	10/12/23	16:25		1	X					●		X	X			
B04-S-7.0	04	10/12/23	16:30		1	●					(X)		O	O			hold
							Samples received at 2 °C										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Christian Sifford	MFA	10/12/23	16:45
Received by:	ANH PHAN	FBS	10/13/23	13:24
Relinquished by:				
Received by:				

Metals Include Cadmium, copper, lead, and zinc

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

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 Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

November 8, 2023

Amanda Bixby, Project Manager
Maul Foster Alongi
1329 N State St, Suite 301
Bellingham, WA 98225

Dear Ms Bixby:

Included is the amended report from the testing of material submitted on October 16, 2023 from the Bellingham Bus Garage M0837.02.005, F&BI 310279 project. Sample ID B10S-2.5 has been amended to B10-S-2.5.

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
MFA1024R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
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Eric Young, B.S.

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October 24, 2023

Amanda Bixby, Project Manager
Maul Foster Alongi
1329 N State St, Suite 301
Bellingham, WA 98225

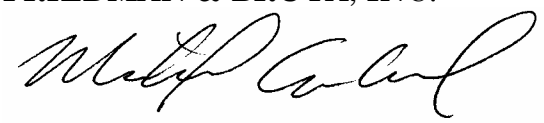
Dear Ms Bixby:

Included are the results from the testing of material submitted on October 16, 2023 from the Bellingham Bus Garage M0837.02.005, F&BI 310279 project. There are 44 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
MFA1024R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 16, 2023 by Friedman & Bruya, Inc. from the Maul Foster Alongi Bellingham Bus Garage M0837.02.005, F&BI 310279 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
310279 -01	B09-S-3.0
310279 -02	B09-S-6.3
310279 -03	B09-S-11.5
310279 -04	B09-S-16.0
310279 -05	B09-GW-21.0
310279 -06	B08-S-3.0
310279 -07	B08-S-5.5
310279 -08	B08-S-12.0
310279 -09	B08-S-17.0
310279 -10	B08-GW-22.5
310279 -11	B02-S-3.0
310279 -12	B02-S-5.5
310279 -13	B02-S-11.0
310279 -14	B02-S-16.0
310279 -15	B02-GW-22.5
310279 -16	TRIPBLANK01
310279 -17	B03-S-2.5
310279 -18	B03-S-6.0
310279 -19	B03-S-11.0
310279 -20	B03-S-16.0
310279 -21	B03-GW-21.5
310279 -22	B10-S-2.5
310279 -23	BDUP-S-2.5
310279 -24	B10-S-6.0
310279 -25	B10-S-12.4
310279 -26	B10-S-17.0
310279 -27	B10-GW-15.0
310279 -28	BDUP-GW-15.0
310279 -29	B07-S-2.0
310279 -30	B07-S-6.0
310279 -31	B07-S-12.5
310279 -32	B07-S-16.7
310279 -33	B07-GW-18.0
310279 -34	B06-S-1.0
310279 -35	B06-S-6.0
310279 -36	B01-S-1.5
310279 -37	B01-S-6.5
310279 -38	BDUP-S-1.5

The 8260D calibration standard failed the acceptance criteria for acetone. The data were flagged accordingly.

CASE NARRATIVE (continued)

An 8270E internal standard failed the acceptance criteria for sample B08-S-3.0. The sample was diluted and reanalyzed with acceptable results. Both data sets were reported.

Mercury in the 1631E matrix spike exceeded the acceptance criteria. The laboratory control sample passed the acceptance criteria, therefore the results were due to matrix effect.

All other quality control requirements were acceptable.

Date of Report: 10/24/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279
Date Extracted: NA
Date Analyzed: 10/16/23

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR PERCENT MOISTURE USING ASTM D2216-98

Sample ID Laboratory ID	% Moisture
B09-S-3.0 310279-01	13
B08-S-3.0 310279-06	13
B02-S-3.0 310279-11	15
B03-S-2.5 310279-17	23
B10-S-2.5 310279-22	18
BDUP-S-2.5 310279-23	16
B07-S-2.0 310279-29	20
B06-S-1.0 310279-34	5
B01-S-1.5 310279-36	9

Date of Report: 10/24/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279
Date Extracted: 10/17/23
Date Analyzed: 10/17/23

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B09-S-3.0 310279-01	<50	<250	89
B08-S-3.0 310279-06	<50	<250	91
B02-S-3.0 310279-11	390	<250	97
B03-S-2.5 310279-17	<50	1,200	96
B10-S-2.5 310279-22	<50	440	98
BDUP-S-2.5 310279-23	<50	<250	95
B07-S-2.0 310279-29	<50	<250	92
B06-S-1.0 310279-34	<50	280	97
B01-S-1.5 310279-36	240 x	1,600	100
Method Blank 03-2454 MB	<50	<250	77

Date of Report: 10/24/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279
Date Extracted: 10/18/23
Date Analyzed: 10/18/23

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
B09-GW-21.0 310279-05 1/1.2	170 x	<300	96
B08-GW-22.5 310279-10 1/1.2	64 x	<300	84
B02-GW-22.5 310279-15	<50	<250	92
B03-GW-21.5 310279-21	<50	<250	93
B10-GW-15.0 310279-27	210 x	<250	98
BDUP-GW-15.0 310279-28	200 x	<250	95
B07-GW-18.0 310279-33	<50	<250	88
Method Blank 03-2460 MB2	<50	<250	90

Analysis For Total Metals By EPA Method 6020B

Client ID:	B09-S-3.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-01
Date Analyzed:	10/17/23	Data File:	310279-01.120
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	9.67

Analysis For Total Metals By EPA Method 6020B

Client ID:	B09-S-3.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-01 x5
Date Analyzed:	10/17/23	Data File:	310279-01 x5.132
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Copper	26.7
Zinc	48.5

Analysis For Total Metals By EPA Method 6020B

Client ID:	B08-S-3.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-06
Date Analyzed:	10/17/23	Data File:	310279-06.133
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Copper	26.5
Zinc	58.4

Analysis For Total Metals By EPA Method 6020B

Client ID:	B08-S-3.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-06 x2
Date Analyzed:	10/18/23	Data File:	310279-06 x2.068
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	71.4

Analysis For Total Metals By EPA Method 6020B

Client ID:	B02-S-3.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-11
Date Analyzed:	10/17/23	Data File:	310279-11.134
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Copper	51.9
Lead	55.3
Zinc	146

Analysis For Total Metals By EPA Method 6020B

Client ID:	B03-S-2.5	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-17
Date Analyzed:	10/17/23	Data File:	310279-17.137
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Copper	40.3
Zinc	73.0

Analysis For Total Metals By EPA Method 6020B

Client ID:	B03-S-2.5	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-17 x5
Date Analyzed:	10/18/23	Data File:	310279-17 x5.070
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	173

Analysis For Total Metals By EPA Method 6020B

Client ID:	B07-S-2.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-29
Date Analyzed:	10/17/23	Data File:	310279-29.078
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	1.62

Analysis For Total Metals By EPA Method 6020B

Client ID:	B07-S-2.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-29 x10
Date Analyzed:	10/20/23	Data File:	310279-29 x10.074
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Copper	60.8
Lead	377
Zinc	616

Analysis For Total Metals By EPA Method 6020B

Client ID:	B06-S-1.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-34
Date Analyzed:	10/17/23	Data File:	310279-34.116
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Lead	11.3

Analysis For Total Metals By EPA Method 6020B

Client ID:	B06-S-1.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-34 x2
Date Analyzed:	10/18/23	Data File:	310279-34 x2.075
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Copper	21.6
Zinc	57.4

Analysis For Total Metals By EPA Method 6020B

Client ID:	B01-S-1.5	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-36
Date Analyzed:	10/17/23	Data File:	310279-36.117
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	1.64
Copper	36.6
Zinc	97.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	B01-S-1.5	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-36 x50
Date Analyzed:	10/20/23	Data File:	310279-36 x50.075
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	3,000

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	I3-827 mb
Date Analyzed:	10/17/23	Data File:	I3-827 mb.057
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Cadmium	<1
Copper	<5
Lead	<1
Zinc	<5

Date of Report: 10/24/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279
Date Extracted: 10/17/23
Date Analyzed: 10/17/23

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL MERCURY
USING EPA METHOD 1631E
Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Total Mercury
B09-S-3.0 310279-01	<0.1
B08-S-3.0 310279-06	<0.1
B02-S-3.0 310279-11	0.22
B03-S-2.5 310279-17	0.11
B07-S-2.0 310279-29	0.26
B06-S-1.0 310279-34	<0.1
B01-S-1.5 310279-36	0.11
Method Blank I3-827 MB	<0.1

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition LL

Client Sample ID:	B09-S-3.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/19/23	Lab ID:	310279-01 1/0.5
Date Analyzed:	10/19/23	Data File:	101914.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	79	128
Toluene-d8	96	84	121
4-Bromofluorobenzene	101	84	116

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.002
Vinyl chloride	<0.002	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.1	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.001
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.002	m,p-Xylene	<0.002
Hexane	<0.25	o-Xylene	<0.001
Methylene chloride	<0.2	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.002	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.002	Bromoform	<0.05
1,1-Dichloroethane	<0.002	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.002	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.002	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.002	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.001	sec-Butylbenzene	<0.05
Trichloroethene	<0.002	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.001	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.01
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition LL

Client Sample ID:	B08-S-3.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/19/23	Lab ID:	310279-06 1/0.5
Date Analyzed:	10/19/23	Data File:	101915.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	79	128
Toluene-d8	93	84	121
4-Bromofluorobenzene	97	84	116

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.002
Vinyl chloride	<0.002	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.1	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	0.0045
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.002	m,p-Xylene	0.019
Hexane	<0.25	o-Xylene	0.0083
Methylene chloride	<0.2	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.002	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.002	Bromoform	<0.05
1,1-Dichloroethane	<0.002	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.002	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.002	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.002	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.001	sec-Butylbenzene	<0.05
Trichloroethene	<0.002	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	0.0075	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	0.014
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition LL

Client Sample ID:	B10-S-2.5	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/19/23	Lab ID:	310279-22 1/0.5
Date Analyzed:	10/19/23	Data File:	101916.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	79	128
Toluene-d8	95	84	121
4-Bromofluorobenzene	99	84	116

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	0.0026
Vinyl chloride	<0.002	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.1	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	0.0017
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.002	m,p-Xylene	0.0061
Hexane	<0.25	o-Xylene	0.0027
Methylene chloride	<0.2	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.002	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.002	Bromoform	<0.05
1,1-Dichloroethane	<0.002	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.002	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.002	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.002	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.001	sec-Butylbenzene	<0.05
Trichloroethene	<0.002	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	0.0088	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.01
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition LL

Client Sample ID:	BDUP-S-2.5	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/19/23	Lab ID:	310279-23 1/0.5
Date Analyzed:	10/19/23	Data File:	101917.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	79	128
Toluene-d8	91	84	121
4-Bromofluorobenzene	95	84	116

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	0.0028
Vinyl chloride	<0.002	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.1	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	0.0037
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.002	m,p-Xylene	0.022
Hexane	<0.25	o-Xylene	0.014
Methylene chloride	<0.2	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.002	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.002	Bromoform	<0.05
1,1-Dichloroethane	<0.002	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.002	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.002	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.002	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	0.0019	sec-Butylbenzene	<0.05
Trichloroethene	<0.002	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	0.0084	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	0.013
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition LL

Client Sample ID:	B07-S-2.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/19/23	Lab ID:	310279-29 1/0.5
Date Analyzed:	10/19/23	Data File:	101918.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	79	128
Toluene-d8	93	84	121
4-Bromofluorobenzene	94	84	116

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.002
Vinyl chloride	<0.002	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.1	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	0.20
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.002	m,p-Xylene	0.47
Hexane	<0.25	o-Xylene	0.20
Methylene chloride	<0.2	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.002	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.002	Bromoform	<0.05
1,1-Dichloroethane	<0.002	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.002	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.002	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.002	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	0.13
Benzene	0.044	sec-Butylbenzene	<0.05
Trichloroethene	<0.002	p-Isopropyltoluene	0.055
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	0.94	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	0.24
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition LL

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Bellingham Bus Garage
Date Extracted:	10/19/23	Lab ID:	03-2419 mb 1/0.5
Date Analyzed:	10/19/23	Data File:	101909.D
Matrix:	Soil	Instrument:	GCMS11
Units:	mg/kg (ppm) Dry Weight	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	79	128
Toluene-d8	96	84	121
4-Bromofluorobenzene	101	84	116

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.002
Vinyl chloride	<0.002	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.1	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.001
Acetone	<5 ca	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.002	m,p-Xylene	<0.002
Hexane	<0.25	o-Xylene	<0.001
Methylene chloride	<0.2	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.002	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.002	Bromoform	<0.05
1,1-Dichloroethane	<0.002	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.002	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<1	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.002	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.002	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.001	sec-Butylbenzene	<0.05
Trichloroethene	<0.002	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<1	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.001	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.01
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	B09-GW-21.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/19/23	Lab ID:	310279-05
Date Analyzed:	10/19/23	Data File:	101920.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	78	126
Toluene-d8	92	84	115
4-Bromofluorobenzene	95	72	130

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	0.023	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<0.01
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50 ca	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	TRIPBLANK01	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/19/23	Lab ID:	310279-16
Date Analyzed:	10/19/23	Data File:	101919.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	78	126
Toluene-d8	95	84	115
4-Bromofluorobenzene	101	72	130

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<0.01
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50 ca	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Bellingham Bus Garage
Date Extracted:	10/19/23	Lab ID:	03-2420 mb
Date Analyzed:	10/19/23	Data File:	101908.D
Matrix:	Water	Instrument:	GCMS11
Units:	ug/L (ppb)	Operator:	LM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	78	126
Toluene-d8	96	84	115
4-Bromofluorobenzene	100	72	130

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.02	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<0.01
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50 ca	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<5	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<5
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<0.2
2-Butanone (MEK)	<20	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<0.2	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<0.5	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<0.5	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<0.5	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<0.4	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<0.5
trans-1,3-Dichloropropene	<0.4	Naphthalene	<1
1,1,2-Trichloroethane	<0.5	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B09-S-3.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/18/23	Lab ID:	310279-01 1/25
Date Analyzed:	10/19/23	Data File:	101910.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	89 d	10	198
2-Fluorobiphenyl	78 d	45	117
2,4,6-Tribromophenol	110 d ca	11	158
Terphenyl-d14	93 d	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.05
2-Methylnaphthalene	<0.05
1-Methylnaphthalene	<0.05
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	<0.05
Phenanthrene	<0.05
Anthracene	<0.05
Fluoranthene	<0.05
Pyrene	<0.05
Benz(a)anthracene	<0.05
Chrysene	<0.05
Benzo(a)pyrene	<0.05
Benzo(b)fluoranthene	<0.05
Benzo(k)fluoranthene	<0.05
Indeno(1,2,3-cd)pyrene	<0.05
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	<0.05

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B08-S-3.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/18/23	Lab ID:	310279-06 1/5
Date Analyzed:	10/18/23	Data File:	101818.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	83	10	198
2-Fluorobiphenyl	82	45	117
2,4,6-Tribromophenol	92	11	158
Terphenyl-d14	102	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.047
2-Methylnaphthalene	0.032
1-Methylnaphthalene	0.026
Acenaphthylene	0.025
Acenaphthene	0.019
Fluorene	0.014
Phenanthrene	0.035
Anthracene	<0.01
Fluoranthene	0.041
Pyrene	0.046
Benz(a)anthracene	0.014
Chrysene	0.021
Benzo(a)pyrene	0.020 J
Benzo(b)fluoranthene	0.041 J
Benzo(k)fluoranthene	0.015 J
Indeno(1,2,3-cd)pyrene	<0.01 J
Dibenz(a,h)anthracene	<0.01 J
Benzo(g,h,i)perylene	0.011 J

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B08-S-3.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-06 1/25
Date Analyzed:	10/19/23	Data File:	101913.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	91 d	10	198
2-Fluorobiphenyl	81 d	45	117
2,4,6-Tribromophenol	105 d ca	11	158
Terphenyl-d14	83 d	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.05
2-Methylnaphthalene	<0.05
1-Methylnaphthalene	<0.05
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	<0.05
Phenanthrene	<0.05
Anthracene	<0.05
Fluoranthene	<0.05
Pyrene	<0.05
Benz(a)anthracene	<0.05
Chrysene	<0.05
Benzo(a)pyrene	<0.05
Benzo(b)fluoranthene	<0.05
Benzo(k)fluoranthene	<0.05
Indeno(1,2,3-cd)pyrene	<0.05
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	<0.05

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B07-S-2.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	310279-29 1/25
Date Analyzed:	10/19/23	Data File:	101911.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	83 d	10	198
2-Fluorobiphenyl	71 d	45	117
2,4,6-Tribromophenol	102 d ca	11	158
Terphenyl-d14	81 d	50	124

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.073
2-Methylnaphthalene	<0.05
1-Methylnaphthalene	<0.05
Acenaphthylene	<0.05
Acenaphthene	<0.05
Fluorene	<0.05
Phenanthrene	0.11
Anthracene	<0.05
Fluoranthene	0.26
Pyrene	0.46
Benz(a)anthracene	0.28
Chrysene	0.33
Benzo(a)pyrene	0.47
Benzo(b)fluoranthene	0.42
Benzo(k)fluoranthene	0.16
Indeno(1,2,3-cd)pyrene	0.099
Dibenz(a,h)anthracene	<0.05
Benzo(g,h,i)perylene	0.082

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Bellingham Bus Garage
Date Extracted:	10/17/23	Lab ID:	03-2456 mb 1/5
Date Analyzed:	10/17/23	Data File:	101710.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	89	16	137
2-Fluorobiphenyl	97	46	122
2,4,6-Tribromophenol	82	17	154
Terphenyl-d14	95	31	167

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Date of Report: 10/24/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279

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

Laboratory Code: 310279-01 (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	65	109	109	64-136	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	112	78-121

Date of Report: 10/24/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	108	100	72-139	8

Date of Report: 10/24/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279

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

Laboratory Code: 310279-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Cadmium	mg/kg (ppm)	10	<5	116	104	75-125	11
Copper	mg/kg (ppm)	50	<25	117	104	75-125	12
Lead	mg/kg (ppm)	50	9.30	121	107	75-125	12
Zinc	mg/kg (ppm)	50	39.8	123 b	96 b	75-125	25 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Cadmium	mg/kg (ppm)	10	100	80-120
Copper	mg/kg (ppm)	50	102	80-120
Lead	mg/kg (ppm)	50	103	80-120
Zinc	mg/kg (ppm)	50	102	80-120

Date of Report: 10/24/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL MERCURY USING EPA METHOD 1631E

Laboratory Code: 310279-01x10 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Mercury	mg/kg (ppm)	5	<0.1	130 vo	117	71-125	10

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Mercury	mg/kg (ppm)	5	107	68-143

Date of Report: 10/24/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 310347-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2	<0.5	40	36	10-142	11
Chloromethane	mg/kg (ppm)	2	<0.5	71	66	10-126	7
Vinyl chloride	mg/kg (ppm)	2	<0.05	72	68	10-138	6
Bromomethane	mg/kg (ppm)	2	<0.5	46	46	10-163	0
Chloroethane	mg/kg (ppm)	2	<0.5	46	46	10-176	0
Trichlorofluoromethane	mg/kg (ppm)	2	<0.5	94	89	10-176	5
Acetone	mg/kg (ppm)	10	<5	100	95	10-163	5
1,1-Dichloroethene	mg/kg (ppm)	2	<0.05	86	83	10-160	4
Hexane	mg/kg (ppm)	2	<0.25	84	75	10-137	11
Methylene chloride	mg/kg (ppm)	2	<0.5	79	75	10-156	5
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	<0.05	88	87	21-145	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	84	83	14-137	1
1,1-Dichloroethane	mg/kg (ppm)	2	<0.05	87	83	19-140	5
2,2-Dichloropropane	mg/kg (ppm)	2	<0.05	94	87	10-158	8
cis-1,2-Dichloroethene	mg/kg (ppm)	2	<0.05	93	87	25-135	7
Chloroform	mg/kg (ppm)	2	<0.05	84	81	21-145	4
2-Butanone (MEK)	mg/kg (ppm)	10	<1	92	86	19-147	7
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	<0.05	84	80	12-160	5
1,1,1-Trichloroethane	mg/kg (ppm)	2	<0.05	89	88	10-156	1
1,1-Dichloropropene	mg/kg (ppm)	2	<0.05	84	80	17-140	5
Carbon tetrachloride	mg/kg (ppm)	2	<0.05	99	100	9-164	1
Benzene	mg/kg (ppm)	2	<0.03	85	83	29-129	2
Trichloroethene	mg/kg (ppm)	2	<0.02	87	82	21-139	6
1,2-Dichloropropane	mg/kg (ppm)	2	<0.05	90	88	30-135	2
Bromodichloromethane	mg/kg (ppm)	2	<0.05	87	81	23-155	7
Dibromomethane	mg/kg (ppm)	2	<0.05	94	89	23-145	5
4-Methyl-2-pentanone	mg/kg (ppm)	10	<1	91	89	24-155	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	93	87	28-144	7
Toluene	mg/kg (ppm)	2	<0.05	90	83	35-130	8
trans-1,3-Dichloropropene	mg/kg (ppm)	2	<0.05	92	84	26-149	9
1,1,2-Trichloroethane	mg/kg (ppm)	2	<0.05	90	83	10-205	8
2-Hexanone	mg/kg (ppm)	10	<0.5	85	80	15-166	6
1,3-Dichloropropane	mg/kg (ppm)	2	<0.05	88	87	31-137	1
Tetrachloroethene	mg/kg (ppm)	2	<0.025	86	82	20-133	5
Dibromochloromethane	mg/kg (ppm)	2	<0.05	91	85	28-150	7
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	<0.05	89	85	28-142	5
Chlorobenzene	mg/kg (ppm)	2	<0.05	88	85	32-129	3
Ethylbenzene	mg/kg (ppm)	2	<0.05	88	84	32-137	5
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	86	84	31-143	2
m,p-Xylene	mg/kg (ppm)	4	<0.1	91	84	34-136	8
o-Xylene	mg/kg (ppm)	2	<0.05	89	85	33-134	5
Styrene	mg/kg (ppm)	2	<0.05	90	87	35-137	3
Isopropylbenzene	mg/kg (ppm)	2	<0.05	92	88	31-142	4
Bromoform	mg/kg (ppm)	2	<0.05	83	81	21-156	2
n-Propylbenzene	mg/kg (ppm)	2	<0.05	86	86	23-146	0
Bromobenzene	mg/kg (ppm)	2	<0.05	85	82	34-130	4
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	<0.05	85	87	18-149	2
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	<0.05	91	90	28-140	1
1,2,3-Trichloropropane	mg/kg (ppm)	2	<0.05	82	81	25-144	1
2-Chlorotoluene	mg/kg (ppm)	2	<0.05	84	86	31-134	2
4-Chlorotoluene	mg/kg (ppm)	2	<0.05	82	82	31-136	0
tert-Butylbenzene	mg/kg (ppm)	2	<0.05	90	90	30-137	0
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	<0.05	84	83	10-182	1
sec-Butylbenzene	mg/kg (ppm)	2	<0.05	87	86	23-145	1
p-Isopropyltoluene	mg/kg (ppm)	2	<0.05	87	87	21-149	0
1,3-Dichlorobenzene	mg/kg (ppm)	2	<0.05	86	84	30-131	2
1,4-Dichlorobenzene	mg/kg (ppm)	2	<0.05	81	84	29-129	4
1,2-Dichlorobenzene	mg/kg (ppm)	2	<0.05	85	88	31-132	3
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	<0.5	83	83	11-161	0
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	<0.25	87	90	22-142	3
Hexachlorobutadiene	mg/kg (ppm)	2	<0.25	96	93	10-142	3
Naphthalene	mg/kg (ppm)	2	<0.05	87	85	14-157	2
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	<0.25	92	88	20-144	4

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2	63	10-146
Chloromethane	mg/kg (ppm)	2	83	27-133
Vinyl chloride	mg/kg (ppm)	2	90	22-139
Bromomethane	mg/kg (ppm)	2	60	10-201
Chloroethane	mg/kg (ppm)	2	53	10-163
Trichlorofluoromethane	mg/kg (ppm)	2	107	10-196
Acetone	mg/kg (ppm)	10	118	52-141
1,1-Dichloroethene	mg/kg (ppm)	2	101	47-128
Hexane	mg/kg (ppm)	2	100	43-142
Methylene chloride	mg/kg (ppm)	2	90	10-184
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2	97	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2	98	64-132
1,1-Dichloroethane	mg/kg (ppm)	2	100	64-135
2,2-Dichloropropane	mg/kg (ppm)	2	104	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2	101	64-135
Chloroform	mg/kg (ppm)	2	93	61-139
2-Butanone (MEK)	mg/kg (ppm)	10	107	30-197
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2	96	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2	103	62-131
1,1-Dichloropropene	mg/kg (ppm)	2	97	64-136
Carbon tetrachloride	mg/kg (ppm)	2	119	60-139
Benzene	mg/kg (ppm)	2	97	65-136
Trichloroethene	mg/kg (ppm)	2	99	63-139
1,2-Dichloropropane	mg/kg (ppm)	2	100	61-145
Bromodichloromethane	mg/kg (ppm)	2	100	57-126
Dibromomethane	mg/kg (ppm)	2	103	62-123
4-Methyl-2-pentanone	mg/kg (ppm)	10	103	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2	102	65-143
Toluene	mg/kg (ppm)	2	95	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2	100	65-131
1,1,2-Trichloroethane	mg/kg (ppm)	2	97	62-131
2-Hexanone	mg/kg (ppm)	10	93	33-152
1,3-Dichloropropane	mg/kg (ppm)	2	99	67-128
Tetrachloroethene	mg/kg (ppm)	2	97	68-128
Dibromochloromethane	mg/kg (ppm)	2	107	55-121
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2	95	66-129
Chlorobenzene	mg/kg (ppm)	2	97	67-128
Ethylbenzene	mg/kg (ppm)	2	97	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2	99	64-121
m,p-Xylene	mg/kg (ppm)	4	96	68-128
o-Xylene	mg/kg (ppm)	2	99	67-129
Styrene	mg/kg (ppm)	2	97	67-129
Isopropylbenzene	mg/kg (ppm)	2	100	68-128
Bromoform	mg/kg (ppm)	2	99	56-132
n-Propylbenzene	mg/kg (ppm)	2	96	68-129
Bromobenzene	mg/kg (ppm)	2	98	69-128
1,3,5-Trimethylbenzene	mg/kg (ppm)	2	97	69-129
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2	104	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2	95	61-137
2-Chlorotoluene	mg/kg (ppm)	2	96	69-128
4-Chlorotoluene	mg/kg (ppm)	2	94	67-127
tert-Butylbenzene	mg/kg (ppm)	2	100	69-129
1,2,4-Trimethylbenzene	mg/kg (ppm)	2	97	69-128
sec-Butylbenzene	mg/kg (ppm)	2	97	69-130
p-Isopropyltoluene	mg/kg (ppm)	2	99	69-130
1,3-Dichlorobenzene	mg/kg (ppm)	2	97	69-127
1,4-Dichlorobenzene	mg/kg (ppm)	2	93	68-126
1,2-Dichlorobenzene	mg/kg (ppm)	2	98	69-127
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2	97	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2	101	64-135
Hexachlorobutadiene	mg/kg (ppm)	2	106	50-153
Naphthalene	mg/kg (ppm)	2	97	62-128
1,2,3-Trichlorobenzene	mg/kg (ppm)	2	104	61-126

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 310267-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	10	<1	86	30-221
Chloromethane	ug/L (ppb)	10	<10	93	50-150
Vinyl chloride	ug/L (ppb)	10	<0.02	97	50-150
Bromomethane	ug/L (ppb)	10	<5	104	50-150
Chloroethane	ug/L (ppb)	10	<1	100	50-150
Trichlorofluoromethane	ug/L (ppb)	10	<1	100	50-150
Acetone	ug/L (ppb)	50	<50	54	18-161
1,1-Dichloroethene	ug/L (ppb)	10	<1	95	50-150
Hexane	ug/L (ppb)	10	<5	87	50-150
Methylene chloride	ug/L (ppb)	10	<5	88	50-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	<1	92	50-150
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	103	50-150
1,1-Dichloroethane	ug/L (ppb)	10	<1	94	50-150
2,2-Dichloropropane	ug/L (ppb)	10	<1	102	43-171
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	104	10-211
Chloroform	ug/L (ppb)	10	<1	93	50-150
2-Butanone (MEK)	ug/L (ppb)	50	<20	73	10-192
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<0.2	103	50-150
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	93	50-150
1,1-Dichloropropene	ug/L (ppb)	10	<1	93	50-150
Carbon tetrachloride	ug/L (ppb)	10	<0.5	98	50-150
Benzene	ug/L (ppb)	10	<0.35	105	50-150
Trichloroethene	ug/L (ppb)	10	<0.5	101	35-149
1,2-Dichloropropane	ug/L (ppb)	10	<1	94	50-150
Bromodichloromethane	ug/L (ppb)	10	<0.5	97	50-150
Dibromomethane	ug/L (ppb)	10	<1	100	50-150
4-Methyl-2-pentanone	ug/L (ppb)	50	<10	100	50-150
cis-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	95	50-150
Toluene	ug/L (ppb)	10	<1	102	50-150
trans-1,3-Dichloropropene	ug/L (ppb)	10	<0.4	95	50-150
1,1,2-Trichloroethane	ug/L (ppb)	10	<0.5	99	50-150
2-Hexanone	ug/L (ppb)	50	<10	90	50-150
1,3-Dichloropropane	ug/L (ppb)	10	<1	103	50-150
Tetrachloroethene	ug/L (ppb)	10	<1	108	50-150
Dibromochloromethane	ug/L (ppb)	10	<0.5	105	50-150
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	<0.01	105	50-150
Chlorobenzene	ug/L (ppb)	10	<1	99	50-150
Ethylbenzene	ug/L (ppb)	10	<1	102	50-150
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	<1	106	50-150
m,p-Xylene	ug/L (ppb)	20	<2	100	50-150
o-Xylene	ug/L (ppb)	10	<1	100	50-150
Styrene	ug/L (ppb)	10	<1	98	50-150
Isopropylbenzene	ug/L (ppb)	10	<1	101	50-150
Bromoform	ug/L (ppb)	10	<5	110	50-150
n-Propylbenzene	ug/L (ppb)	10	<1	95	50-150
Bromobenzene	ug/L (ppb)	10	<1	102	50-150
1,3,5-Trimethylbenzene	ug/L (ppb)	10	<1	95	50-150
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	<0.2	105	50-150
1,2,3-Trichloropropane	ug/L (ppb)	10	<1	100	50-150
2-Chlorotoluene	ug/L (ppb)	10	<1	95	50-150
4-Chlorotoluene	ug/L (ppb)	10	<1	95	50-150
tert-Butylbenzene	ug/L (ppb)	10	<1	93	50-150
1,2,4-Trimethylbenzene	ug/L (ppb)	10	<1	95	50-150
sec-Butylbenzene	ug/L (ppb)	10	<1	91	50-150
p-Isopropyltoluene	ug/L (ppb)	10	<1	94	50-150
1,3-Dichlorobenzene	ug/L (ppb)	10	<1	100	50-150
1,4-Dichlorobenzene	ug/L (ppb)	10	<1	98	50-150
1,2-Dichlorobenzene	ug/L (ppb)	10	<1	100	50-150
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	<10	100	50-150
1,2,4-Trichlorobenzene	ug/L (ppb)	10	<1	89	50-150
Hexachlorobutadiene	ug/L (ppb)	10	<0.5	70	50-150
Naphthalene	ug/L (ppb)	10	<1	94	50-150
1,2,3-Trichlorobenzene	ug/L (ppb)	10	<1	90	50-150

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	10	84	88	46-206	5
Chloromethane	ug/L (ppb)	10	89	94	59-132	5
Vinyl chloride	ug/L (ppb)	10	93	94	64-142	1
Bromomethane	ug/L (ppb)	10	98	103	50-197	5
Chloroethane	ug/L (ppb)	10	98	104	70-130	6
Trichlorofluoromethane	ug/L (ppb)	10	95	101	51-159	6
Acetone	ug/L (ppb)	50	49	51	10-140	4
1,1-Dichloroethene	ug/L (ppb)	10	93	97	64-140	4
Hexane	ug/L (ppb)	10	94	97	54-136	3
Methylene chloride	ug/L (ppb)	10	95	93	43-134	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	10	89	92	70-130	3
trans-1,2-Dichloroethene	ug/L (ppb)	10	100	103	70-130	3
1,1-Dichloroethane	ug/L (ppb)	10	91	94	70-130	3
2,2-Dichloropropane	ug/L (ppb)	10	99	94	64-148	5
cis-1,2-Dichloroethene	ug/L (ppb)	10	103	104	70-130	1
Chloroform	ug/L (ppb)	10	89	93	70-130	4
2-Butanone (MEK)	ug/L (ppb)	50	76	82	47-112	8
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	101	104	70-130	3
1,1,1-Trichloroethane	ug/L (ppb)	10	91	94	70-130	3
1,1-Dichloropropene	ug/L (ppb)	10	93	97	70-130	4
Carbon tetrachloride	ug/L (ppb)	10	96	100	70-130	4
Benzene	ug/L (ppb)	10	104	106	70-130	2
Trichloroethene	ug/L (ppb)	10	99	102	70-130	3
1,2-Dichloropropane	ug/L (ppb)	10	96	99	70-130	3
Bromodichloromethane	ug/L (ppb)	10	95	100	70-130	5
Dibromomethane	ug/L (ppb)	10	98	99	70-130	1
4-Methyl-2-pentanone	ug/L (ppb)	50	100	103	68-130	3
cis-1,3-Dichloropropene	ug/L (ppb)	10	96	101	69-131	5
Toluene	ug/L (ppb)	10	101	103	70-130	2
trans-1,3-Dichloropropene	ug/L (ppb)	10	98	100	70-130	2
1,1,2-Trichloroethane	ug/L (ppb)	10	98	100	70-130	2
2-Hexanone	ug/L (ppb)	50	98	91	45-138	7
1,3-Dichloropropane	ug/L (ppb)	10	102	104	70-130	2
Tetrachloroethene	ug/L (ppb)	10	105	109	70-130	4
Dibromochloromethane	ug/L (ppb)	10	106	105	60-148	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	10	104	107	70-130	3
Chlorobenzene	ug/L (ppb)	10	98	100	70-130	2
Ethylbenzene	ug/L (ppb)	10	101	103	70-130	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	10	99	104	70-130	5
m,p-Xylene	ug/L (ppb)	20	99	101	70-130	2
o-Xylene	ug/L (ppb)	10	98	100	70-130	2
Styrene	ug/L (ppb)	10	95	100	70-130	5
Isopropylbenzene	ug/L (ppb)	10	99	100	70-130	1
Bromoform	ug/L (ppb)	10	110	113	69-138	3
n-Propylbenzene	ug/L (ppb)	10	97	99	70-130	2
Bromobenzene	ug/L (ppb)	10	100	99	70-130	1
1,3,5-Trimethylbenzene	ug/L (ppb)	10	96	97	70-130	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	10	107	105	70-130	2
1,2,3-Trichloropropane	ug/L (ppb)	10	101	99	70-130	2
2-Chlorotoluene	ug/L (ppb)	10	96	96	70-130	0
4-Chlorotoluene	ug/L (ppb)	10	98	96	70-130	2
tert-Butylbenzene	ug/L (ppb)	10	94	96	70-130	2
1,2,4-Trimethylbenzene	ug/L (ppb)	10	95	96	70-130	1
sec-Butylbenzene	ug/L (ppb)	10	96	97	70-130	1
p-Isopropyltoluene	ug/L (ppb)	10	99	99	70-130	0
1,3-Dichlorobenzene	ug/L (ppb)	10	99	100	70-130	1
1,4-Dichlorobenzene	ug/L (ppb)	10	98	99	70-130	1
1,2-Dichlorobenzene	ug/L (ppb)	10	99	101	70-130	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	10	100	97	70-130	3
1,2,4-Trichlorobenzene	ug/L (ppb)	10	95	95	70-130	0
Hexachlorobutadiene	ug/L (ppb)	10	93	92	70-130	1
Naphthalene	ug/L (ppb)	10	96	97	70-130	1
1,2,3-Trichlorobenzene	ug/L (ppb)	10	96	95	70-130	1

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 310115-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.83	<0.01	73	62	50-150	16
2-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	79	64	50-150	21 vo
1-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	79	64	50-150	21 vo
Acenaphthylene	mg/kg (ppm)	0.83	<0.01	82	71	50-150	14
Acenaphthene	mg/kg (ppm)	0.83	<0.01	81	70	50-150	15
Fluorene	mg/kg (ppm)	0.83	<0.01	84	73	50-150	14
Phenanthrene	mg/kg (ppm)	0.83	<0.01	84	75	10-170	11
Anthracene	mg/kg (ppm)	0.83	<0.01	85	74	37-139	14
Fluoranthene	mg/kg (ppm)	0.83	<0.01	89	81	10-203	9
Pyrene	mg/kg (ppm)	0.83	<0.01	86	78	10-208	10
Benz(a)anthracene	mg/kg (ppm)	0.83	<0.01	90	83	37-146	8
Chrysene	mg/kg (ppm)	0.83	<0.01	91	83	36-144	9
Benzo(a)pyrene	mg/kg (ppm)	0.83	<0.01	89	82	40-150	8
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	<0.01	86	81	45-157	6
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	<0.01	87	79	50-150	10
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	<0.01	102	88	24-145	15
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	<0.01	102	88	31-137	15
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	<0.01	101	84	14-141	18

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.83	85	59-105
2-Methylnaphthalene	mg/kg (ppm)	0.83	86	62-108
1-Methylnaphthalene	mg/kg (ppm)	0.83	87	62-108
Acenaphthylene	mg/kg (ppm)	0.83	96	61-111
Acenaphthene	mg/kg (ppm)	0.83	94	61-110
Fluorene	mg/kg (ppm)	0.83	94	62-114
Phenanthrene	mg/kg (ppm)	0.83	96	64-112
Anthracene	mg/kg (ppm)	0.83	95	63-111
Fluoranthene	mg/kg (ppm)	0.83	99	66-115
Pyrene	mg/kg (ppm)	0.83	106	65-112
Benz(a)anthracene	mg/kg (ppm)	0.83	100	64-116
Chrysene	mg/kg (ppm)	0.83	99	66-119
Benzo(a)pyrene	mg/kg (ppm)	0.83	100	62-116
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	101	61-118
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	99	65-119
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	105	64-130
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	103	67-131
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	101	67-126

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 10/16/23 VW1/C2/N2

310279

Page # 1 of 4

Report To Amanda Bixby
Company Maul Foster & Alongi, Inc.
Address 1329 N State Street, Suite 301
City, State, ZIP Bellingham, WA 98225
Phone (360) 635-8371 Email abixby@maulfoster.com

SAMPLERS (*signature*) Amanda Bixby

PROJECT NAME: Bellingham Bus Garage
PO #: M0837.02.005

REMARKS
x = analyze
o = hold.
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

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 SIM	PCBs EPA 8082	Mercury by EPA 1631E	Metals by EPA 6020B - See note			Notes
B09-S-3.0	01 A-E	10/11/23	1250	S	5	X				X	●		X	X			● analyze per AB 10/13/23 ME
B09-S-6.3	02	10/11/23	1255	S	5	O				O			O	O			
B09-S-11.5	03	10/11/23	1300	S	5	O				O			O	O			⊗ per AB 10/24/23 ME
B09-S-16.0	04 ↓	10/11/23	1305	S	5	O				O			O	O			
B09-GW-21.0	05 A-D	10/11/23	1500	W	4	X				X							
B08-S-3.0	06 A-E	10/11/23	1430	S	5	X				X	●		X	X			
B08-S-5.5	07	10/11/23	1435	S	5	O				O	O		O	O			
B08-S-12.0	08	10/11/23	1440	S	5	O				O	● AB		O	O			
B08-S-17.0	09 ↓	10/11/23	1445	S	5	O				O			O	O			
B08-GW-22.5	10 A-D	10/11/23	1550	W	4	X				O							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Amanda Bixby	Amanda Bixby	MFA	10/12/23	1530
Received by:	ANH PHAN	FBI	10/16/23	14:38
Relinquished by:		Samples received at 4 °C		
Received by:				

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

SAMPLE CHAIN OF CUSTODY 10/16/23 VW1/C2/N2

310279

Report To Amanda Bixby

Company Maul Foster & Alongi, Inc.

Address 1329 N State Street, Suite 301

City, State, ZIP Bellingham, WA 98225

Phone (360) 635-8371 Email abixby@maulfoster.com

SAMPLERS (*signature*) Amanda Bixby

PROJECT NAME: Bellingham Bus Garage

PO #: M0837.02.005

REMARKS
X = analyze
O = hold
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

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	Mercury by CVA 1631E	Metals by CVA 6020 ot - see note			Notes
						ANALYSES REQUESTED											
B02-S-3.0	11 A-E	10/11/23	1630	S	5	X				O			X	X			
B02-S-5.5	12	10/11/23	1635	S	5	O				O			O	O			
B02-S-11.0	13	10/11/23	1640	S	5	O				O			O	O			
B02-S-16.0	14	10/11/23	1645	S	5	O				O			O	O			
B02-GW-22.5	15 A-D	10/11/23	1740	W	4	X				O							
TRIPBLANK01	16 A-B	10/11/23	NA	W	2					X							
B03-S-2.5	17 A-E	10/12/23	0820	S	5	X				O			X	X			
B03-S-6.0	18	10/12/23	0825	S	5	O				O			O	O			
B03-S-11.0	19	10/12/23	0830	S	5	O				O			O	O			
B03-S-16.0	20	10/12/23	0835	S	5	O				O			O	O			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Amanda Bixby	Amanda Bixby	MFA	10/12/23	1530
Received by:	ANHPHAN	FSB	10/16/23	14:38
Relinquished by:		Samples received at 4 °C		
Received by:				

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

310279 [redacted]

SAMPLE CHAIN OF CUSTODY 10/16/23 [redacted] VW1/C2/N2

Page # 3 of 4

Report To Amanda Bixby
Company Maul Foster & Alongi, Inc.
Address 1329 N State Street, Suite 301
City, State, ZIP Bellingham, WA 98225
Phone (360)635-8371 Email abixby@maulfoster.com

SAMPLERS (signature) [signature]

PROJECT NAME	PO #
Bellingham Bus Garage	MC837.02.005

REMARKS	INVOICE TO
X=analyze O=hold Project specific RLs? - Yes / No	accounting@maulfoster.com

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	Mercury by EPA 1613E	Metals by EPA 6020B - see note	Lead		Notes
B03-GW-21.5	21 A-D	10/12/23	0930	W	4	X				O							
B10-S-2.5	22 A-E	10/12/23	1050	S	5	X				X	O						
BDUP-S-2.5	23 ↓	10/12/23	1050	S	5	X				X	O						
B10-S-6.0	24	10/12/23	1055	S	5	O				O							
B10-S-12.4	25	10/12/23	1100	S	5	O				O							
B10-S-17.0	26	10/12/23	1105	S	5	O				O							
B10-GW-15.0	27 A-D	10/12/23	1126	W	4	X				O							
BDUP-GW-15.0	28 ↓	10/12/23	1126	W	4	X				O							
B07-S-2.0	29 A-E	10/12/23	1300	S	5	X				X	●		X	X			
B07-S-6.0	30 ↓	10/12/23	1305	S	5	O				O	(X)		O	O	(X)		

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Amanda Bixby	MFA	10/12/23	1530
Received by:	[signature]	ANH PHAN	FBB	10/16/23	14:38
Relinquished by:			Samples received at 4 °C		
Received by:					

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

310279

SAMPLE CHAIN OF CUSTODY 10/16/23 VW1/C2/N2

Page # 4 of 4

Report To Amanda Bixby
Company Maul Foster & Alongi, Inc.
Address 1329 N State Street, Suite
City, State, ZIP Bellingham, WA 98225
Phone (360)635-8371 Email abixby@maulfoster.com

SAMPLERS (*signature*) Amanda Bixby

PROJECT NAME: Bellingham Bus Garage
PO #: M0837.02.005

REMARKS
X = analyze
O = hold
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☒ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Mercury by EPA 1631E	Metals by EPA 6020B - see note	Lead		Notes
B07-S-12.5	31 A-E	10/12/23	1310	S	5	O				O			O	O			
B07-S-16.7	32 ↓	10/12/23	1315	S	5	O				O			O	O			
B07-GW-18.0	33 A-D	10/12/23	1358	W	4	X				O							
B06-S-1.0	34	10/12/23	1415	S	1	X							X	X			
B06-S-6.0	35	10/12/23	1420	S	1	O							O	O			
B01-S-1.5	36	10/12/23	1510	S	1	X							X	X			
B01-S-6.5	37	10/12/23	1515	S	1	O							O	O	X		
BDUP-S-1.5	38	10/12/23	1510	S	1	O							O	O			
~~B02-S-1.5~~	AB			~~S~~	~~1~~												
~~B05-S-1.5~~	AB			~~S~~	~~1~~												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Amanda Bixby	Amanda Bixby	MFA	10/12/23	1530
Received by:	ANH PHAN	FSB	10/16/23	14:38
Relinquished by:		Samples received at 4 °C		
Received by:				

Metals include

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

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 Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

November 8, 2023

Amanda Bixby, Project Manager
Maul Foster Alongi
1329 N State St, Suite 301
Bellingham, WA 98225

Dear Ms Bixby:

Included is the amended report from the testing of material submitted on October 16, 2023 from the Bellingham Bus Garage M0837.02.005, F&BI 310279 project. Sample ID B10S-2.5 has been amended to B10-S-2.5.

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
MFA1101R.DOC

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 Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

November 1, 2023

Amanda Bixby, Project Manager
Maul Foster Alongi
1329 N State St, Suite 301
Bellingham, WA 98225

Dear Ms Bixby:

Included are the additional results from the testing of material submitted on October 16, 2023 from the Bellingham Bus Garage M0837.02.005, F&BI 310279 project. There are 10 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
MFA1101R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 16, 2023 by Friedman & Bruya, Inc. from the Maul Foster Alongi Bellingham Bus Garage M0837.02.005, F&BI 310279 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
310279 -01	B09-S-3.0
310279 -02	B09-S-6.3
310279 -03	B09-S-11.5
310279 -04	B09-S-16.0
310279 -05	B09-GW-21.0
310279 -06	B08-S-3.0
310279 -07	B08-S-5.5
310279 -08	B08-S-12.0
310279 -09	B08-S-17.0
310279 -10	B08-GW-22.5
310279 -11	B02-S-3.0
310279 -12	B02-S-5.5
310279 -13	B02-S-11.0
310279 -14	B02-S-16.0
310279 -15	B02-GW-22.5
310279 -16	TRIPBLANK01
310279 -17	B03-S-2.5
310279 -18	B03-S-6.0
310279 -19	B03-S-11.0
310279 -20	B03-S-16.0
310279 -21	B03-GW-21.5
310279 -22	B10-S-2.5
310279 -23	BDUP-S-2.5
310279 -24	B10-S-6.0
310279 -25	B10-S-12.4
310279 -26	B10-S-17.0
310279 -27	B10-GW-15.0
310279 -28	BDUP-GW-15.0
310279 -29	B07-S-2.0
310279 -30	B07-S-6.0
310279 -31	B07-S-12.5
310279 -32	B07-S-16.7
310279 -33	B07-GW-18.0
310279 -34	B06-S-1.0
310279 -35	B06-S-6.0
310279 -36	B01-S-1.5
310279 -37	B01-S-6.5
310279 -38	BDUP-S-1.5

All quality control requirements were acceptable.

Date of Report: 11/01/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279
Date Extracted: NA
Date Analyzed: 10/25/23

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR PERCENT MOISTURE USING ASTM D2216-98

Sample ID Laboratory ID	% Moisture
B07-S-6.0 310279-30	22
B01-S-6.5 310279-37	9

Analysis For Total Metals By EPA Method 6020B

Client ID:	B07-S-6.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage M0837.02.005
Date Extracted:	10/25/23	Lab ID:	310279-30
Date Analyzed:	10/25/23	Data File:	310279-30.152
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	8.17

Analysis For Total Metals By EPA Method 6020B

Client ID:	B01-S-6.5	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage M0837.02.005
Date Extracted:	10/25/23	Lab ID:	310279-37 x10
Date Analyzed:	10/26/23	Data File:	310279-37 x10.125
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	491

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Bellingham Bus Garage M0837.02.005
Date Extracted:	10/25/23	Lab ID:	I3-848 mb
Date Analyzed:	10/25/23	Data File:	I3-848 mb.051
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B07-S-6.0	Client:	Maul Foster Alongi
Date Received:	10/16/23	Project:	Bellingham Bus Garage M0837.02.005
Date Extracted:	10/24/23	Lab ID:	310279-30 1/5
Date Analyzed:	10/24/23	Data File:	102422.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	70	16	137
2-Fluorobiphenyl	76	46	122
2,4,6-Tribromophenol	76	17	154
Terphenyl-d14	77	31	167

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Bellingham Bus Garage M0837.02.005
Date Extracted:	10/24/23	Lab ID:	03-2540 mb 1/5
Date Analyzed:	10/24/23	Data File:	102408.D
Matrix:	Soil	Instrument:	GCMS12
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Nitrobenzene-d5	91	16	137
2-Fluorobiphenyl	97	46	122
2,4,6-Tribromophenol	78	17	154
Terphenyl-d14	96	31	167

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Date of Report: 11/01/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279

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

Laboratory Code: 310442-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	<5	95	93	75-125	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	93	80-120

Date of Report: 11/01/23
Date Received: 10/16/23
Project: Bellingham Bus Garage M0837.02.005, F&BI 310279

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 310396-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.83	<0.01	72	76	50-150	5
2-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	75	78	50-150	4
1-Methylnaphthalene	mg/kg (ppm)	0.83	<0.01	75	78	50-150	4
Acenaphthylene	mg/kg (ppm)	0.83	<0.01	82	82	50-150	0
Acenaphthene	mg/kg (ppm)	0.83	<0.01	79	80	50-150	1
Fluorene	mg/kg (ppm)	0.83	<0.01	81	80	50-150	1
Phenanthrene	mg/kg (ppm)	0.83	<0.01	80	81	10-170	1
Anthracene	mg/kg (ppm)	0.83	<0.01	82	80	37-139	2
Fluoranthene	mg/kg (ppm)	0.83	<0.01	87	85	10-203	2
Pyrene	mg/kg (ppm)	0.83	<0.01	84	82	10-208	2
Benz(a)anthracene	mg/kg (ppm)	0.83	<0.01	86	86	37-146	0
Chrysene	mg/kg (ppm)	0.83	<0.01	86	84	36-144	2
Benzo(a)pyrene	mg/kg (ppm)	0.83	<0.01	88	85	40-150	3
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	<0.01	86	86	45-157	0
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	<0.01	89	86	50-150	3
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	<0.01	90	84	24-145	7
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	<0.01	89	85	31-137	5
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	<0.01	87	83	14-141	5

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.83	82	59-105
2-Methylnaphthalene	mg/kg (ppm)	0.83	87	62-108
1-Methylnaphthalene	mg/kg (ppm)	0.83	87	62-108
Acenaphthylene	mg/kg (ppm)	0.83	87	61-111
Acenaphthene	mg/kg (ppm)	0.83	84	61-110
Fluorene	mg/kg (ppm)	0.83	86	62-114
Phenanthrene	mg/kg (ppm)	0.83	85	64-112
Anthracene	mg/kg (ppm)	0.83	83	63-111
Fluoranthene	mg/kg (ppm)	0.83	89	66-115
Pyrene	mg/kg (ppm)	0.83	88	65-112
Benz(a)anthracene	mg/kg (ppm)	0.83	91	64-116
Chrysene	mg/kg (ppm)	0.83	89	66-119
Benzo(a)pyrene	mg/kg (ppm)	0.83	89	62-116
Benzo(b)fluoranthene	mg/kg (ppm)	0.83	89	61-118
Benzo(k)fluoranthene	mg/kg (ppm)	0.83	90	65-119
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.83	92	64-130
Dibenz(a,h)anthracene	mg/kg (ppm)	0.83	93	67-131
Benzo(g,h,i)perylene	mg/kg (ppm)	0.83	90	67-126

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 10/16/23 VW1/C2/N2

310279

Page # 1 of 4

Report To Amanda Bixby
Company Maul Foster & Alongi, Inc.
Address 1329 N State Street, Suite 301
City, State, ZIP Bellingham, WA 98225
Phone (360) 635-8371 Email abixby@maulfoster.com

SAMPLERS (*signature*) Amanda Bixby

PROJECT NAME: Bellingham Bus Garage
PO #: M0837.02.005

REMARKS
x = analyze
o = hold.
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

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 SIM	PCBs EPA 8082	Mercury by EPA 1631E	Metals by EPA 6020B - See note			Notes
B09-S-3.0	01 A-E	10/11/23	1250	S	5	X				X	●		X	X			● analyze per AB 10/13/23 ME
B09-S-6.3	02	10/11/23	1255	S	5	O				O			O	O			
B09-S-11.5	03	10/11/23	1300	S	5	O				O			O	O			⊗ per AB 10/24/23 ME
B09-S-16.0	04 ↓	10/11/23	1305	S	5	O				O			O	O			
B09-GW-21.0	05 A-D	10/11/23	1500	W	4	X				X							
B08-S-3.0	06 A-E	10/11/23	1430	S	5	X				X	●		X	X			
B08-S-5.5	07	10/11/23	1435	S	5	O				O	O		O	O			
B08-S-12.0	08	10/11/23	1440	S	5	O				O	● AB		O	O			
B08-S-17.0	09 ↓	10/11/23	1445	S	5	O				O			O	O			
B08-GW-22.5	10 A-D	10/11/23	1550	W	4	X				O							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Amanda Bixby	Amanda Bixby	MFA	10/12/23	1530
Received by:	ANH PHAN	FBI	10/16/23	14:38
Relinquished by:		Samples received at 4 °C		
Received by:				

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

SAMPLE CHAIN OF CUSTODY 10/16/23 VW1/C2/N2

310279

Report To Amanda Bixby

Company Maul Foster & Alongi, Inc.

Address 1329 N State Street, Suite 301

City, State, ZIP Bellingham, WA 98225

Phone (360) 635-8371 Email abixby@maulfoster.com

SAMPLERS (*signature*) Amanda Bixby

PROJECT NAME: Bellingham Bus Garage

PO #: M0837.02.005

REMARKS
X = analyze
O = hold
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

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	Mercury by CVA 1631E	Metals by CVA 6020 ot - see note			Notes
						ANALYSES REQUESTED											
B02-S-3.0	11 A-E	10/11/23	1630	S	5	X				O			X	X			
B02-S-5.5	12	10/11/23	1635	S	5	O				O			O	O			
B02-S-11.0	13	10/11/23	1640	S	5	O				O			O	O			
B02-S-16.0	14	10/11/23	1645	S	5	O				O			O	O			
B02-GW-22.5	15 A-D	10/11/23	1740	W	4	X				O							
TRIPBLANK01	16 A-B	10/11/23	NA	W	2					X							
B03-S-2.5	17 A-E	10/12/23	0820	S	5	X				O			X	X			
B03-S-6.0	18	10/12/23	0825	S	5	O				O			O	O			
B03-S-11.0	19	10/12/23	0830	S	5	O				O			O	O			
B03-S-16.0	20	10/12/23	0835	S	5	O				O			O	O			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Amanda Bixby	Amanda Bixby	MFA	10/12/23	1530
Received by:	ANHPHAN	FSB	10/16/23	14:38
Relinquished by:		Samples received at 4 °C		
Received by:				

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Ph. (206) 285-8282

310279
[redacted]

SAMPLE CHAIN OF CUSTODY 10/16/23 [redacted] VW1/C2/N2

Page # 3 of 4

Report To: Amanda Bixby

Company: Maul Foster & Alongi, Inc.

Address: 1329 N State Street, Suite 301

City, State, ZIP: Bellingham, WA 98225

Phone: (360)635-8371 Email: abixby@maulfoster.com

SAMPLERS (signature)	
[signature]	
PROJECT NAME	**PO #**
Bellingham Bus Garage	MC837.02.005
REMARKS	**INVOICE TO**
X=analyze O=hold Project specific RLs? - Yes / No	accounting@maulfoster.com

TURNAROUND TIME
- ☒ 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	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Mercury by EPA 1613E	Metals by EPA 6020B - see note	Lead		Notes
B03-GW-21.5	21 A-D	10/12/23	0930	W	4	X				O							
B10-S-2.5	22 A-E	10/12/23	1050	S	5	X				X	O						
BDUP-S-2.5	23	10/12/23	1050	S	5	X				X	O						
B10-S-6.0	24	10/12/23	1055	S	5	O				O							
B10-S-12.4	25	10/12/23	1100	S	5	O				O							
B10-S-17.0	26 ↓	10/12/23	1105	S	5	O				O							
B10-GW-15.0	27 A-D	10/12/23	1126	W	4	X				O							
BDUP-GW-15.0	28 ↓	10/12/23	1126	W	4	X				O							
B07-S-2.0	29 A-E	10/12/23	1300	S	5	X				X	●		X	X			
B07-S-6.0	30 ↓	10/12/23	1305	S	5	O				O	(X)		O	O	(X)		

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Amanda Bixby	MFA	10/12/23	1530
Received by:	[signature]	ANH PHAN	F&B	10/16/23	14:38
Relinquished by:			Samples received at 4 °C		
Received by:					

[illegible]

310279

SAMPLE CHAIN OF CUSTODY 10/16/23 VW1/C2/N2

Page # 4 of 4

Report To Amanda Bixby
Company Maul Foster & Alongi, Inc.
Address 1329 N State Street, Suite
City, State, ZIP Bellingham, WA 98225
Phone (360)635-8371 Email abixby@maulfoster.com

SAMPLERS (*signature*) Amanda Bixby

PROJECT NAME: Bellingham Bus Garage
PO #: M0837.02.005

REMARKS
X = analyze
O = hold
Project specific RLs? - Yes / No

INVOICE TO: accounting@maulfoster.com

TURNAROUND TIME
☒ Standard turnaround
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☒ Archive samples
☐ Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Mercury by EPA 1631E	Metals by EPA 6020B - see note	Lead		Notes
B07-S-12.5	31 A-E	10/12/23	1310	S	5	O				O			O	O			
B07-S-16.7	32 ↓	10/12/23	1315	S	5	O				O			O	O			
B07-GW-18.0	33 A-D	10/12/23	1358	W	4	X				O							
B06-S-1.0	34	10/12/23	1415	S	1	X							X	X			
B06-S-6.0	35	10/12/23	1420	S	1	O							O	O			
B01-S-1.5	36	10/12/23	1510	S	1	X							X	X			
B01-S-6.5	37	10/12/23	1515	S	1	O							O	O	X		
BDUP-S-1.5	38	10/12/23	1510	S	1	O							O	O			
~~B02-S-1.5~~	AB			~~S~~	~~1~~												
~~B05-S-1.5~~	AB			~~S~~	~~1~~												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Amanda Bixby	Amanda Bixby	MFA	10/12/23	1530
Received by:	ANH PHAN	FSB	10/16/23	14:38
Relinquished by:		Samples received at 4 °C		
Received by:				

Metals include

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Ph. (206) 285-8282

Appendix E

Data Validation Memorandum

MAUL
FOSTER
ALONGI

Data Quality Assurance/Quality Control Review

Project No. M0837.02.005 | November 8, 2023 | Bellingham School District

Maul Foster & Alongi, Inc. (MFA), conducted an independent Stage 2A review of the quality of analytical results for groundwater, soil, and associated quality control samples collected on October 11 and 12, 2023, at the Bellingham School District bus garage facility located at 1801 James Street, Bellingham, Washington.

Friedman & Bruya, Inc. (F&B), performed the analyses. MFA reviewed F&B report numbers 310254, 310254-additional, 310279, and 310279-additional. The analyses performed and the samples analyzed are listed in the following tables. Not all analyses were performed on all samples. Samples on hold are indicated below.

Analysis	Reference
Diesel- and motor-oil-range hydrocarbons	NWTPH-Dx
Percent moisture	ASTM D2216-98
Semivolatile organic compounds	EPA 8270E
Total mercury	EPA 1631E
Total metals	EPA 6020B
Volatile organic compounds	EPA 8260D

Notes
ASTM = ASTM International.
EPA = U.S. Environmental Protection Agency.
NWTPH = Northwest Total Petroleum Hydrocarbons.

Samples Analyzed			
Report 310254/310254-additional			
B05-S-1.7	B05-S-5.5 (hold)	B04-S-1.0	B04-S-7.0
Report 310279/310279-additional			
B09-S-3.0	B02-S-3.0	B03-GW-21.5	B07-S-12.5 (hold)
B09-S-6.3 (hold)	B02-S-5.5 (hold)	B10-S-2.5	B07-S-16.7 (hold)
B09-S-11.5 (hold)	B02-S-11.0 (hold)	BDUP-S-2.5	B07-GW-18.0
B09-S-16.0 (hold)	B02-S-16.0 (hold)	B10-S-6.0 (hold)	B06-S-1.0
B09-GW-21.0	B02-GW-22.5	B10-S-12.4 (hold)	B06-S-6.0 (hold)
B08-S-3.0	TRIPBLANK01	B10-S-17.0 (hold)	B01-S-1.5
B08-S-5.5 (hold)	B03-S-2.5	B10-GW-15.0	B01-S-6.5
B08-S-12.0 (hold)	B03-S-6.0 (hold)	BDUP-GW-15.0	BDUP-S-1.5 (hold)
B08-S-17.0 (hold)	B03-S-11.0 (hold)	B07-S-2.0	--
B08-GW-22.5	B03-S-16.0 (hold)	B07-S-6.0	--

Data Qualification

Analytical results were evaluated according to applicable sections of U.S. Environmental Protection Agency (EPA) guidelines for data review (EPA 2020a, 2020b) and appropriate laboratory- and method-specific guidelines (EPA 1986, F&B 2022).

Data validation procedures were modified, as appropriate, to accommodate quality control requirements for methods that EPA data review procedures do not specifically address (e.g., Northwest Total Petroleum Hydrocarbons [NWTPH]-Dx).

Based on the results of the data quality review procedures described below, the data, with the appropriate final data qualifiers assigned, are considered acceptable for their intended use. Final data qualifiers represent qualifiers originating from the laboratory and accepted by the reviewer, and data qualifiers assigned by the reviewer during validation.

Final data qualifiers:

- J = result is estimated.
- U = result is non-detect at the method reporting limit (MRL).
- UJ = result is non-detect with an estimated MRL.

According to reports 310254 and 310279, the NWTPH-Dx diesel-range hydrocarbons results for samples B05-S-1.7, B01-S-1.5, B09-GW-21.0, G10-GW-15.0, and BDUP-GW-15.0 had chromatographic patterns that did not resemble the fuel standard used for quantitation. Results are reported as diesel-range hydrocarbons instead of specific fuel products; thus, qualification by the reviewer was not required.

According to reports 310254-additional and 310279, the EPA Method 8270E samples B04-S-1.0 and B08-S-3.0 had several analytes that were associated with internal standards that failed acceptance criteria. F&B reanalyzed the samples at higher dilutions, and the internal standards passed criteria for both samples, indicating that the matrix effects were overcome. To meet project reporting level needs, the lower dilution analyses with the internal standard issues are considered the results of record, as shown in the following table. The results associated with the internal standard issues are qualified by the reviewer. F&B reported some results below MRLs and qualified the results with J; the reviewer accepted these laboratory qualifications.

Report	Sample	Analyte	Primary Analysis (mg/kg)	Secondary Analysis (mg/kg)	Result of Record, with Qualification (mg/kg)
310254-additional	B04-S-1.0	Naphthalene	0.1 U	0.5 U	0.1 U
		2-Methylnaphthalene	0.10	0.5 U	0.10
		1-Methylnaphthalene	2.1	2.2	2.1
		Acenaphthylene	0.1 U	0.5 U	0.1 U
		Acenaphthene	0.1 U	0.5 U	0.1 U
		Fluorene	0.21	0.5 U	0.21
		Phenanthrene	0.15	0.5 U	0.15
		Anthracene	0.1 U	0.5 U	0.1 U
		Fluoranthene	0.057 J	0.5 U	0.057 J
		Pyrene	0.25	0.5 U	0.25
		Benz(a)anthracene	0.026 J	0.5 U	0.026 J
		Chrysene	0.21	0.5 U	0.21
		Benzo(a)pyrene	0.075 J[(a)]	0.087 J	0.075 J
		Benzo(b)fluoranthene	0.10[(a)]	0.087 J	0.10 J
		Benzo(k)fluoranthene	0.1 U[(a)]	0.5 U	0.1 UJ
		Indeno(1,2,3-cd)pyrene	0.033 J[(a)]	0.065 UJ	0.033 J

Report	Sample	Analyte	Primary Analysis (mg/kg)	Secondary Analysis (mg/kg)	Result of Record, with Qualification (mg/kg)
		Dibenz(a,h)anthracene	0.057 J[(a)]	0.12 UJ	0.057 J
		Benzo(g,h,i)perylene	0.13[(a)]	0.11 J	0.13 J
310279	B08-S-3.0	Naphthalene	0.047	0.05 U	0.047
		2-Methylnaphthalene	0.032	0.05 U	0.032
		1-Methylnaphthalene	0.026	0.05 U	0.026
		Acenaphthylene	0.025	0.05 U	0.025
		Acenaphthene	0.019	0.05 U	0.019
		Fluorene	0.014	0.05 U	0.014
		Phenanthrene	0.035	0.05 U	0.035
		Anthracene	0.01 U	0.05 U	0.01 U
		Fluoranthene	0.041	0.05 U	0.041
		Pyrene	0.046	0.05 U	0.046
		Benz(a)anthracene	0.014	0.05 U	0.014
		Chrysene	0.021	0.05 U	0.021
		Benzo(a)pyrene	0.020[(a)]	0.05 U	0.020 J
		Benzo(b)fluoranthene	0.041[(a)]	0.05 U	0.041 J
		Benzo(k)fluoranthene	0.015[(a)]	0.05 U	0.015 J
		Indeno(1,2,3-cd)pyrene	0.01 U[(a)]	0.05 U	0.01 UJ
		Dibenz(a,h)anthracene	0.01 U[(a)]	0.05 U	0.01 UJ
		Benzo(g,h,i)perylene	0.011[(a)]	0.05 U	0.011 J

Notes
J = result is estimated.
mg/kg = milligrams per kilogram.
U = result is non-detect at the method reporting limit.
UJ = result is non-detect with an estimated method reporting limit.
[(a)]Flagged by the laboratory due to an internal standard failure.

According to report 310279, the EPA Method 8260D acetone calibration standard failed acceptance criteria. The reviewer qualified all associated sample results, as shown in the following table.

Report	Sample	Analyte	Units	Original Result	Qualified Result
310279	B09-S-3.0	Acetone	mg/kg	5 U	5 UJ
	B08-S-3.0			5 U	5 UJ
	B10-S-2.5			5 U	5 UJ
	BDUP-S-2.5			5 U	5 UJ
	B07-S-2.0			5 U	5 UJ
	B09-GW-21.0		ug/L	50 U	50 UJ
	TRIPBLANK01			50 U	50 UJ

Notes
mg/kg = milligrams per kilogram.
U = result is non-detect at the method reporting limit.
ug/L = micrograms per liter.
UJ = result is non-detect with an estimated method reporting limit.

Sample Conditions

Sample Custody

Sample custody was appropriately documented on the chain-of-custody (COC) forms accompanying the reports.

The reviewer confirmed that the gaps in custody on the COC forms are due to shipment via a third-party shipping service.

Holding Times

Extractions and analyses were performed within the recommended holding times.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

Reporting Limits

The laboratory evaluated results to MRLs. Samples that required dilutions because of high analyte concentrations, matrix interferences, and/or dilutions necessary for preparation and/or analysis were reported with raised MRLs.

Blanks

Method Blanks

Laboratory method blanks are used to assess whether laboratory contamination was introduced during sample preparation and analysis. Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the laboratory method blanks were associated with all samples prepared in the analytical batch.

All laboratory method blank results were non-detect to MRLs.

Equipment Rinsate Blanks

Equipment rinsate blanks are used to evaluate field equipment decontamination. These blanks were not required for this sampling event.

Trip Blanks

Trip blanks are used to evaluate whether volatile organic compound contamination was introduced during sample storage or during shipment between the sampling location and the laboratory.

A trip blank (TRIPBLANK01) was submitted with the sample delivery group 310279 for EPA Method 8260D analysis.

The trip blank was non-detect to MRLs for all target analytes.

Laboratory Control Sample and Laboratory Control Sample Duplicate Results

A laboratory control sample (LCS) and a laboratory control sample duplicate (LCSD) are spiked with target analytes to provide information about laboratory precision and accuracy.

F&B reported LCSD results only for NWTPH-Dx waters in report 310279. Laboratory precision was evaluated using matrix spike (MS) and matrix spike duplicate (MSD) results for the remaining

analyses. All LCSs and the NWTPH-Dx waters LCSD were prepared and analyzed at the required frequency.

All LCS and LCSD results were within acceptance limits for percent recovery and relative percent difference (RPD).

Laboratory Duplicate Results

Laboratory duplicate results are used to evaluate laboratory precision. F&B did not report laboratory duplicate results; laboratory precision was evaluated using LCS and LCSD or MS and MSD results.

Matrix Spike and Matrix Spike Duplicate Results

Matrix spike (MS) and matrix spike duplicate (MSD) results are used to evaluate laboratory precision, accuracy, and the effect of the sample matrix on sample preparation and analysis.

F&B did not report MS or MSD for NWTPH-Dx waters in report 310279; laboratory precision accuracy was evaluated using LCS and LCSD results. All MS and MSD samples for the remaining analyses were prepared and analyzed at the required frequency.

When MS and MSD were prepared with samples from unrelated projects, the MS and/or MSD percent recovery and/or RPD control limit exceedances did not require qualification because these sample matrices were not representative of project sample matrices.

According to report 310279, the EPA Method 6020B soil MS and MSD prepared with sample B09-S-3.0 had a zinc RPD above the 20 percent limit, at 25 percent. Both the MS and the MSD were within percent recovery acceptance limits. The reviewer qualified the associated sample result with J, as shown in the following table.

Report	Sample	Analyte	Original Result (mg/kg)	Qualified Result (mg/kg)
310279	B09-S-3.0	Zinc	48.5	48.5 J

Notes
J = result is estimated.
mg/kg = milligrams per kilogram.

According to report 310279, the EPA Method 1631E soil MS prepared with sample B09-S-3.0 had a mercury result above the upper percent recovery acceptance limit of 125 percent, at 130 percent. The associated sample result was non-detect; thus, qualification by the reviewer was not required.

All remaining MS and MSD results were within acceptance limits for percent recovery and RPD.

Surrogate Recovery Results

The samples were spiked with surrogate compounds to evaluate laboratory performance for individual samples for organic analyses.

The laboratory appropriately documented and qualified surrogate outliers. When surrogate percent recoveries were outside acceptance limits because of dilutions necessary to quantify high concentrations of target analytes, qualification by the reviewer was not required.

All remaining surrogate results were within percent recovery acceptance limits.

Field Duplicate Results

Field duplicate samples measure both field and laboratory precision. The following field duplicate and parent sample pairs were submitted for analysis:

Report	Parent Sample	Field Duplicate Sample
310279/310279-additional	B10-S-2.5	BDUP-S-2.5
	B10-GW-15.0	BDUP-GW-15.0
	B01-S-1.5	BDUP-S-1.5 (hold)

Field duplicate sample BDUP-S-1.5 was submitted on hold, while the parent sample B01-S-1.5 was analyzed by ASTM D2216-98, NWTPH-Dx, EPA Method 6020B, and EPA Method 1631E. The reviewer could not evaluate precision for this sample pair.

MFA uses acceptance criteria of 100 percent RPD for results that are less than five times the MRL or 50 percent RPD for results that are greater than five times the MRL. RPD was not evaluated when both results in the sample pair were non-detect. When one result in the sample pair was non-detect, RPD was evaluated using the MRL of the non-detect result. Field duplicate results that exceeded the acceptance criteria were qualified by the reviewer with J, as shown in the following table.

Report	Sample	Analyte	RPD (%)	Original Result (mg/kg)	Qualified Result (mg/kg)
310279	B10-S-2.5	m,p-Xylene	110	0.0061	0.0061 J
	BDUP-S-2.5			0.022	0.022 J
	B10-S-2.5	o-Xylene	140	0.0027	0.0027 J
	BDUP-S-2.5			0.014	0.014 J

Notes
J = result is estimated.
mg/kg = milligrams per kilogram.
RPD = relative percent difference.

All remaining field duplicate results met the RPD acceptance criteria.

Data Package

The data package was reviewed for transcription errors, omissions, and anomalies.

Follow-up analyses for reports 310254 and 310279 were requested by the MFA project manager after sample receipt, and F&B marked the COC forms with the requested analyses. The follow-up analyses are reported in separate files 310254-additional and 310279-additional. The reviewer confirmed that all requested analyses were reported by F&B.

Reports 310279 and 310279-additional were revised by F&B on November 8, 2023, to update the sample name for B10-S-2.5 to match the COC form.

No other issues were found.

References

EPA. 1986. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.* EPA publication SW-846. 3rd ed. U.S. Environmental Protection Agency. Final updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), V (2015), VI phase I (2017), VI phase II (2018), VI phase III (2019), VII phase I (2019), and VII phase II (2020).

EPA. 2020a. *National Functional Guidelines for Inorganic Superfund Methods Data Review.* EPA 542-R-20-006. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation: Washington, DC. November.

EPA. 2020b. *National Functional Guidelines for Organic Superfund Methods Data Review.* EPA 540-R-20-005. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation: Washington, DC. November.

F&B. 2022. *Quality Assurance Manual.* Rev. 18. Friedman & Bruya, Inc.: Seattle, WA. December 9.

Appendix F

Terrestrial Ecological Evaluation

MAUL FOSTER ALONGI

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: Bellingham School District Bus Garage	
Facility/Site Address: 1801 James Street, Bellingham, Washington	
Facility/Site No: 57487227	VCP Project No.:

Step 2: IDENTIFY EVALUATOR			
Please identify below the person who conducted the evaluation and their contact information.			
Name: Phil Wiescher, PhD			Title: Principal Environmental Scientist
Organization: Maul Foster & Alongi, Inc.			
Mailing address: 1329 N State Street, Suite 301			
City: Bellingham		State: WA	Zip code: 98225
Phone: (360) 594-6267	Fax:	E-mail: pwiescher@maulfoster.com	

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 2**.*

☐ No or Unknown *If you answered **"NO" or "UNKNOWN,"** then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? *Check all that apply. Then skip to **Step 4** of this form.*

Point of Compliance: WAC 173-340-7491(1)(a)

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

☐ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☒ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☐ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☐ No *If you answered **"NO,"** then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? *Check all that apply. Then skip to **Step 4** of this form.*

Exposure Analysis: WAC 173-340-7492(2)(a)

☐ Area of soil contamination at the Site is not more than 350 square feet.

☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. *See* WAC 173-340-7493(1)(c).

1. Was there a problem? *See* WAC 173-340-7493(2).

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? *See* WAC 173-340-7493(3).

- ☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- ☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?
Check all that apply. See WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

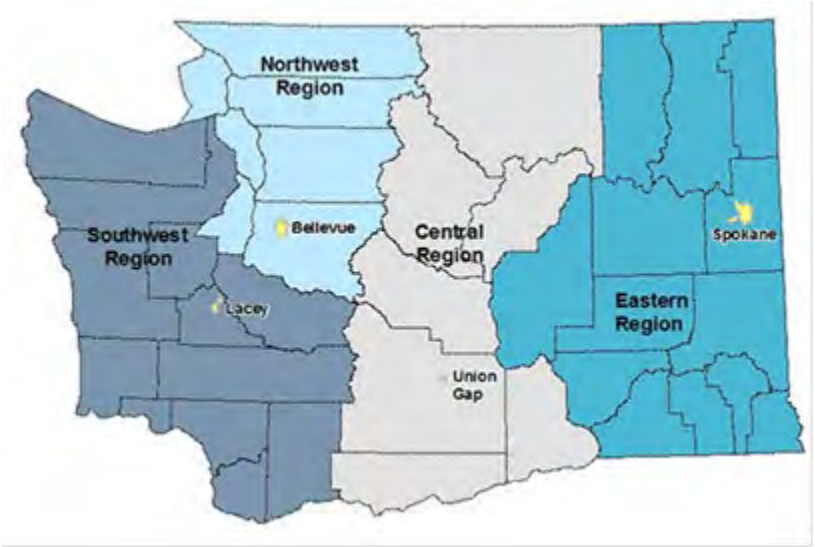
5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ Yes If so, please identify the Ecology staff who approved those steps:

☐ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

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

Figure F-1
Terrestrial Ecological Evaluation Radius Map

Bellingham School District
Bus Garage
Bellingham, WA

Legend

- Property Boundary[a]
- Undeveloped Contiguous Land (1.4 Acres)
- 500 Ft Property Boundary Buffer
- Tax Lot

Note

[a] The Property boundary shown on this figure excludes two areas on the north side of Whatcom Creek, where no known historical operations took place.

0 100
Feet

Data Sources

Aerial photograph obtained from the US Department of Agriculture; tax lot data obtained from Whatcom County.

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Path: X:\0837.02_BellinghamSchoolDistrict\Pro\M0837_02_005_001_001D.aprx\Fig F-1 Terrestrial Ecological Evaluation Radius Map
Print Date: 1/23/2024
Reviewed By: bmurphy
Produced By: sturner
Project: M0837.02.005